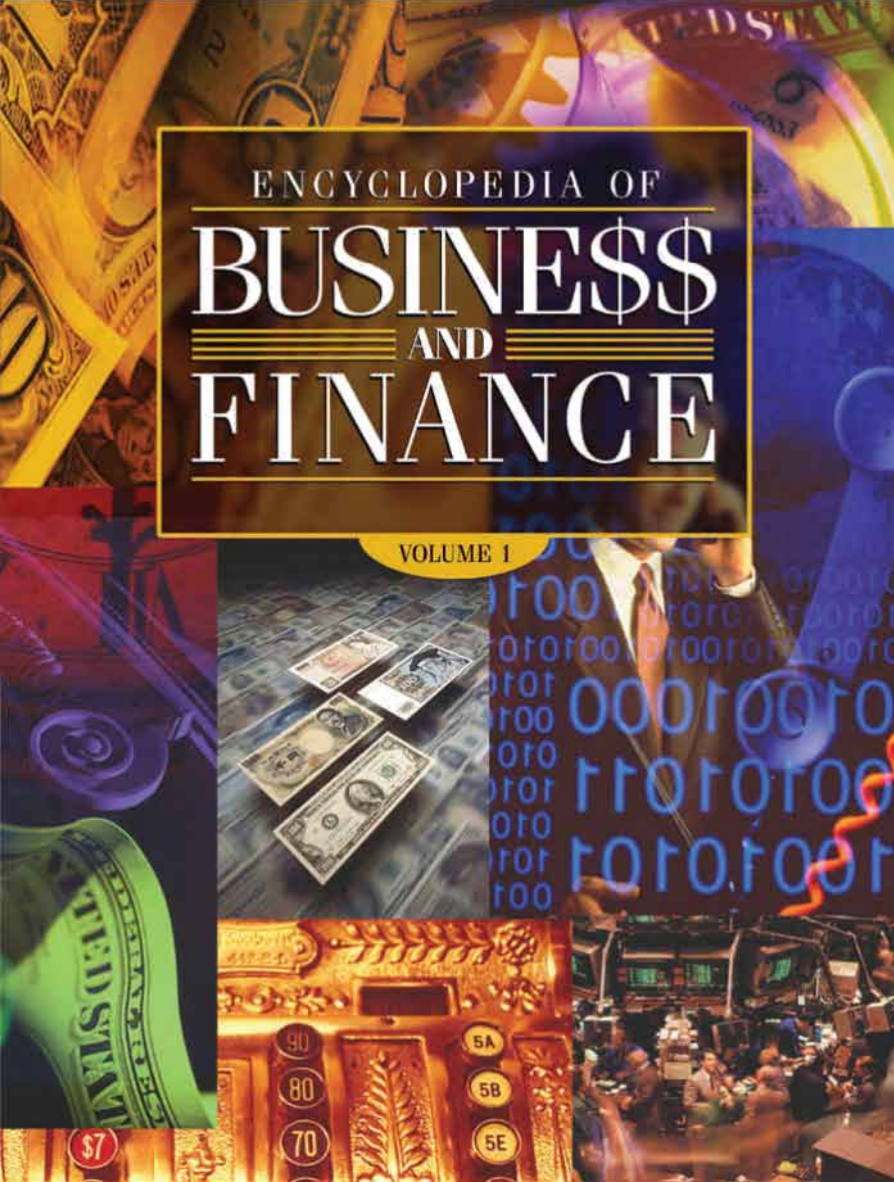

ENCYCLOPEDIA OF

BUSINE$$ AND FINANCE

VOLUME 1

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VOLUME 1

BURTON S. KALISKI,
Editor-in-Chief

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Encyclopedia of Business and Finance

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Preface

Business is the backbone of American society and is one of the keys to making our system work as well as it has for more than two hundred years. Yet as a body of knowledge, business is much younger. There has been, to this point, no organized work that has attempted to present the discipline of business in a single place. The major purpose of the *Encyclopedia of Business and Finance* is to summarize the body of knowledge that we know as business in a single place and in language accessible to the layperson.

This two-volume collection of more than three hundred entries presents a wealth of information about the major functional areas of business: accounting, economics, finance, information systems, law, management, and marketing. The articles vary in length and in depth, in bibliographic support, and in writing style. Thus, the reader will encounter a variety of approaches and discern a number of perspectives about business. Some articles are quantitative, since some aspects of business are numerically based. Other articles tend more toward the qualitative, to accommodate the more descriptive aspects of business. Some of the articles present a historical perspective, incorporating long-proven knowledge, while others focus more on current concepts and newer data. All entries have the same goal: to provide useful knowledge about the business and financial world.

Because of their importance, we have given special treatment to two topics: careers and ethics. In each case, a lead entry is followed by an article about that topic in each of the functional areas of business. Thus, there are articles about careers in accounting, economics, finance, information systems, law, management, and marketing, as well as a similar series of articles for ethics.

There is also a strong emphasis on organizations in the field of business and government. Wherever an organization is discussed, the article provides a Web site for further information. Relevant federal legislation is also featured in this work. All acts that have had a major impact on business are included in the Encyclopedia.

The entries are arranged in the usual alphabetical order, with extensive cross-referencing of three types. First, there are "See" references, referring the reader to an entry by another name. For example, under Bait and Switch Advertising one finds the line "See Advertising." The second type of cross-referencing is the "See Also" reference. At the conclusion of the article on Insurance, for example, one reads "See Also Personal Financial Planning." The third type of cross-referencing is the Related Articles listing. At the conclusion of most articles, there is a list of other articles that may shed more light on the topic just discussed.

Is the knowledge contained in this work the definitive and final word on each topic? The answer is "most certainly not." In this day and age of dynamic and rapidly growing knowledge, a positive answer would be quite inappropriate. However, this is not necessarily a negative. The information contained in this Encyclopedia is valid and reliable and enables readers to do further research by going easily accessible sources. Today's technological environment thus offers a unique opportunity that was not available to previous generations: to extend one's knowledge on every topic presented.

This work was designed for different types of users. The middle school student may be looking for a starting point for a paper on careers. The high school student may be seeking background on a major research topic, such as the corporate form of organization. The businessperson may be seeking a summary of antitrust laws. The business teacher may be preparing a lesson on the history of computers. The interested layperson may simply want to learn about something new, such as government accounting standards or matrix organization.

The *Encyclopedia of Business and Finance* can serve as a survey document for the many aspects of business or as a guide to those aspects. It can be the beginning point of lengthy secondary research, the background for primary research, or the ending point for research on a specific item covered within its pages. It can be used to help ask questions or to find answers. It can be used as a summary of existing knowledge or the basis for acquiring new knowledge.

A number of individuals deserve to be mentioned for their contributions to this project. First, I must thank the five associate editors on this project: Roger Luft, Dorothy Maxwell, Jim Maxwell, Mary Ellen Oliverio, and Allen Truell. Without their tireless efforts at securing contributors of quality, we would have a very small work. Second, great appreciation goes to Elly Dickason, Publisher of Macmillan Reference USA, for her inspiration in conceiving of this project and getting it off the ground. Third, I want to express my indebtedness to Allison Marion, Editor at the Gale Group, for her professional work in keeping this project running to its conclusion. Fourth, I must thank all the contributors for the best efforts that each put forth. Writing for an encyclopedia is not a financially rewarding activity; however, it is a contribution to posterity, so what each contributor has written is of great intangible value to knowledge and to future scholars. Finally, I speak for all of the people involved in what has been a lengthy project when I thank our families for their encouragement and support.

Burton S. Kaliski

Acknowledgments

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B. June Schmidt

RECORDS MANAGEMENT
Carolyn Ashe

RETAILERS
Patricia Spirou

ROBINSON-PATMAN ACT OF 1936
Phyllis Bunn

SCHOOL TO CAREER MOVEMENT
Winnifred Bolinsky

SCIENTIFIC MANAGEMENT
Marcia Anderson

SECURITIES ACTS: REQUIREMENTS FOR ACCOUNTING
Samir B. Fahmy

SECURITIES AND EXCHANGE COMMISSION
Mary Jean Lush

SERVICE INDUSTRIES
Alan G. Krabbenhoft

SEXUAL HARASSMENT
Clarice Brantley

SHERMAN ANTITRUST ACT OF 1890
Phyllis Bunn

SHOPPING
Audrey Langill

SINGLE-AUDIT ACT
Margaret Hicks

SMALL BUSINESS ADMINISTRATION
Mary Jean Lush

SOCIAL RESPONSIBILITY
Thomas Haynes

SOFTWARE
Wanda Samson

SOLE PROPRIETORSHIP
G.W. Maxwell

SPEAKING SKILLS IN BUSINESS
Jan Hargrave

SPREADSHEETS
Betty Brown

STAGGERS RAIL AND MOTOR CARRIER ACTS OF 1980
Phyllis Bunn

STANDARDS-BASED WORK PERFORMANCE
James Miles

STANDARD COSTING
Bernard H. Newman

STANDARD METROPOLITAN STATISTICAL AREAS
Mary Jean Lush

STATEMENTS ON MANAGEMENT ACCOUNTING
B. Douglas Clinton

STATE SOCIETIES OF CPAS
Kathleen A. Simons

STOCK EXCHANGES
Ian Domowitz

STOCK INDEXES
Joel Lerner

STOCKS
Joel Lerner

STRATEGIC MANAGEMENT
Norman Wright

STRESS, WORK-RELATED
Jim Rucker

SUPPLY AND DEMAND
John Conant

TARGET MARKETING
Tatum Turner

TAXATION
Jeffrey Jacobs

TELECOMMUNICATION
Mary Alice Griffin, Susan Evana Jennings

TELECOMMUTING
Carol Jones

TELEMARKETING
Earl Meyer

TELEPHONE SKILLS
Dorothy Maxwell

TEMPORARY EMPLOYMENT
Dorothy Maxwell

TIME MANAGEMENT
Carrie Foley

TIME VALUE OF MONEY
Roman L. Weil

TRADEMARKS
Randy L. Joyner

TRADE SHOWS
Earl Meyer

TRADING BLOCS
Masaaki Kotabe

TRAINING AND DEVELOPMENT
David Hyslop

TRANSFER PAYMENTS
Michael Nelson

UNIFORM CERTIFIED PUBLIC ACCOUNTANT EXAMINATION
Anthony T. Krzystofik

UNITED STATES GENERAL ACCOUNTING OFFICE
Jean E. Harris

VIDEOCONFERENCING
James Miles

VOICE MESSAGING
Christine Irvine

WHOLESALING
Patricia Spirou

WORD PROCESSING
William H. Baker

WORK GROUPS
Tena B. Crews

WORK MEASUREMENT
Nashwa George

WRITING SKILLS IN BUSINESS
G.W. Maxwell

List of Contributors

Mohammad Abdolmohammadi
Bentley College
AUDITING

Theo B. A. Addo
San Diego State University
INFORMATION SYSTEMS
PROGRAMMING

Connie Anderson
University of Nebraska
PROFESSIONAL EDUCATION

Marcia Anderson
Southern Illinois University, Carbondale
BEHAVIORAL SCIENCE MOVEMENT
EMPLOYEE DISCIPLINE
SCIENTIFIC MANAGEMENT

Carolyn Ashe
University of Houston
OUTSOURCING
RECORDS MANAGEMENT

Linda J. Austin
Tomball, Texas
CAREERS IN INFORMATION PROCESSING
DOCUMENT PROCESSING
OFFICE TECHNOLOGY

C. Richard Baker
University of Massachusetts, Dartmouth
INDEPENDENCE STANDARDS BOARD

William H. Baker
Brigham Young University, Provo
DESKTOP PUBLISHING
WORD PROCESSING

Lloyd Bartholome
Utah State University, Logan
INTERNET
MANAGEMENT INFORMATION SYSTEMS

Marsha Bayless
Stephen A. Austin State University
E-MAIL

Jean C. Bedard
Northeastern University
ANALYTICAL PROCEDURES

Dennis R. Beresford
University of Georgia
FINANCIAL ACCOUNTING STANDARDS BOARD

Robert G. Berns
Bowling Green State University
DECA
ENTREPRENEURSHIP

Craig A. Bestwick
San Francisco, California
CAREERS IN LAW FOR BUSINESS

Keith Bice
Indianapolis, Indiana
CONTRACTS
PARTNERSHIP

Lauren Block
New York, New York
CONSUMER BEHAVIOR

Winnifred Bolinsky
Allentown, Pennsylvania
SCHOOL TO CAREER MOVEMENT

Richard Bortz
Southern Illinois University, Carbondale
JOB ANALYSIS AND DESIGN

David Bowers
Case Western Reserve University
BUSINESS CYCLE

Louis Braiotta, Jr.
SUNY, Binghamton
AUDIT COMMITTEES

Clarice Brantley
Pensacola, Florida
SEXUAL HARASSMENT

Clifford Brown
Bentley College
ACTIVITY-BASED MANAGEMENT COSTING
COST ALLOCATION

Michael Brun
Illinois State University
FACTORS OF PRODUCTION

Phyllis Bunn
Delta State University
CONSUMER PRODUCT SAFETY ACT OF 1972

FAIR PACKAGING AND LABELING ACT OF 1966
FEDERAL TRADE COMMISSION ACT OF 1914
FOOD, DRUG, AND COSMETIC ACT
ROBINSON-PATMAN ACT OF 1936
SHERMAN ANTITRUST ACT OF 1890
STAGGERS RAIL AND MOTOR CARRIER ACTS OF 1980

Charles H. Calhoun
Westport, Connecticut
CERTIFIED INTERNAL AUDITORS (CIA)
FOREIGN CORRUPT PRACTICES ACT OF 1977

Patrick Casabona
St. John's University
DERIVATIVES

Judith Chiri-Mulkey
Colorado Springs, Colorado
CAREERS OVERVIEW
INTEGRATED SOFTWARE

Frederick D. S. Choi
New York University
INTERNATIONAL FEDERATION OF ACCOUNTANTS

Diane Clevesy
Bradford, Massachusetts
CORPORATE EDUCATION

B. Douglas Clinton
Central Missouri State University
STATEMENTS ON MANAGEMENT ACCOUNTING

John Conant
Indiana State University
SUPPLY AND DEMAND

Tena B. Crews
State University of West Georgia
WORK GROUPS

Henry H. Davis
Eastern Illinois University
INTEREST RATE(S)

Ian Domowitz
Pennsylvania State University
STOCK EXCHANGES

Roger Doost
Clemson University
BUDGETS AND BUDGETING

Douglas R. Emery
University of Miami, Coral Gables
CAPITAL INVESTMENTS

Samir B. Fahmy
St. John's University
SECURITIES ACTS: REQUIREMENTS FOR ACCOUNTING

Mary L. Fischer
University of Texas, Tyler
BENCHMARKING
GOVERNMENT ACCOUNTING

Marie Flatley
Del Mar, California
COMMUNICATIONS CHANNELS
POLICY DEVELOPMENT

Carrie Foley
West Baldwin, Maine
TIME MANAGEMENT

Nashwa George
Jersey City, New Jersey
PUBLIC OVERSIGHT BOARD
WORK MEASUREMENT

Rosario Girasa
Pace University
BANKRUPTCY

Rajeev K. Goel
Illinois State University
OLIGOPOLY

Keith Goree
St. Petersburg, Florida
ETHICS OVERVIEW

Audrey A. Gramling
Wake Forest University
INTERNAL CONTROL SYSTEMS

Pat Graves
Eastern Illinois University
ERGONOMICS
MOTIVATION

Mary B. Greenawalt
The Citadel
ETHICS IN ACCOUNTING
FINANCIAL STATEMENT ANALYSIS

Mary Alice Griffin
Valdosta State University
INFORMATION PROCESSING
TELECOMMUNICATIONS

Lisa E. Gueldenzoph
Bowling Green State University
PRIVACY AND SECURITY

Mahendra R. Gujarathi
Bentley College
INTERNATIONAL ACCOUNTING STANDARDS

Louise Dratler Haberman
New York, New York
NATIONAL ASSOCIATION OF STATE BOARDS OF ACCOUNTANCY

Jewel Hairston
Bowling Green State University
BUSINESS PROFESSIONALS OF AMERICA
ENTREPRENEURSHIP

Walter A. Hamilton
South Hadley, Massachusetts
COMPUTER GRAPHICS

Gary Hansen
Brigham Young University, Provo
DATABASES

James Hansen
Brigham Young University, Provo
ARTIFICIAL INTELLIGENCE

Jan Hargrave
Houston, Texas
LISTENING SKILLS IN BUSINESS
SPEAKING SKILLS IN BUSINESS

Jean E. Harris
Pennsylvania State University, Harrisburg
CHIEF FINANCIAL OFFICERS ACT
INCOME TAX, HISTORY OF
UNITED STATES GENERAL ACCOUNTING OFFICE

Beth Haynes
Brigham Young University, Hawaii
CONSUMER PRICE INDEX

Thomas Haynes
Illinois State University

ETHICS IN MANAGEMENT
MANAGEMENT/LEADERSHIP STYLES
MANUFACTURING
SOCIAL RESPONSIBILITY

Harvey Hendrickson
Florida International University
ACCOUNTING

Margaret Hicks
Howard University
SINGLE-AUDIT ACT

Patrick Highland
Iowa City, Iowa
DIVERSITY IN THE WORKPLACE
EMPLOYEE ASSISTANCE PROGRAMS
HUMAN RELATIONS

Vicky B. Hoffman
University of Pittsburgh
COMPILATION AND REVIEW SERVICES

Edward Hsieh
California State University, Los Angeles
MONETARY POLICY

Lisa Huddlestun
Greenup, Illinois
BALANCE OF TRADE
MACROECONOMICS/MICROEC ONOMICS

Jesse Hughes
Kingwood, Texas
GOVERNMENT ACCOUNTING STANDARDS BOARD

David Hyslop
Bowling Green State University
TRAINING AND DEVELOPMENT

Christine Irvine
Nagodoches, Texas
VOICE MESSAGING

Jeffrey Jacobs
Quinnipiac College
TAXATION

Christine Jahn
Springfield, Illinois
HUMAN RESOURCE MANAGEMENT
ORGANIZATIONAL STRUCTURE

Steven E. Jameson
Norwalk, Connecicut
INSTITUTE FOR INTERNAL AUDITORS

Edmund L. Jenkins
Norwalk, Connecticut
GENERALLY ACCEPTED ACCOUNTING PRINCIPLES

Jennifer Jennes
Hooksett, New Hampshire
FADS
PUBLICITY

Carol Jones
California State Polytechnic University
TELECOMMUTING

Randy L. Joyner
Greenville, North Carolina
CAREERS IN MARKETING
COPYRIGHTS
PATENTS
RESEARCH IN BUSINESS
TRADEMARKS

Burton S. Kaliski
New Hampshire College
CREDIT/DEBIT/TRAVEL CARDS

Surendra Kaushik
Pace Univeristy
CAPITAL MARKETS
FINANCIAL INSTITUTIONS

Edward J. Keller, Jr.
Franklin Square, New York
INSURANCE

Donna McAlister Kizzier
University of Nebraska, Lincoln
DIVISION OF LABOR
NEGOTIATION

Masaaki Kotabe
Blue Bell, Pennsylvania
INTERNATIONAL INVESTMENT
TRADING BLOCS

Alan G. Krabbenhoft
Roosevelt University
SERVICE INDUSTRIES

Anthony T. Krzystofik
Hadley, Massachusetts
CERTIFIED PUBLIC ACCOUNTANT (CPA)
UNIFORM CERTIFIED PUBLIC ACCOUNTANT EXAMINATION

Janel Kupferschmid
Bloomington, Illinois
ANTITRUST LEGISLATION
OPERATIONS MANAGEMENT

Gerard A. Lange
St. John's University
FRAUDULENT FINANCIAL REPORTING

Audrey Langill
Derry, New Hampshire
SHOPPING

Christine Latino
Atkinson, Connecticut
MARKET RESEARCH

Lee Wonsick Lee
Newington, Connecticut
EMPLOYEE COMPENSATION
LEADERSHIP
PERFORMANCE APPRAISAL

Mark Lefebvre
Bow, New Hampshire
INVENTORY CONTROL

Joel Lerner
Sullivan County Community College
PERSONAL FINANCIAL PLANNING
STOCK INDEXES
STOCKS

Paula Luft
Dahinda, Illinois
COLLECTIVE BARGAINING
ECONOMIC CYCLES
LABOR UNIONS

Roger Luft
Dahinda, Illinois
CIRCULAR FLOW
ECONOMICS
ECONOMICS: A HISTORICAL PERSPECTIVE
ETHICS IN ECONOMICS
FORECASTING IN BUSINESS
MANAGEMENT
MANAGEMENT: HISTORICAL PERSPECTIVES
QUALITY MANAGEMENT

Mary Jean Lush
Delta State University
AMERICAN MARKETING ASSOCIATION
CONSUMER BILL OF RIGHTS
DEMOGRAPHICS

ENVIRONMENTAL PROTECTION AGENCY
FOOD AND DRUG ADMINISTRATION
INTERSTATE COMMERCE COMMISSION
NATIONAL RETAIL FEDERATION
NATIONAL TRANSPORTATION SAFETY BOARD
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
SECURITIES AND EXCHANGE COMMISSION
SMALL BUSINESS ADMINISTRATION
STANDARD METROPOLITAN STATISTICAL AREAS

Dorothy Maxwell
Cornish, Maine
FACSIMILE REPRODUCTION
TELEPHONE SKILLS
TEMPORARY EMPLOYMENT

G.W. Maxwell
Cornish, Maine
CORPORATION
NATIONAL BUSINESS EDUCATION ASSOCIATION
SOLE PROPRIETORSHIP
WRITING SKILLS IN BUSINESS

Beryl McEwen
Greensburough, North Carolina
JOB SATISFACTION

Thaddeus McEwen
Greensburough, North Carolina
CAREERS IN MANAGEMENT

David McGrady
Eastern Illinois University
EUROPEAN UNION
FISCAL POLICY

Robert Mednick
Chicago, Illinois
AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

Earl Meyer
Lutz, Florida
CONSUMER AND INDUSTRIAL GOODS
DISCOUNT STORES
GOODS AND SERVICES
MARKET SEGMENTATION
MARKETING CONCEPT
MASS MARKETING
TELEMARKETING
TRADE SHOWS

Mary Michel
Manhattan College
COST-BENEFIT ANALYSIS
NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM

Michael Milbier
St. Louis, Missouri
PRODUCT LABELING
PRODUCT LINES
PRODUCT MIX

James Miles
Pittsford, New York
INFORMATION PROCESSING: HISTORICAL PERSPECTIVES
STANDARDS-BASED WORK PERFORMANCE
VIDEOCONFERENCING

Allie F. Miller
Drexel University
ACCOUNTING CYCLE
BONDS

Theodore J. Mock
University of Southern California
ACCOUNTING INFORMATION SYSTEMS

Hassan Mohammadi
Illinois State University
MONEY SUPPLY

Melvin Morgenstein
Plainview, New York
FEDERAL RESERVE SYSTEM

George Mundrake
Ball State University
MULTIMEDIA SYSTEMS

Robert J. Muretta, Jr.
Westbook, Maine
GOVERNMENT FINANCIAL REPORTING

Michael Nelson
Illinois State University
TRANSFER PAYMENTS

Bernard H. Newman
Pace University
BUREAU OF LABOR STATISTICS
CAREERS IN ACCOUNTING
FINANCIAL FORECASTS AND PROJECTIONS
GOVERNMENT AUDITING STANDARDS
INTERNATIONAL MONETARY FUND
STANDARD COSTING

Cheryl Noll
Eastern Illinois University
CHANGE PROCESS
MANAGEMENT: AUTHORITY AND RESPONSIBILITY
ORGANIZATIONAL BEHAVIOR AND DEVELOPMENT

Mary Ellen Oliverio
Pace University
FINANCE: HISTORICAL PERSPECTIVES

Sharon Lund O'Neil
Houston, Texas
COMMUNICATION IN BUSINESS

Don Pallais
Richmond, Virginia
ASSURANCE SERVICES

Lou E. Pelton
University of North Texas
CHANNELS OF DISTRIBUTION

Nikole Pogeman
Bartonvill, Illinois
AMERICAN MANAGEMENT ASSOCIATION
AMERICANS WITH DISABILITIES ACT
CIVIL RIGHTS ACTS
EQUAL EMPLOYMENT OPPORTUNITY ACT
EQUAL PAY ACT

Karen Puglisi
Hooksett, New Hampshire
CLASSICS

Zane Quible
Oklahoma State University
OFFICE LAYOUT

Barry L. Reece
Pittsboro, North Carolina
CUSTOMER SERVICE

Brenda Reinsborough
Yarmouth, Maine
HEALTH ISSUES IN BUSINESS
MEETING MANAGEMENT

Tod Rejholec
Bridgeport, Illinois
NATIONAL LABOR RELATIONS BOARD

James Rinehart
Francis Marion University
DEREGULATION

Wendy Rinholen
Galva, Illinois
CAREERS IN ECONOMICS

Jim Rucker
Fort Hays State University
STRESS, WORK-RELATED

Wanda Samson
Fremont, Nebraska
SOFTWARE

Marcy Satterwhite
Charleston, Illinois
COMPETITION
COOPERATIVE
DECISION MAKING
EMPLOYEE BENEFITS
JOB ENRICHMENT

B. June Schmidt
Virginia Polytechnic Institute and State University
OFFICE TECHNOLOGY: HISTORICAL PERSPECTIVES
READING SKILLS IN BUSINESS

Armand Sequin
Emporia State University
HARDWARE
INTRANET

Anand Shetty
Iona College
ETHICS IN FINANCE
MUTUAL FUNDS

Victoria Shoaf
St. John's University
FINANCIAL STATEMENTS

Kathleen A. Simons
Bryant College
STATE SOCIETIES OF CPAS

G. Stevenson Smith
West Virginia University
COST-VOLUME-PROFIT ANALYSIS
NOT-FOR-PROFIT ACCOUNTING

Michael Spahr
Nashua, New Hampshire
MONOPOLY

Patricia Spirou
Manchester, New Hampshire
CONSUMER ADVOCACY AND PROTECTION
FRANCHISES
INTERSTATE COMMERCE
PRICE FIXING
RETAILERS
WHOLESALING

James E. Stoddard
Appalachian State University
MARKETING: HISTORICAL PERSPECTIVES

John Swope
East Carolina University
ADVERTISING AGENCIES
ETHICS IN MARKETING

Ellen Szarleta
Indiana University, Northwest
ECONOMIC DEVELOPMENT

Philip D. Taylor
Wesleyan College
INTERACTIVE TECHNOLOGIES

Allen D. Truell
University of Missouri, Columbia
ADVERTISING
CRIME AND FRAUD
GOVERNMENT ROLE IN BUSINESS
INTERNATIONAL TRADE
MARKETING
MARKETING MIX
PRICING
PROMOTION

Tatum Turner
Manchester, New Hampshire
TARGET MARKETING

Gregory Valentine
University of Southern Indiana
GROSS DOMESTIC PRODUCT
INCOME

Carson Varner
Illinois State University
ETHICS IN LAW FOR BUSINESS
LAW IN BUSINESS

Miklos A. Vasarhelyi
Rutgers University, Newark
ELECTRONIC COMMERCE

Annette Vincent
University of Southwestern Louisiana
ETHICS IN INFORMATION PROCESSING

Michelle Voto
Londonberry, New Hampshire
LIFESTYLES

Julie Watkins
Brownfield, Maine
COTTAGE INDUSTRIES

Roman L. Weil
University of Chicago
TIME VALUE OF MONEY

Jill White
Pensacola, Florida
FUTURE BUSINESS LEADERS OF AMERICA

Kathy Williams
Montvale, New Jersey
CERTIFIED MANAGEMENT ACCOUNTANT (CMA)
INSTITUTE OF MANAGEMENT ACCOUNTANTS

Mark Wilson
Columbus, Ohio
CAREERS IN FINANCE

Denise Woodbury
Brigham Young University, Hawaii
CURRENCY EXCHANGE
ECONOMIC SYSTEMS
MONEY
OPPORTUNITY COST

Charles W. Wootton
Eastern Illinois University
ACCOUNTING: HISTORICAL PERSPECTIVES

Ralph Wray
Bloomington, Indiana
ECONOMIC ANALYSIS

Norman Wright
Brigham Young University, Hawaii
GLOBAL ECONOMY
STRATEGIC MANAGEMENT

Douglas E. Ziegenfuss
Virginia Beach, Virginia
PERFORMANCE AUDITS

A

ABSOLUTE AND COMPARATIVE ADVANTAGES

(SEE: *Marketing*)

ABSOLUTE AND RELATIVE PRICES

(SEE: *Pricing*)

ACCOUNTING

Accounting is a field of specialization critical to the functioning of all types of organizations. Accounting often is referred to as ‘‘the language of business’’ because of its role in maintaining and processing all relevant financial information that an entity requires for its managing and reporting purposes.

Accountants often have a specific subspecialization and function at one of several levels. Preparation for the field is provided by secondary schools, postsecondary business schools, community colleges, and four-year colleges and universities.

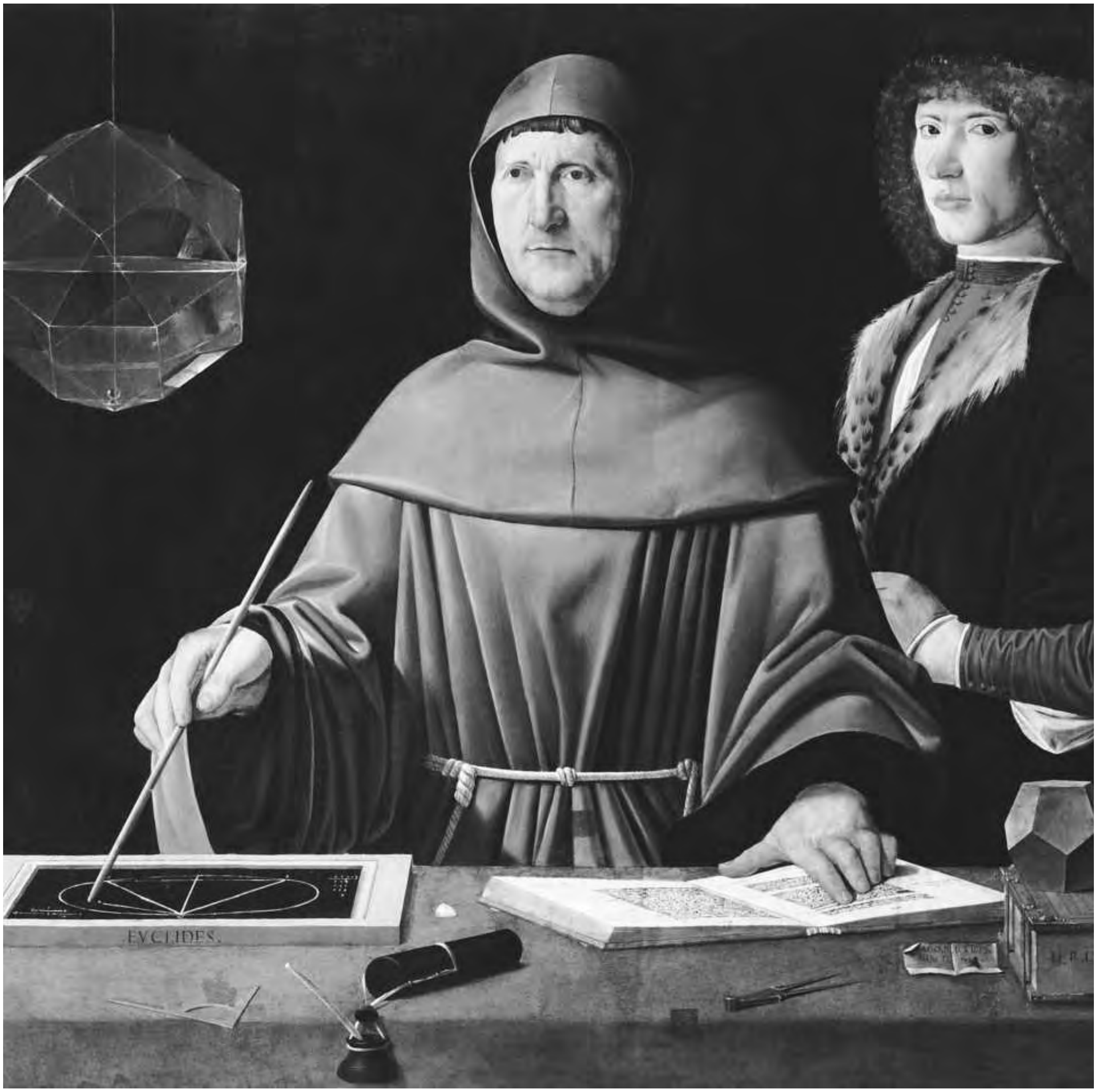
WHAT IS ACCOUNTING?

Accounting is a body of principles and conventions as well as an established general process for capturing financial information related to an entity's resources and their use in meeting the entity's goals. Accounting is a service function that provides information of value to all operating units and to other service functions, such as the headquarters offices of a large corporation.

Origin of Accounting Modern accounting is traced to the work of an Italian monk, Luca Pacioli, whose publication in A.D. 1494 described the double-entry system, which continues to be the fundamental structure for contemporary accounting systems in all types of entities. When double-entry accounting is used, the balance sheet identifies both the resources controlled by the entity and those parties who have claims to those assets.

Early histories of business identify the bookkeeper as a valuable staff member. As businesses became more complex, the need for more astute review and interpretation of financial information was met with the development of a new profession—public accounting. In the United States, public accounting began in the latter part of the nineteenth century. The first organization was established in 1887; the first professional examination was administered in December 1896.

In the early days of the twentieth century, numerous states established licensing requirements and began to administer examinations. During the first century of public accounting in the United States, the American Institute of Certified Public Accountants (and its predecessor organizations) provided strong leadership to meet the changing needs of business, not-for-profit, and governmental entities.



Fra Luca Pacioli's 1494 publication described the double-entry system.

Generally Accepted Accounting Principles (**GAAP**) No single source provides principles for handling all transactions and events. Over time, conventional rules have developed that continue to be relevant. Additionally, groups have been authorized to establish accounting standards. The Financial Accounting Standards Board (FASB) assumed responsibility for accounting standards and principles in 1973. It is authorized to amend existing rules and establish new ones. In 1992, the Auditing Standards Board established the GAAP hierarchy. At the highest level of the hierarchy are FASB statements and interpretations; APB opinions were issued from 1959 to 1973 by the Accounting Principles Board (APB), and Accounting Research Bulletins, issued until

1959 by the Committee on Accounting Procedure (CAP); both the APB and CAP were committees of the American Institute of Certified Public Accountants (AICPA).

What type of unit is served by accounting? Probably no concept or idea is more basic to accounting than the accounting unit or *entity*, a term used to identify the organization for which the accounting service is to be provided and whose accounting or other information is to be analyzed, accumulated, and reported. The entity can be any area, activity, responsibility, or function for which information would be useful. Thus, an entity is established to provide the needed focus of attention. The information about one entity can be consolidated with that of a part or all of another, and this combination process can be continued until the combined entity reaches the unit that is useful for the desired purpose.

Accounting activities may occur within or outside the organization. Although accounting is usually identified with privately owned, profit-seeking entities, its services also are provided to not-for-profit organizations such as universities or hospitals, to governmental organizations, and to other types of units. The organizations may be small, owner-operated enterprises offering a single product or service, or huge multi-enterprise, international conglomerates with thousands of different products and services. The not-for-profit, governmental, or other units may be local, national, or international; they may be small or very large; they may even be entire nations, as in national income accounting. Since not-for-profit and governmental accounting are covered elsewhere in this encyclopedia, the balance of this article will focus on accounting for privately owned, profit-seeking entities.

What is the work of accountants? Accountants help entities be successful, ethical, responsible participants in society. Their major activities include observation, measurement, and communication. These activities are analytical in nature and draw on several other disciplines (e.g., economics, mathematics, statistics, behavioral science, law, history, and language/communication).

Accountants identify, analyze, record, and accumulate facts, estimates, forecasts, and other data about the unit's activities; then they translate these data into information that can be useful for a specific purpose.

The data accumulation and recording phase traditionally has been largely clerical; typically and appropriately, this has been called bookkeeping, which is still a common and largely manual activity, especially in smaller firms that have not adopted state-of-the-art technology. But with advances in information technology and user-friendly software, the clerical aspect has become largely electronically performed, with internal checks and controls to assure that the input and output are factual and valid.

Accountants design and maintain accounting systems, an entity's central information system, to help control and provide a record of the entity's activities, resources, and obligations. Such systems also facilitate reporting on all or part of the entity's accomplishments for a period of time and on its status at a given point in time.

An organization's accounting system provides information that (1) helps managers make decisions about assembling resources, controlling, and organizing financing and operating activities; and (2) aids other users (employees, investors, creditors, and others—usually called stakeholders) in making investment, credit, and other decisions.

The accounting system must also provide internal controls to ensure that (1) laws and enterprise policies are properly implemented; (2) accounting records are accurate; (3) enterprise assets are used effectively (e.g., that idle cash balances are being invested to earn returns); and (4) steps be taken to reduce chances of losing assets or incurring liabilities from fraudulent or similar activities, such as the carelessness or dishonesty of employees, customers, or suppliers. Many of these controls are simple (e.g., the prenumbering of documents and accounting for all numbers); others require division of duties among employees to separate record keeping and custodial tasks in order to reduce opportunities for falsification of records and thefts or misappropriation of assets.

An enterprise's system of internal controls usually includes an internal auditing function and personnel to ensure that prescribed data handling and asset/liability protection procedures are being followed. The internal auditor uses a variety of approaches, including observation of current activities, examination of past transactions, and simulation—often using sample or fictitious transactions—to test the accuracy and reliability of the system.

Accountants may also be responsible for preparing several types of documents. Many of these (e.g., employees' salary and wage records) also serve as inputs for the accounting system, but many are needed to satisfy other reporting requirements (e.g., employee salary records may be needed to support employee claims for pensions). Accountants also provide data for completing income tax returns.

What is the accountant's role in decision making? Accountants have a major role in providing information for making economic and financial decisions. Rational decisions are usually based on analyses and comparisons of estimates, which in turn, are based on accounting and other data that project future results from alternative courses of action.

External or financial accounting, reporting, and auditing are directly involved in providing information for the decisions of investors and creditors that help the capital markets to efficiently and effectively allocate resources to enterprises; internal, managerial, or management accounting is responsible for providing information and input to help managers make decisions on the efficient and effective use of enterprise resources.

The accounting information used in making decisions within an enterprise is not subject to governmental or other external regulation, so any rules and constraints are largely self-imposed. As a result, in developing the data and information that are relevant for decisions within the enterprise, managerial accountants are constrained largely by cost-benefit considerations and their own ingenuity and ability to predict future conditions and events.

But accounting to external users (financial accounting, reporting, and auditing) has many regulatory constraints—especially if the enterprise is a "public" corporation whose securities are registered (under the United States Securities Acts of 1933 and 1934) with the Securities and Exchange Commission (SEC) and traded publicly over-the-counter or on a stock exchange. Public companies are subject to regulations and reporting requirements imposed and enforced by the SEC; to rules and standards established for its financial reports by the FASB and enforced by the SEC; to regulations of the organization where its securities are traded; and to the regulations of the AICPA, which establishes requirements and standards for its members (who may be either internal or external accountants or auditors).

If the entity is a state or local governmental unit, it is subject to the reporting standards and requirements of the Government Accounting Standards Board. If the entity is private and not a profit-seeking unit, it is subject to various reporting and other regulations, including those of the Internal Revenue Service, which approves its tax status and with which it must file reports.

Largely as a result of the governmental regulation of private profit-seeking businesses that began in 1933, an increasingly clear distinction has been made between managerial or internal accounting and financial accounting that is largely for external users. One important exception to this trend, however, was the change adopted in the 1970s in the objectives of financial reporting such that both managerial and financial accounting now have the same objective: to provide information that is useful for making economic decisions.

But it must be recognized that although the financial accounting information reported to stakeholders comes from the organization's accounting system, its usefulness for decision making is limited. This is because it is largely historical—it reflects events and activities that occurred in the past, not what is expected in the future.

Even estimated data such as budgets and standard costs must be examined regularly to determine whether these past estimates continue to be indicative of current conditions and expectations and thus are useful for making decisions. Thus historical accounting information must be examined carefully, modified, and supplemented to make certain that what is used is relevant to expectations about the future.

But it also must be recognized that accounting can and does provide information that is current and useful in making estimates about future events. For example, accounting provides current-value information about selected items, such as readily marketable investments in debt and equity securities and inventories, and it provides reports on what the organization plans to accomplish and its expectations about the future in budgets and earnings forecasts.

Who uses accounting information for decision making? The information developed by the accountant's information system can be useful to:

- Managers in planning, controlling, and evaluating their organization's activities
- Owners, directors, and others in evaluating the performance of the organization and determining operating, compensation, and other policies
- Union, governmental, regulatory, taxing, environmental, and other entities in evaluating whether the organization is conforming with applicable contracts, rules, laws, and public policies and/or whether changes are needed;
- Existing and potential owners, lenders, employees, customers, and suppliers in evaluating their current and future commitments to the organization
- Accounting researchers, security analysts, security brokers and dealers, mutual-fund managers, and others in their analyses and evaluations of enterprises, capital markets, and/or investors

The services that accounting and the accountant can provide have been enhanced in many ways since the 1970s by advances in computers and other information technology. The impact of these changes is revolutionizing accounting and the accounting profession. But the changes have yet to reach their ultimate potential. For example, accounting in the 1990s began to provide current-value information and estimates about the future that an investor or other user would find useful for decision making. The availability of computer software and the Internet greatly enhanced the potential for data and information services. Such changes create opportunities for accounting and accountants and also will require substantial modifications in the traditional financial accounting and reporting model.

What is the profession of accounting? At the core of the profession of accounting is the certified public accountant (CPA) who has passed the national CPA examination, been licensed in at least one state or territory, and engages in the practice of public accounting/auditing in a public accounting or CPA firm. The CPA firm provides some combination of two or more of four types of services: accounting, auditing, income tax planning and reporting, and management advising/consulting. Analysis of trends indicates that the demand for auditing services has peaked and that most of the growth experienced by public accounting firms is in the consulting area.

Accounting career paths, specializations, or subprofessions for CPAs who join profit-seeking enterprises include being controllers, chief financial officers, or internal auditors. Other career paths include being controllers or chief financial officers in not-for-profit or government organizations and teaching in colleges and universities. Students should note that non-CPAs also could enter these subprofessions and that certificates, but not licenses, could be earned by passing examinations in several areas, including internal auditing, management accounting, and bank auditing.

How do environmental changes impact the accounting profession? Numerous changes in the environment make the practice of accounting and auditing much different in the new century than it was in the 1970s. For example, professional accounting firms now actively compete for clients by advertising extensively in various media, a practice that at one time was forbidden by their code of professional conduct. Mergers of clients have led CPA firms into mergers as well, such that the Big Eight is now the Big Five and the second-tier group has been reduced from twelve firms to about five. Another result of competition and other changes has been that some of the largest employers of CPAs now include income tax and accounting services firms such as H&R Block and an American Express subsidiary.

Competition among CPAs also has led the SEC to expand its regulatory and enforcement activities to ensure that financial reports are relevant and reliable. From its inception, the SEC has had legal authority to prescribe the accounting principles and standards used in the financial reports of enterprises whose securities are publicly traded, but it has delegated this responsibility to the accounting profession. Since 1973, that organization has been the FASB, with which the SEC works closely. But since the FASB is limited to performing what is essentially a legislative function, the SEC has substantially increased its enforcement activities to ensure that the FASB's standards are appropriately applied in financial reports and that accountants/auditors act in the public interest in performing their independent audits—for which the Securities Acts have given the CPA profession a monopoly.

How does a student prepare for the accounting profession? Persons considering entering the accounting profession should begin by doing some self-analysis to determine whether they enjoy mathematical, problem- or puzzle-solving, or other analytical activities; by taking some aptitude tests; or by talking with accounting teachers or practitioners about their work.

Anyone interested in becoming an accounting professional should expect to enter a rigorous five-year education program and to earn a master's degree in order to qualify to enter the profession and to sit for the CPA examination. To build a base for rising to the top of the profession, students should select courses that help them learn how to think and to define and solve problems. The courses should help them to develop analytical (logical, mathematical, statistical), communication (oral, reading, writing), computer, and interpersonal skills. The early part of the program should emphasize arts and sciences courses in these skill-development areas.

The person should begin to develop word-processing, data-processing, and Internet skills long before entering college and should expect to maintain competence in them throughout his or her professional career. These skills greatly enhance and facilitate all phases and aspects of what accounting and accountants attempt to do. What can be done is limited only by technology and by the sophistication of the system, its operators, and users.

(SEE ALSO: *Accounting cycle*; *Careers in accounting*; *Financial Accounting Standards Board*; *Certified Management Accountant*; *Generally Accepted Accounting Principles*; *Government accounting*; *Institute for Internal Auditors*; *Institute of Management Accountants*; *International Accounting Standards*; *International Federation of Accountants*; *National Association of Boards of Accountancy*; *Public Oversight Board*; *Uniform Certified Public Accountant examination*; *United States General Accounting Office*; *Securities Acts: Requirements for accounting*)

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HARVEY S. HENDRICKSON

ACCOUNTING CYCLE

The primary objectives of the accounting function in an organization are to process financial information and to prepare financial statements at the end of the accounting period. Companies must systematically process financial information and must have staff who prepare financial statements on a monthly, quarterly, and/or annual basis. To meet these primary objectives, a series of steps is required. Collectively these steps are known as the *accounting cycle.* The steps, applicable to a manual accounting system, are described below. Later, there will be a brief discussion of a computerized processing system.

THE STEPS OF THE CYCLE

1. *Collect and analyze data from transactions and events:* As transactions and events related to financial resources occur, they are analyzed with respect to their effect on the financial position of the company. As an example, consider the sales for a day in a retail establishment that are collected on a cash register tape. These sales become inputs into the accounting system. Every organization establishes a chart of accounts that identifies the categories for recording transactions and events. The chart of accounts for the retail establishment mentioned earlier in this paragraph will include *Cash* and *Sales.*
2. *Journalize transactions:* After collecting and analyzing the information obtained in the first step, the information is entered in the *general journal,* which is called the *book of original entry.* Journalizing transactions may be done continually, but this step can de done in a batch at the end of the day if data from similar transactions are being sorted and collected, on a cash register tape, for example. At the end of the day, the sales of $4,000 for cash would be recorded in the general journal in this form:
   Cash 4000
   Sales 4000
3. *Post to general ledger:* The general journal entries are posted to the general ledger, which is organized by *account.* All transactions for the same account are collected and summarized; for example, the account entitled "Sales" will accumulate the total value of the sales for the period. If posting were done daily, the "Sales" account in the ledger would show the total sales for each day as well as the cumulative sales for the period to date. Posting to ledger accounts may be less frequent, perhaps at the end of each day, at the end of the week, or possibly even at the end of the month.
4. *Prepare an unadjusted trial balance:* At the end of the period, double-entry accounting requires that debits and credits recorded in the general ledger be equal. *Debit* and *credit* merely signify position—left and right, respectively. Some accounts normally have debit balances (e.g., assets and expenses) and other accounts have credit balances (e.g., liabilities, owners' equity and revenues). As transactions are recorded in the general journal and subsequently posted to the ledger, all amounts recorded on the debit side of accounts (i.e., recorded on the left side) must equal all amounts recorded on the credit side of accounts (i.e., recorded on the right side). Preparing an unadjusted trial balance tests the equality of debits and credits as recorded in the general ledger. If unequal amounts of debits and credits are found in this step, the reason for the inequality is investigated and corrected before proceeding to the next step. Additionally, this unadjusted trial balance provides the balances of all the accounts that may require adjustment in the next step.
5. *Prepare adjustments:* Period-end adjustments are required to bring accounts to their proper balances after considering transactions and/or events not yet recorded. Under accrual accounting, revenue is recorded when earned and expenses when incurred. Thus, an entry may be required at the end of the period to record revenue that has been earned but not yet recorded on the books. Similarly, an adjustment may be required to record an expense that may have been incurred but not yet recorded.

6. *Prepare an adjusted trial balance:* As with an unadjusted trial balance, this step tests the equality of debits and credits. However, assets, liabilities, owners' equity, revenues, and expenses will now reflect the adjustments that have been made in the previous step. If there should be unequal amounts of debits and credits or if an account appears to be incorrect, the discrepancy or error is investigated and corrected.
7. *Prepare financial statements:* Financial statements are prepared using the corrected balances from the adjusted trial balance. These are one of the primary *outputs* of the financial accounting system.
8. *Close the accounts:* Revenues and expenses are accumulated and reported by period, either a monthly, quarterly, or yearly. To prevent their not being added to or comingled with revenues and expenses of another period, they need to be closed out—that is, given zero balances—at the end of each period. Their *net* balances, which represent the income or loss for the period, are transferred into owners' equity. Once revenue and expense accounts are closed, the only accounts that have balances are the asset, liability, and owners' equity accounts. Their balances are carried forward to the next period.
9. *Prepare a post-closing trial balance:* The purpose of this final step is two-fold: to determine that all revenue and expense accounts have been closed properly and to test the equality of debit and credit balances of all the balance sheet accounts, that is, assets, liabilities and owners' equity.

COMPUTERIZED ACCOUNTING SYSTEM

A computerized accounting system saves a great deal of time and effort, considerably reduces (if not *eliminates*) mathematical errors, and allows for much more timely information than does a manual system. In a real-time environment, accounts are accessed and updated immediately to reflect activity, thus combining steps 2 and 3 as discussed in the preceding section. The need to test for equality of debits and credits through trial balances is usually not required in a computerized system accounting since most systems test for equality of debit and credit amounts as they are entered. If someone were to attempt to input data containing an inequality, the system would not accept the input. Since the computer is programmed to post amounts to the various accounts and calculate the new balances as new entries are made, the possibility of mathematical error is markedly reduced.

Computers may also be programmed to record some adjustments automatically at the end of the period. Most software programs are also able to prepare the financial statement once it has been determined the account balances are correct. The closing process at the end of the period can also be done automatically by the computer.

Human judgment is still required to analyze the data for entry into the computer system correctly. Additionally, the accountant's knowledge and judgment are frequently required to determine the adjustments that are needed at the end of the reporting period. The mechanics of the system, however, can easily be handled by the computer.

(SEE ALSO: *Accounting*; *Accounting information systems*)

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Allie F. Miller

ACCOUNTING: CONCEPTUAL FRAMEWORK

(SEE ALSO: *Accounting*)

ACCOUNTING: HISTORICAL PERSPECTIVES

With the establishment of the first English colonies in America, accounting or bookkeeping, as the discipline was referred to then, quickly assumed an important role in the development of American commerce. Two hundred years, however, would pass before accounting would separate from bookkeeping, and nearly three hundred years would pass before the profession of accounting, as it is now practiced, would emerge.

For individuals and businesses, accounting records in Colonial America often were very elementary. Most records of this period relied on the single-entry method or were simply narrative accounts of transactions. As rudimentary as they were, these records were important because the colonial economy was largely a barter and credit system with substantial time passing before payments were made. Accounting records were often the only reliable records of such historical transactions.

THE EMERGENCE OF ACCOUNTING

Prior to the late 1800s, the terms *bookkeeping* and *accounting* were often used interchangeably because the recording/posting process was central to both activities. There was little need for financial statements (e.g., income statements) because most owners had direct knowledge of their businesses and, therefore, could rely on elementary bookkeeping procedures for information.

Although corporations (e.g., banks, canal companies) were present in the United States prior to the early 1800s, their numbers were few. Beginning in the late 1820s, however, the number of corporations rapidly increased with the creation and expansion of the railroads. To operate successfully, the railroads needed cost reports, production reports, financial statements, and operating ratios that were more complex than simple recording procedures could provide. Alfred D. Chandler, Jr. (1977), noted the impact of the railroads on the development of accounting in his classic work, *The Visible Hand*, when he stated "after 1850, the railroad was central in the development of the accounting profession in the United States" (p. 110).

With the increase in the number of corporations, there also arose a demand for additional financial information that A.C. Littleton (1933/1988) in his landmark book, *The Rise of the Accounting Profession*, called "figure" knowledge. With no direct knowledge of a business, investors had to rely on financial statements for information, and to create those statements, more complex accounting methods were required. The accountant's responsibility, therefore, expanded beyond simply recording entries to include the preparation, classification, and analysis of financial statements. As John L. Carey (1969) wrote in *The Rise of the Accounting Profession*, "the nineteenth century saw bookkeeping expanded into accounting" (p. 15).

Additionally, as the development of the corporation created a greater need for the services of accountants, the study of commerce and accounting became more important. Although there had been trade business schools and published texts on accounting/bookkeeping, traditional colleges had largely ignored the study of business and accounting. In 1881, however, the Wharton School of Finance and Economy was founded, and two years later, the school added accounting to its curriculum. As other major universities created schools of commerce, accounting secured a significant place in the curriculum.

With a separation of management and ownership in corporations, there also arose a need for an independent party to review the financial statements. Someone was needed to represent the owners' interest and to verify that the statements accurately presented the financial conditions of the company. Moreover, there was often an expectation that an independent review would discover whether managers were violating their fiduciary duties to the owners. Additionally, because the late nineteenth century was a period of major industrial mergers, someone was needed to verify the reported values of the companies. The independent public accountant, a person whose obligation was not to the managers of a company but to its shareholders and potential investors, provided the knowledge and skills to meet these needs.

In 1913, the responsibilities of and job opportunities for accountants again expanded with the ratification of the Sixteenth Amendment to the Constitution, which allowed a federal income tax. Accountants had become somewhat familiar with implementing a national tax with the earlier passage of the Corporation Excise Tax Law. Despite the earlier law, however, many companies had not set up proper systems to determine taxable income and few were familiar with concepts such as depreciation and accrual accounting.

As tax rates increased, tax services became even more important to accounting firms and often opened the door to providing other services to a client. Accounting firms, therefore, were often engaged to establish a proper accounting system and audit financial statements as well as prepare the required tax return.

Thus, in contrast to bookkeeping which often had been considered a trade, the responsibilities of accounting had expanded by the early twentieth century to such an extent that it now sought professional status. One foundation of the established professions (e.g., medicine, law) was professional certification, which accounting did not have. In 1896, with the support of several accounting organizations, New York State passed a law restricting the title certified public accountant (CPA) to those who had passed a state examination and had acquired at least three years of accounting experience. Similar laws were soon passed in several states.

PROFESSIONAL ORGANIZATIONS

Throughout the history of accounting, professional organizations have made major contributions to the development of the profession. For example, in 1882, the Institute of Accountants and Bookkeepers of New York (IABNY) was organized with the primary aim of increasing the level of educational resources available for accountants. In 1886, the IABNY became the Institute of Accounts, and it continued to be active in promoting accounting education for nearly twenty years. Meanwhile, the first national organization for accounting educators, the American Association of University Instructors in Accounting (AAUIP), was organized in 1916. In 1935, the AAUIP was reorganized as the American Accounting Association.

The national public accounting organization, the American Association of Public Accountants (AAPA), was incorporated in 1887. Reflecting the need of most professions for a code of ethics, the AAPA added a professional ethics section to its bylaws in 1907. The AAPA was reorganized as the American Institute of Accountants in the United States of America and then later as the American Institute of Accountants (AIA). In 1921, the American Society of Certified Public Accountants (ASCPA) was established and became a rival to the AIA for leadership in the public accounting area. The rivalry continued until 1937, when the ASCPA merged with the AIA. In 1957, the AIA became the American Institute of Certified Public Accountants (AICPA).

In contrast to the public accounting emphasis of the AIA and ASCPA, the National Association of Cost Accountants (NACA) was founded in 1919. The NACA placed an emphasis on the development of cost controls and proper reporting within companies. In 1957, the NACA changed its name to the National Association of Accountants (NAA) in recognition of the expansion of managerial accounting beyond traditional cost accounting. Then, in 1991, recognizing its emphasis on the managerial aspects of accounting, the NAA became the Institute of Management Accountants.

EXTERNAL AND INTERNAL REGULATION

During the nineteenth century, the federal government generally allowed accounting to regulate itself. Then, in 1913, Congress established the Federal Reserve System and, one year later, the Federal Trade Commission (FTC). From this date forward, federal agencies have had an increasing impact on the profession of accounting.

The government's first major attempt at the formalization of authoritative reporting standards was in 1917 with the Federal Reserve Board's publication of *Uniform Accounting.* In 1918, the bulletin was reissued as *Approved Methods for the Preparation of Balance Sheet Statements.* Although directed toward auditing the balance sheet, the report presented model income and balance sheet statements. Because the proposal was only a recommendation, however, its acceptance was limited.

The impetus for stricter financial reporting was provided by the collapse of the securities market in 1929 and the revelation of massive fraud in a company listed on the New York Stock Exchange (NYSE). In 1933, the NYSE announced that companies applying for a listing on the exchange must have their financial statements audited by an independent public accountant. The scope of these audits had to follow the revised guidelines set forth by the Federal Reserve in 1929.

Another major innovation in the regulation of accounting was the passage of the Securities Act of 1933 and the Securities and Exchange Act of 1934. The 1933 act conferred upon the FTC the authority to prescribe the accounting methods for companies to follow. Under this act, accountants could be held liable for losses that resulted from material omissions or misstatements in registration statements they had certified. The 1934 act transferred the authority to prescribe accounting methods to the newly established Securities and Exchange Commission (SEC) and required that financial statements filed with the SEC be certified by an independent public accountant.

With the creation of the SEC and the passage of new securities laws, the federal government assumed a central role in the establishment of basic requirements for the issuance and auditing of financial reports. Additionally, these acts increased the importance of accountants and enlarged the accountant's responsibility to the general public. Under these acts, not only did accountants have a responsibility to the public, they were now potentially liable for their actions.

In 1938, the SEC delegated much of its authority to prescribe accounting practices to the AIA and its Committee on Accounting Procedures (CAP). In 1939, CAP issued its first of fifty-one Accounting Research Bulletins. Responding to criticism of CAP, the AICPA (formerly the AIA) in 1959 replaced the CAP with the Accounting Principles Board (APB). The APB was designed to issue accounting opinions after it had considered previous research studies, and in 1962, the APB issued its first of thirty-one opinions. Although the SEC had delegated much of its standard-setting authority to the AICPA, the commission exercised its right to approve all standards when it declared that companies did not have to follow the rules set forth in APB No. 2, The Investment Credit.

Responding to criticism of the APB, a study group chaired by Francis M. Wheat was established to review the board structure and the rule-making process. The committee recommended that an independent, full time, more diverse standards board replace the APB. Following the recommendations, the Financial Accounting Standards Board (FASB) was established in 1973. This board is independent of the AICPA and issued its first statement in 1973.

THE CHANGING GENDERIZATION OF THE WORK FORCE

With the separation of bookkeeping from accounting, the demand for women bookkeepers dramatically increased, and by 1930, over 60 percent of all bookkeepers were women. A similar increase in the demand for women accountants, however, did not occur. Although World War II created some opportunities for women in accounting, at the start of the second half of the twentieth century, accounting still was not considered an appropriate career for most women. In fact, in 1950, only 15 percent of the more than 300,000 accountants in the United States were women. Moreover, less than 4 percent of college students majoring in accounting then were women.

In the 1960s, social and legal events began that ultimately provided opportunities for women in the profession of accounting. As these events occurred, the overall demand for accounting services and accountants also greatly increased. This demand became so large that the traditional labor pool of men was not sufficient to maintain the accounting work force. Concurrently, women majoring in accounting increased dramatically from less than 5 percent of all accounting majors in 1960 to over 50 percent in 1985.

Given the increase of women accounting majors and the inability of the traditional labor pool to meet the work force demand, accounting (especially public accounting) increased the hiring of women. By 1990, women comprised a majority of the accounting work force. It would be the turn of the twenty-first century, however, before women began to obtain a significant number of upper-level management positions in accounting.

THE TWENTY-FIRST CENTURY

The accountant, the accounting firm, and the accounting profession of the twenty-first century are quite different from what existed at the beginning of the twentieth century. In contrast to a bookkeeper manually recording entries in a large bound volume, an accountant is now responsible for information concerning all facets of a business and is dependent on the latest technology for processing that information. In contrast to small local firms, accounting firms now can be large international organizations with reported revenues of billions of dollars. In addition to the traditional audit/attest information, accounting firms provide their clients with tax services, financial planning, system analysis, consulting, and legal services. At the beginning of the twentieth century, the accounting profession was just emerging. Today, the profession is comprised of thousands of men and women working in public and private firms as well as profit and nonprofit organizations as members of management teams or as valued consultants.

(SEE ALSO: *American Institute of CPAs*; *National Association of Boards of Accountancy*)

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CHARLES W. WOOTTON
CAROL J. NORMAND

ACCOUNTING INFORMATION SYSTEMS

Accounting Information Systems (AISs) combine the study and practice of accounting with the design, implementation, and monitoring of information systems. Such systems use modern information technology resources together with traditional accounting controls and methods to provide users the financial information necessary to manage their organizations.

AIS TECHNOLOGY

Input The input devices commonly associated with AIS include: standard personal computers or workstations running applications; scanning devices for standardized data entry; electronic communication devices for electronic data interchange (EDI) and e-commerce. In addition, many financial systems come "Web-enabled" to allow devices to connect to the World Wide Web.

Process Basic processing is achieved through computer systems ranging from individual personal computers to large-scale enterprise servers. However, conceptually, the underlying processing model is still the "double-entry" accounting system initially introduced in the fifteenth century.

Output Output devices used include computer displays, impact and nonimpact printers, and electronic communication devices for EDI and e-commerce. The output content may encompass almost any type of financial reports from budgets and tax reports to multinational financial statements.

MANAGEMENT INFORMATION SYSTEMS (MIS)

MISs are interactive human/machine systems that support decision making for users both in and out of traditional organizational boundaries. These systems are used to support an organization's daily operational activities; current and future tactical decisions; and overall strategic direction. MISs are made up of several major applications including, but not limited to, the financial and human resources systems.

Financial applications make up the heart of an AIS in practice. Modules commonly implemented include: general ledger, payables, procurement/purchasing, receivables, billing, inventory, assets, projects, and budgeting.

Human resource applications make up another major part of modern information systems. Modules commonly integrated with the AIS include: human resources, benefits administration, pension administration, payroll, and time and labor reporting.

AIS—INFORMATION SYSTEMS IN CONTEXT

AISs cover all business functions from backbone accounting transaction processing systems to sophisticated financial management planning and processing systems.

Financial reporting starts at the operational levels of the organization, where the transaction processing systems capture important business events such as normal production, purchasing, and selling activities. These events (transactions) are classified and summarized for internal decision making and for external financial reporting.

Cost accounting systems are used in manufacturing and service environments. These allow organizations to track the costs associated with the production of goods and/or performance of services. In addition, the AIS can provide advanced analyses for improved resource allocation and performance tracking.

Management accounting systems are used to allow organizational planning, monitoring, and control for a variety of activities. This allows managerial-level employees to have access to advanced reporting and statistical analysis. The systems can be used to gather information, to develop various scenarios, and to choose an optimal answer among alternative scenarios.

DEVELOPMENT

The development of an AIS includes five basic phases: planning, analysis, design, implementation, and support. The time period associated with each of these phases can be as short as a few weeks or as long as several years.

Planning—project management objectives and techniques The first phase of systems development is the planning of the project. This entails determination of the scope and objectives of the project, the definition of project responsibilities, control requirements, project phases, project budgets, and project deliverables.

Analysis The analysis phase is used to both determine and document the accounting and business processes used by the organization. Such processes are redesigned to take advantage of best practices or of the operating characteristics of modern system solutions.

Data analysis is a thorough review of the accounting information that is currently being collected by an organization. Current data are then compared to the data that the organization should be using for managerial purposes. This method is used primarily when designing accounting transaction processing systems.

Decision analysis is a thorough review of the decisions a manager is responsible for making. The primary decisions that managers are responsible for are identified on an individual basis. Then models are created to support the manager in gathering financial and related information to develop and design alternatives, and to make actionable choices. This method is valuable when decision support is the system's primary objective.

Process analysis is a thorough review of the organization's business processes. Organizational processes are identified and segmented into a series of events that either add or change data. These processes can then be modified or reengineered to improve the organization's operations in terms of lowering cost, improving service, improving quality, or improving management information. This method is appropriate when automation or reengineering is the system's primary objective.

Design The design phase takes the conceptual results of the analysis phase and develops detailed, specific designs that can be implemented in subsequent phases. It involves the detailed design of all inputs, processing, storage, and outputs of the proposed accounting system. Inputs may be defined using screen layout tools and application generators. Processing can be shown through the use of flowcharts or business process maps that define the system logic, operations, and work flow. Logical data storage designs are identified by modeling the relationships among the organization's resources, events, and agents through diagrams. Also, entity relationship diagram (ERD) modeling is used to document large-scale database relationships. Output designs are documented through the use of a variety of reporting tools such as report writers, data extraction tools, query tools, and on-line analytical processing tools. In addition, all aspects of the design phase can be performed with software tool sets provided by specific software manufacturers.

Reporting is the driving force behind an AIS development. If the system analysis and design are successful, the reporting process provides the information that helps drive management decision making. Accounting systems make use of a variety of scheduled and on-demand reports. The reports can be tabular, showing data in a table or tables; graphic, using images to convey information in a picture format; or matrices, to show complex relationships in multiple dimensions.

There are numerous characteristics to consider when defining reporting requirements. The reports must be accessible through the system's interface. They should convey information in a proactive manner. They must be relevant. Accuracy must be maintained. Lastly, reports must meet the information processing (cognitive) style of the audience they are to inform.

Reports are of three basic types: A *filter report* that separates select data from a database, such as a monthly check register; a *responsibility report* to meet the needs of a specific user, such as a weekly sales report for a regional sales manager; a *comparative report* to show period differences, percentage breakdowns and variances between actual and budgeted expenditures. An example would be the financial statement analytics showing the expenses from the current year and prior year as a percentage of sales.

Screen designs and system interfaces are the primary *data capture devices* of AISs and are developed through a variety of tools. *Storage* is achieved through the use of normalized databases that assure functionality and flexibility.

Business process maps and *flowcharts* are used to document the operations of the systems. Modern AISs use specialized databases and processing designed specifically for accounting operations. This means that much of the base processing capabilities come delivered with the accounting or enterprise software.

Implementation The implementation phase consists of two primary parts: construction and delivery. Construction includes the selection of hardware, software and vendors for the implementation; building and testing the network communication systems; building and testing the databases; writing and testing the new program modifications; and installing and testing the total system from a technical standpoint. Delivery is the process of conducting final system and user acceptance testing; preparing the conversion plan; installing the production database; training the users; and converting all operations to the new system.

Tool sets are a variety of application development aids that are vendor-specific and used for customization of delivered systems. They allow the addition of fields and tables to the database, along with ability to create screen and other interfaces for data capture. In addition, they help set accessibility and security levels for adequate internal control within the accounting applications.

Security exists in several forms. Physical security of the system must be addressed. In typical AISs the equipment is located in a locked room with access granted only to technicians. Software access controls are set at several levels, depending on the size of the AIS. The first level of security occurs at the network level, which protects the organization's communication systems. Next is the operating system level security, which protects the computing environment. Then, database security is enabled to protect organizational data from theft, corruption, or other forms of damage. Lastly, application security is used to keep unauthorized persons from performing operations within the AIS.

Testing is performed at four levels. Stub or unit testing is used to insure the proper operation of individual modifications. Program testing involves the interaction between the individual modification and the program it enhances. System testing is used to determine that the program modifications work within the AIS as a whole. Acceptance testing ensures that the modifications meet user expectations and that the entire AIS performs as designed.

Conversion entails the method used to change from an old AIS to a new AIS. There are several methods for achieving this goal. One is to run the new and old systems in parallel for a specified period. A second method is to directly cut over to the new system at a specified point. A third is to phase in the system, either by location or system function. A fourth is to pilot the new system at a specific site before converting the rest of the organization.

Support The *support* phase has two objectives. The first is to update and maintain the AIS. This includes fixing problems and updating the system for business and environmental changes. For example, changes in generally accepted accounting principles (GAAP) or tax laws might necessitate changes to conversion or reference tables used for financial reporting. The second objective of support is to continue development by continuously improving the business through adjustments to the AIS caused by business and environmental changes. These changes might result in future problems, new opportunities, or management or governmental directives requiring additional system modifications.

ATTESTATION

AISs change the way internal controls are implemented and the type of audit trails that exist within a modern organization. The lack of traditional forensic evidence, such as paper, necessitates the involvement of accounting professionals in the design of such systems. Periodic involvement of public auditing firms can be used to make sure the AIS is in compliance with current internal control and financial reporting standards.

After implementation, the focus of attestation is the review and verification of system operation. This requires adherence to standards such as ISO 9000-3 for software design and development as well as standards for control of information technology.

Periodic functional business reviews should be conducted to be sure the AIS remains in compliance with the intended business functions. Quality standards dictate that this review should be done according to a periodic schedule.

ENTERPRISE RESOURCE PLANNING (ERP)

ERP systems are large-scale information systems that impact an organization's AIS. These systems permeate all aspects of the organization and require technologies such as client/server and relational databases. Other system types that currently impact AISs are supply chain management (SCM) and customer relationship management (CRM).

Traditional AISs recorded financial information and produced financial statements on a periodic basis according to GAAP pronouncements. Modern ERP systems provide a broader view of organizational information, enabling the use of advanced accounting techniques, such as activity-based costing (ABC) and improved managerial reporting using a variety of analytical techniques.

(SEE ALSO: *Accounting*; *Internal Control Systems*)

THEODORE J. MOCK
ROBERT M. KIDDOO

ACHIEVEMENT MOTIVATION THEORY

(SEE: *Motivation*)

ACTIVITY-BASED MANAGEMENT

Activity-based management (ABM) is an approach to management in which process managers are given the responsibility and authority to continuously improve the planning and control of operations by focusing on key operational activities. ABM strategically incorporates activity analysis, activity-based costing (ABC), activity-based budgeting, life-cycle and target costing, process value analysis, and value-chain analysis. Enhanced effectiveness and efficiencies are expected for both revenue generation and cost incurrences. Since the focus is on activities, improved cost management is achieved through better managing those activities that consume resources and drive costs. The focus for control is shifted away from the financial measurement of resources to activities that cause costs to be incurred.

As an overall framework, ABM relies on ABC information. ABC deals with the analysis and assignment of costs. In order to complete cost analyses, activities need to be identified and classified. An activity dictionary can be developed, listing and describing all activities within an organization, including information on each activity's location, performance measure(s), and key value-added and non-value-added attributes. (See "ABC/ABM Dictionary," which was used to help construct many of the definitions used in this entry.) ABC information is extremely helpful in the strategic analysis of areas such as process and plant layout redesign, pricing, customer values, sourcing, evaluation of competitive position, and product strategy.

ACTIVITY AND ACTIVITY ANALYSIS

An activity is a business task, or an aggregation of closely related purposeful actions, with clear beginning and ending points, that consumes resources and produces outputs. An activity could be a single task or a simple process. Resources are inputs, such as materials, labor, equipment, and other economic elements consumed by an activity in the production of an output. Outputs are products, services, and accompanying information flowing from an activity. In seeking continuous business improvement, an overall examination of variations in performances of key organizational activities and their causes is referred to as activity analysis. Performance is measured by a financial or nonfinancial indicator that is causally related to the performance (adding value to a product or service) of an activity and can be used to manage and improve the performance of that activity.

The level of an activity within an organization depends on that level of operations supported by that activity. For instance, a unit-level activity is one that is performed directly on each unit of output of an organizational process. A batch-level activity is one performed on a small group, or batch, of output units at the same time. For example, the setup activity to run a batch job in a production process and the associated cost for completing such a setup is a batch-level activity. A customer-sustaining activity supports an individual or a particular grouping of customers, such as mailings or customer service. A product-sustaining activity supports an individual product or product line, such as product (re)design or (re)engineering. These last two types of activities are sometimes referred to as service-sustaining activities. Lastly, a facility-sustaining activity supports an entire facility, such as the actions of the manager of an entire plant, with an associated cost equal to the manager's compensation package. Not every activity within an organization is significant enough to isolate in an activity analysis.

A process is a set of logically related activities performed in order to achieve a particular objective, such as the production of a unit of product or service. Identification of all such processes within an organization along with a specification of the relationships among them provides a value chain. Value chains are often presented in terms of functional areas (a function provides the organization with a particular type of service or product, such as finance, distribution, or purchasing). Within each of these key processes, activities can be classified as primary activities, secondary activities, and other activities. Primary activities contribute directly to the providing of the final product or service. Secondary activities directly support primary activities. The "other activities" category is comprised of those actions too far removed from the intended output to be individually noted. They should be examined to determine if they are necessary and should be continued.

VALUE-ADDED AND NON-VALUE-ADDED

Each of the key (primary and secondary) activities noted from our analysis must be categorized as either value-added or non-value-added. This analysis is referred to as value analysis. An activity is value-added to the extent that its performance contributes to the completion of the product or service for consumers. While value-added activities are necessary, the efficiency with which they are performed often can be improved through best practice analysis and benchmarking. This process of improvement is referred to as business process redesign or reengineering.

Because many activities may not fit neatly into a value-added/non-value-added dichotomy, weightings may be assigned to indicate the extent to which an activity is value-added, such as a scale ranging from one to eight, with an eight representing total value-additivity and a zero, none. A non-value-added activity transforms a product or service in a way that adds no usefulness to the product or service. Non-value-added activities should be minimized or eliminated. An overall value-chain analysis would examine all the activities and associated processes in an attempt to provide greater value at the same cost, the same value at less cost, or both.

ACTIVITY-BASED COSTING

Because costs are initially assigned from resource cost pools to activity cost pools and from there to final cost objects, activity-based costing is viewed as a two-stage allocation process. Once activities have been identified, an activity-based costing analysis can be completed. Activity-based costing is a form of cost refinement, designed to obtain greater accuracy than traditional allocations in cost assignments for product costing and decision-making purposes. Costs are assigned to activities from resource cost pools. Costs are first accumulated according to the type of resource, such as materials or labor, with which they are associated. Then resource (cost) drivers, which measure the consumption of a resource by an activity, are identified and used to assign the costs of resource consumptions to each activity. The result of this assignment is an activity cost pool for each activity.

From the activity cost pool, the focus shifts to one or more activity drivers. An activity driver measures the frequency or intensity with which a cost object requires the use of an activity, thereby relating the performance of an activity's tasks to the needs of one or more cost objects. A cost object is why activities are performed; it is a unit of product or service, an operating segment of the organization, or even another activity for which management desires an assignment of costs for unit costing or decision making purposes. The activity cost pools are then reassigned to the final cost objects according to the intensity with which each cost object used the respective activity drivers.

A cost driver may be defined to be "any factor that has the effect of changing the level of total cost for a cost object." (Blocher et al., 1999, p. 8) In general, four types of cost drivers can be identified: volume-based, activity-based, structural, and executional (Blocher, et al., 1999, p. 61). Activity-based management focuses on activity-based cost drivers. In investigating and specifying cost drivers, many methods are used, such as cause-and-effect diagrams, cost simulations, and Pareto analysis.

Traditional cost assignment systems typically would assign directly to the cost objects the costs of those resource consumptions that can be economically traced directly to units of output requiring the resources. The remaining costs, referred to as indirect costs, would be accumulated into one or more cost pools, which would subsequently be allocated to the cost objects according to volume-related bases of allocation. When different products consume resources at rates that are not accurately reflected in their relative numbers (volumes), a traditional cost allocation approach will result in product cost cross-subsidization. That is, a high-volume, relatively simple product will end up overcosted and subsidizing a subsequently undercosted, low-volume, relatively complex product, resulting in inaccurate unit costing and suboptimal product-line pricing decisions and performance evaluations. Activity-based costing tries to take the nonuniformity of resource consumption across products into account in the assignment of costs.

(SEE ALSO: *Management*)

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CLIFFORD BROWN
LAWRENCE KLEIN

One of our most beloved residents
SilverLakes
GLASSES 1 HR
DOC
Wellesley Inns
SPEED LIMIT 45
CAPITAL BANK

Billboards are a popular form of advertising.

ADVERTISING

Advertising is often thought of as the paid, nonpersonal promotion of a cause, idea, product, or service by an identified sponsor attempting to inform or persuade a particular target audience. Advertising has taken many different forms since the beginning of time. For instance, archaeologists have uncovered walls painted in Rome announcing gladiator fights as well as rock paintings along Phoenician trade routes used to advertise wares. From this early beginning, advertising has evolved to take a variety of forms and to permeate nearly every aspect of modern society. The various delivery mechanisms for advertising include banners at sporting events, billboards, Internet Web sites, logos on clothing, magazines, newspapers, radio spots, and television commercials. Advertising has so permeated everyday life that individuals can expect to be exposed to more than 1,200 different messages each day. While advertising may seem like the perfect way to get a message out, it does have several limitations, the most commonly noted ones being its inability to (1) focus on an individual consumer's specific needs, (2) provide in-depth information about a product, and (3) be cost-effective for small companies.

FORMS OF ADVERTISING

Advertising can take a number of forms, including advocacy, comparative, cooperative, direct-mail, informational, institutional, outdoor, persuasive, product, reminder, point-of-purchase, and specialty advertising.

Advocacy Advertising Advocacy advertising is normally thought of as any advertisement, message, or public communication regarding economic, political, or social issues. The advertising campaign is designed to persuade public opinion regarding a specific issue important in the public arena. The ultimate goal of advocacy advertising usually relates to the passage of pending state or federal legislation. Almost all nonprofit groups use some form of advocacy advertising to influence the public's attitude toward a particular issue. One of the largest and most powerful nonprofit advocacy groups is the American Association of Retired Persons (AARP). The AARP fights to protect social programs such as Medicare and Social Security for senior citizens by encouraging its members to write their legislators, using television advertisements to appeal to emotions, and publishing a monthly newsletter describing recent state and federal legislative action. Other major nonprofit advocacy groups include the environmental organization Greenpeace, Mothers Against Drunk Driving (MADD), and the National Rifle Association (NRA).

Comparative Advertising Comparative advertising compares one brand directly or indirectly with one or more competing brands. This advertising technique is very common and is used by nearly every major industry, including airlines and automobile manufacturers. One drawback of comparative advertising is that customers have become more skeptical about claims made by a company about its competitors because accurate information has not always been provided, thus making the effectiveness of comparison advertising questionable. In addition, companies that engage in comparative advertising must be careful not to misinform the public about a competitor's product. Incorrect or misleading information may trigger a lawsuit by the aggrieved company or regulatory action by a governmental agency such as the Federal Trade Commission (FTC).

Cooperative Advertising Cooperative advertising is a system that allows two parties to share advertising costs. Manufacturers and distributors, because of their shared interest in selling the product, usually use this cooperative advertising technique. An example might be when a soft-drink manufacturer and a local grocery store split the cost of advertising the manufacturer's soft drinks; both the manufacturer and the store benefit from increased store traffic and its associated sales. Cooperative advertising is especially appealing to small storeowners who, on their own, could not afford to advertise the product adequately.

Direct-Mail Advertising Catalogues, flyers, letters, and postcards are just a few of the direct-mail advertising options. Direct-mail advertising has several advantages, including detail of information, personalization, selectivity, and speed. But while direct mail has advantages, it carries an expensive per-head price, is dependent on the appropriateness of the mailing list, and is resented by some customers, who consider it "junk mail."

Informational Advertising In informational advertising, which is used when a new product is first being introduced, the emphasis is on promoting the product name, benefits, and possible uses. Car manufacturers used this strategy when sport utility vehicles (SUVs) were first introduced.

Institutional Advertising Institutional advertising takes a much broader approach, concentrating on the benefits, concept, idea, or philosophy of a particular industry. Companies often use it to promote image-building activities, such an environmentally friendly business practices or new community-based programs that it sponsors. Institutional advertising is closely related to public relations, since both are interested in promoting a positive image of the company to the public. As an example, a large lumber company may develop an advertising theme around its practice of planting trees in areas where they have just been harvested. A theme of this nature keeps the company's name in a positive light with the general public because the replanting of trees is viewed positively by most people.

Outdoor Advertising Billboards and messages painted on the side of buildings are common forms of outdoor advertising, which is often used when quick, simple ideas are being promoted. Since repetition is the key to successful promotion, outdoor advertising is most effective when located along heavily traveled city streets and when the product being promoted can be purchased locally. Only about 1 percent of advertising is conducted in this manner.

Persuasive Advertising Persuasive advertising is used after a product has been introduced to customers. The primary goal is for a company to build selective demand for its product. For example, automobile manufacturers often produce special advertisements promoting the safety features of their vehicles. This type of advertisement could allow automobile manufactures to charge more for their products because of the perceived higher quality the safety features afford.

Product Advertising Product advertising pertains to nonpersonal selling of a specific product. An example is a regular television commercial promoting a soft drink. The primary purpose of the advertisement is to promote the specific soft drink, not the entire soft-drink line of a company.

Reminder Advertising Reminder advertising is used for products that have entered the mature stage of the product life cycle. The advertisements are simply designed to remind customers about the product and to maintain awareness. For example, detergent producers spend a considerable amount of money each year promoting their products to remind customers that their products are still available and for sale.

Point-of-Purchase Advertising Point-of-purchase advertising uses displays or other promotional items near the product that is being sold. The primary motivation is to attract customers to the display so that they will purchase the product. Stores are more likely to use point-of-purchase displays if they have help from the manufacturer in setting them up or if the manufacturer provides easy instructions on how to use the displays. Thus, promotional items from manufacturers who provide the best instructions or help are more likely to be used by the retail stores.

Specialty Advertising Specialty advertising is a form of sales promotion designed to increase public recognition of a company's name. A company can have its name put on a variety of items, such as caps, glassware, gym bags, jackets, key chains, and pens. The value of specialty advertising varies depending on how long the items used in the effort last. Most companies are successful in achieving their goals for increasing public recognition and sales through these efforts.

ADVERTISING OBJECTIVES

Advertising objectives are the communication tasks to be accomplished with specific customers that a company is trying to reach during a particular time frame. A company that advertises usually strives to achieve one of four advertising objectives: trial, continuity, brand switching, and switchback. Which of the four advertising objectives is selected usually depends on where the product is in its life cycle.

Trial The purpose of the trial objective is to encourage customers to make an initial purchase of a new product. Companies will typically employ creative advertising strategies in order to cut through other competing advertisements. The reason is simple: Without that first trial of a product by customers, there will not be any repeat purchases.

Continuity Continuity advertising is a strategy to keep current customers using a particular product. Existing customers are targeted and are usually provided new and different information about a product that is designed to build consumer loyalty.

Brand Switching Companies adopt brand switching as an objective when they want customers to switch from competitors' brands to their brands. A common strategy is for a company to compare product price or quality in order to convince customers to switch to its product brand.

Switchback Companies subscribe to this advertising objective when they want to get back former users of their product brand. A company might highlight new product features, price reductions, or other important product information in order to get former customers of its product to switchback.

ADVERTISING BUDGET

Once an advertising objective has been selected, companies must then set an advertising budget for each product. Developing such a budget can be a difficult process because brand managers want to receive a large resource allocation to promote their products. Overall, the advertising budget should be established so as to be congruent with overall company objectives. Before establishing an advertising budget, companies must take into consideration other market factors, such as advertising frequency, competition and clutter, market share, product differentiation, and stage in the product life cycle.

Advertising Frequency Advertising frequency refers to the number of times an advertisement is repeated during a given time period to promote a product's name, message, and other important information. A larger advertising budget is required in order to achieve a high advertising frequency: Estimates have been put forward that a consumer needs to come in contact with an advertising message nine times before it will be remembered.

Competition and Clutter Highly competitive product markets, such as the soft-drink industry, require higher advertising budgets just to stay even with competitors. If a company wants to be a leader in an industry, then a substantial advertising budget must be earmarked every year. Examples abound of companies that spend millions of dollars on advertising in order to be key players in their respective industries (e.g., Coca Cola and General Motors).

Market Share Desired market share is also an important factor in establishing an advertising budget. Increasing market share normally requires a large advertising budget because a company's competitors counterattack with their own advertising blitz. Successfully increasing market share depends on advertisement quality, competitor responses, and product demand and quality.

Product Differentiation How customers perceive products is also important to the budget-setting process. Product differentiation is often necessary in competitive markets where customers have a hard time differentiating between products. For example, product differentiation might be necessary when a new laundry detergent is advertised: Since so many brands of detergent already exist, an aggressive advertising campaign would be required. Without this aggressive advertising, customers would not be aware of the product's availability and how it differs from other products on the market. The advertising budget is higher in order to pay for the additional advertising.

Stage in the Product Life Cycle New product offerings require considerably more advertising to make customers aware of their existence. As a product moves through the product life cycle, fewer and fewer advertising resources are needed because the product has become known and has developed an established buyer base. Advertising budgets are typically highest for a particular product during the introduction stage and gradually decline as the product matures.

SELECTING THE RIGHT ADVERTISING APPROACH

Once a company decides what type of specific advertising campaign it wants to use, it must decide what approach should carry the message. A company is interested in a number of areas regarding advertising, such as frequency, media impact, media timing, and reach.

Frequency Frequency refers to the average number of times that an average consumer is exposed to the advertising campaign. A company usually establishes frequency goals, which can vary for each advertising campaign. For example, a company might want to have the average consumer exposed to the message at least six times during the advertising campaign. This number might seem high, but in a crowded and competitive market repetition is one of the best methods to increase the product's visibility and to increase company sales. The more exposure a company desires for its product, the more expensive the advertising campaign. Thus, often only large companies can afford to have high-frequency advertisements during a campaign.

Media Impact Media impact generally refers to how effective advertising will be through the various media outlets (e.g., television, Internet, print). A company must decide, based on its product, the best method to maximize consumer interest and awareness. For example, a company promoting a new laundry detergent might fare better with television commercials rather than simple print ads because more consumers are likely to see the television commercial. Similarly, a company such as Mercedes-Benz, which markets expensive products, might advertise in specialty car magazines to reach a high percentage of its potential customers. Before any money is spent on any advertising media, a thorough analysis is done of each one's strengths and weaknesses in comparison to the cost. Once the analysis is done, the company will make the best decision possible and embark on its advertising campaign.

Media Timing Another major consideration for any company engaging in an advertising campaign is when to run the advertisements. For example, some companies run ads during the holidays to promote season-specific products. The other major consideration for a company is whether it wants to employ a continuous or pulsing pattern of advertisements. Continuous refers to advertisements that are run on a scheduled basis for a given time period. The advantage of this tactic is that an advertising campaign can run longer and might provide more exposure over time. For example, a company could run an advertising campaign for a particular product that lasts years with the hope of keeping the product in the minds of customers. Pulsing indicates that advertisements will be scheduled in a disproportionate manner within a given time frame. Thus, a company could run thirty-two television commercials over a three- or six-month period to promote the specific product is wants to sell. The advantage with the pulsing strategy is twofold. The company could spend less money on advertising over a shorter time period but still gain the same recognition because the advertising campaign is more intense.

Reach Reach refers to the percentage of customers in the target market who are exposed to the advertising campaign for a given time period. A company might have a goal of reaching at least 80 percent of its target audience during a given time frame. The goal is to be as close to 100 percent as possible, because the more the target audience is exposed to the message, the higher the chance of future sales.

ADVERTISING EVALUATION

Once the advertising campaign is over, companies normally evaluate it compared to the established goals. An effective tactic in measuring the usefulness of the advertising campaign is to measure the pre- and post-sales of the company's product. In order to make this more effective, some companies divide up the country into regions and run the advertising campaigns only in some areas. The different geographic areas are then compared (advertising versus nonadvertising), and a detailed analysis is performed to provide an evaluation of the campaign's effectiveness. Depending on the results, a company will modify future advertising efforts in order to maximize effectiveness.

SUMMARY

Advertising is the paid, nonpersonal promotion of a cause, idea, product, or service by an identified sponsor attempting to inform or persuade a particular target audience. Advertising has evolved to take a variety of forms and has permeated nearly every aspect of modern society. The various delivery mechanisms for advertising include banners at sporting events, billboards, Internet Web sites, logos on clothing, magazines, newspapers, radio spots, and television commercials. While advertising can be successful at getting the message out, it does have several limitations, including its inability to (1) focus on an individual consumer's specific needs, (2) provide in-depth information about a product, and (3) be cost-effective for small companies. Other factors, such as objectives, budgets, approaches, and evaluation methods must all be considered.

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Allen D. Truell
Michael Milbier

ADVERTISING AGENCIES

Advertising agencies are independent businesses that evolved to develop, prepare, and place advertising in advertising media for sellers seeking to find customers for their goods, services, and ideas (American Association of Advertising Agencies, 2000). Advertisers use *agents* when they believe the agency will be more expert than they are at creating advertisements or at developing an advertising campaign. As businesses have become more complex and diversified, many of them have consulted agencies to help them carry out their marketing communication efforts.

The modern advertising agency provides a variety of important services to clients, including media planning and buying, research, market information, sales promotion assistance, campaign development and creation of advertisements, plus a range of services designed to help the advertiser achieve marketing objectives. The first documented advertising agency in the United States was the N. W. Ayer Agency, established in 1877 (Gilson, 1980). Prior to this time, advertising agents were *space brokers*—agents who solicited ads from businesses and then sold them to newspapers that had difficulty getting out-of-town advertising (Gilson, 1980; Russell and Lane, 1998).

EVOLUTION OF THE ADVERTISING AGENCY FROM THE 1870s TO THE EARLY 1900s

During the late nineteenth century, most advertising appeared in newspapers, on posters, and in handbills (Wells et al. 2000). Because it was difficult to reproduce illustrations, most of these ads were simple text-based items.

By 1900, the first specialized magazines had begun to appear in the United States. Magazines such as *Field & Stream* (in 1895) and *Good Housekeeping* (in 1900) established niche markets, which allowed for mass marketing to consumers with varied interests. Also, print technology had evolved considerably, making full-color illustrations possible. Advertising agencies began to use the new technology to create more attractive advertisements for the new niche markets, thus becoming creative centers rather than merely space brokerages.

The late nineteenth and early twentieth centuries were times of public concern about unethical business practices. Many professions formed their own organizations to create ethical standards of operation. The American Association for Advertising Agencies (AAAA) was founded in 1917, partially in response to these ethical concerns.

Newspapers also set their own ethical standards concerning rates charged for advertisements. By 1917, publishers had agreed to set a flat rate of 15 percent as the standard commission an advertising agency would receive—with the exception of local advertising, for which there was generally no predetermined commission (Russell and Lane, 1998).

In addition, two laws were passed to alleviate concerns about unethical advertising practices. The *Federal Trade Commission Act of* 1914 was originally designed to make all unfair methods of competition unlawful. It was not until 1922 that advertising was legally regulated under this act. The case that set this legal precedent was *FTC* v. *Winsted Hosiery Company* (1922) (Russell and Lane, 1998). The *Pure Food and Drug Act* of 1906 was the first act that limited the advertising of patent medicines—drugs that were advertised

A popular Pepsi-Cola television advertisement from the mid-1990s.

using exaggerated claims of effectiveness—for use by children.

EVOLUTION OF THE ADVERTISING AGENCY FROM 1920 TO THE EARLY 1950s

By the 1920s, the majority of advertising agencies had determined that most family purchasing decisions were either made by or influenced by women (Goodrum and Dalrymple, 1990). Thus, advertising agencies created full-color magazine advertisements for goods such as expensive automobiles, refrigerators, and radios. Newspapers continued to use simple advertisements.

Although Guglielmo Marconi had invented the first operating radio in 1895, radio became popular for home and family use only in the early

1920s. In that decade, as a result of radio's mass appeal, advertising agencies produced radio programs for the sole purpose of attracting consumers for popular national products. For example, soap operas were originally created for the purpose of advertising Procter & Gamble's soap products (Gilson, 1980).

The 1930s were a time of renewed public interest in legislation concerning unfair and deceptive business practices. The 1934 *Wheeler-Lea Amendment* to the *Federal Trade Commission Act* enabled the Federal Trade Commission (FTC) to protect consumers from deceptive advertising in the food, drug, therapeutic device, and cosmetic industries (Russell and Lane, 1998). The *Robinson-Patman Act* of 1936 prevented manufacturers from providing promotional allowances to a retail customer unless it also offered promotional allowances to that customer's competitors.

Although World War II suspended production of many peacetime goods and services, many advertising agents found employment working for the War Advertising Council, which was responsible for mobilizing public support for the war effort. This organization later became the Ad Council.

EVOLUTION OF THE ADVERTISING AGENCY FROM THE 1950s TO THE EARLY 1990s

The end of World War II saw a culmination of more than a decade of unsatisfied consumer demand as a result of the Great Depression and war. Most markets for goods and services found a willing consumer base for new products—including television sets. Due to the proliferation of television sales in the 1950s, advertising agencies began to combine the visual impact of print ads with the aural impact of radio to create a lifelike effect. This, in turn, created a change in the structure of advertising agencies. For example, prior to the 1950s, the main source of creativity was the person writing the advertising message—referred to as the *copywriter.* As television made more consumers comfortable with visual imagery, the art director and artist became more important (Goodrum and Dalrymple, 1990).

It was during the 1950s that large numbers of returning veterans began to marry and have children—the generation of children known as *baby-boomers.* For the first time in the United States, advertising agencies found it profitable to market certain goods and services directly to the youth market. Ads for blue jeans and stereo equipment appeared in newspaper inserts, in youth-oriented niche market magazines, and on television.

During the 1960s, large accounts from Fortune 500 companies migrated from the larger agencies to smaller, more responsive agencies (Goodrum and Dalrymple, 1990). The newer, more creative advertisements proved popular and profitable. The profits allowed agencies to spend more money on advertising research—often employing behavioral psychologists to design elaborate studies of consumer buying behavior (Goodrum and Dalrymple, 1990). It was the function of the behavioral psychologist to determine why consumers buy goods and services.

Advances in product design during the 1960s and 1970s resulted in few differences between most products—a problem known as product parity (Goodrum and Dalrymple, 1990)—and forced advertising agencies to become more creative in order to differentiate their client's product from competitors' equally good products. All of this creativity had a cost—it became very expensive to produce two-minute TV advertisements. Advertising agencies solved the cost dilemma by designing thirty-second television commercials with memorable *advertising slogans*—short phrases designed to keep a consumer's attention and maintain recognition of a particular brand of good or service.

Advertising agency clients began to demand results for increasingly expensive ads—in the form of research data from the end-consumer (Goodrum and Dalrymple, 1990). However, the cost of this research, including the employment of advertising researchers, was too great for small agencies, forcing smaller agencies to merge into larger ones during the 1980s (Goodrum and Dalrymple, 1990). During this decade, some advertising agencies moved from traditional radio and TV advertising toward *sales promotion* techniques (such as rebates, coupons, and sweepstakes) that offered measurable proof of increased sales (Wells et al., 2000).

EVOLUTION OF THE ADVERTISING AGENCY FROM 1991 TO THE PRESENT

Present-day advertising agencies employ many of the techniques that were popular in the early years of advertising. Newspapers continue to advertise primarily in text format, although color inserts are becoming popular. Advertising agencies continue to be able to advertise in smaller and smaller niche-market magazines. Radio remains a popular advertising medium in local markets. The widespread availability of cable TV and satellite transmission has fragmented television advertising into niche markets. However, some changes in the advertising industry continue to change how advertising agencies operate. These changes are discussed below.

Globalization. Advertising agencies are under increasing pressure to create ads for products in a global market, often advertising the same brand to different markets around the world. Agencies must often consider culture, language, and customs when designing an advertisement tailored to the international market. Today, in order to meet the demands of a global market, advertisers are forming large multinational agencies and continuing to debate whether to standardize advertising globally or to segment advertisements by culture or nationality (Wells et al., 2000).

The Internet. Although the Internet continues in be most accessible in developed countries, satellite transmission may soon make Internet access available to most people worldwide. The Internet allows advertising agencies to target consumers worldwide and to conduct market research inexpensively. The easy access to market research information may allow advertising agencies to continue developing ads to reach smaller and smaller niche markets worldwide. At the same time, certain forces are reducing the availability and use of information gathered over the Internet. For example, the Children's Online Protection Act (1998), or COPA, is a U.S. law that affects business transactions by children using the Internet. COPA requires Web sites soliciting personal information from children under the age of 13 to prominently post a privacy policy and require parental consent for the release of personal information provided by those children before any business can be transacted. Many countries are developing laws similar to COPA, and it remains to be seen how COPA and other impending legislation will affect advertising agencies that conduct business globally.

The Role of Government in Advertising As of 2000, the Ad Council acts as an advertising agency that addresses social ills such as drunk driving, racial intolerance, and domestic violence (Russell and Lane, 1998; The Ad Council, 2000). The Ad Council will probably expand its role as an advertising agency that serves as a catalyst for social change.

Changing Incentives While the 15-percent commission on gross sales has been around for some time, it is now common to offer other incentives, such as box seats at sporting events and music concerts (Mayer, 1991).

EVOLVING CAREER FIELDS IN ADVERTISING

Today's advertising agencies include a vast array of specialists who work together to create a complete and thorough advertising campaign. Account managers allocate agency resources, including time, money, and personnel for individual projects. An account manager often assembles a team of individuals, each bringing a particular advertising specialty to the project. The team includes an art director, creative director, artist(s), copywriters, and designers. The team may also include other specialists such as media analysts, product testers, researchers, and public relations consultants.

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SCOTT WILLIAMS
JOHN A. SWOPE

AGGREGATE INCOME

(SEE: *Income*)

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

The American Institute of Certified Public Accountants (AICPA) is the premier national professional organization for the certified public accountant (CPA) profession in the United States. Its founding in 1887 was a milestone in establishing accountancy as a profession distinguished by rigorous educational requirements, high professional standards, a strict code of professional ethics, and a commitment to serving the public interest.

As of 2000, its membership numbers more than 336,000 certified public accountants from around the country employed in various types of environments. Approximately 45 percent work in business and industry, nearly 40 percent work in public accounting firms, and still others are on the staffs of government bodies and agencies or are employed by educational institutions. In addition, some members work in the legal profession, offer consulting services, or have retired. Along with these membership segments, the AICPA has associates (those who have passed the Uniform CPA Exam and are in the midst of fulfilling the other requirements to become CPAs), as well as student and international affiliates. All together, the AICPA represents more than 350,000 people.

The AICPA's primary mission is to provide the resources, information, and leadership necessary to enable CPAs to perform services in the best professional manner to benefit the public as well as employers and clients. Activities include advocacy, certification and licensing, communications, recruiting and education, standards development, and performance monitoring. In carrying out its mission, the Institute works with local CPA societies in fifty-four accountancy jurisdictions (the fifty states plus Washington, D.C., Puerto Rico, the U.S. Virgin Islands, and Guam), giving priority to those areas where public reliance on CPA skills is greatest.

In light of its scope and resources, the AICPA is the national representative of CPAs before governments, regulatory bodies, and other organizations in protecting and promoting members' interests while preserving public confidence in the financial reporting system. It also promotes public awareness of and confidence in the integrity, objectivity, competence, and professionalism of CPAs. Most notably, to enhance key business decision makers' understanding of the skills and knowledge of CPAs, the AICPA launched the nation's first advertising campaign conducted on behalf of a profession. Having completed five consecutive successful years, the comprehensive ad campaign included television, radio, print, and Web site advertisements nationwide.

Through its volunteer member committees and professional staff, the AICPA also establishes, monitors, and enforces professional standards, as well as assisting members in continually improving their professional conduct, performance, and expertise. It also promotes and protects the CPA designation and encourages, among the states that license CPAs, the highest possible level of uniform certification and licensing standards. In fact, the AICPA develops the Uniform CPA Examination, which is administered to all candidates for the CPA designation in all states and U.S. licensing jurisdictions.

As the largest association for the accounting profession, the AICPA is also the primary information resource for CPAs and on the CPA profession. As such, the AICPA, as of 2000, is developing an Internet-based vertical portal that will provide CPAs with resources to better service small to medium-sized business clients and organizations. It will deliver information and services to the CPA more quickly, efficiently, and cost-effectively than is readily available today. The goal of the portal is to become the ultimate e-business destination for both the professional and business needs of CPAs, their clients, and employers. *AICPA Online*, the Institute's Web site (www.aicpa.org), offers the public the most comprehensive single source of information that exists on the CPA profession. For its members, the Institute houses the nation's most extensive accounting library and publishes numerous volumes of technical standards and topical publications.

Another mission of the AICPA is to encourage highly qualified individuals to become CPAs. Through member educators, recommendations for accounting curriculum, targeted recruitment, and promotional materials, the AICPA helps to ensure the continuous flow of qualified CPAs into the profession. Besides supporting the development of outstanding academic programs for students, the AICPA also is a major provider of educational courses and materials for continuing professional education, which is required by most jurisdictions for the continued licensing of CPAs and membership in the AICPA.

The AICPA's initiatives carried out on behalf of the CPA profession are numerous and always evolving to keep in step with the changing needs of a very diverse membership in a volatile business environment. As a major component of this goal, the AICPA in 1998 launched the ongoing *CPA Vision Project* (www.cpavision.org). Through this nationwide grassroots initiative, the CPA profession defined its own future, culling the views of CPAs in all segments of the profession throughout the nation. By consensus, the profession crafted a Core Purpose and Vision Statement and identified a new set of core values, services, and competencies that will characterize the work of CPAs in the future. The CPA Vision, a collective term for these findings, will extend the CPA's unique skills, expertise, and training to new services and products that bring unique added value on an ongoing basis to an ever-changing marketplace.

In an effort to identify areas where CPAs can market new services built on their special expertise and to drive markets to members, the Institute developed "assurance services," which are designed to improve the quality of information, or its context, for decision makers. Decision makers can be management, users of financial and nonfinancial information, or even consumers. The AICPA trains and licenses CPAs to offer an exclusive assurance service and seal for Web sites of companies engaging in electronic commerce over the Internet. Known as *CPA WebTrust*, the service indicates by means of a special *WebTrust* seal that appears on a company's Web site that a CPA has verified the company's business practices, transaction integrity, and privacy and security measures. The seal is intended to give consumers assurance in conducting e-commerce transactions on that Web site. Other assurance services include *CPA ElderCare Services* (providing financial and nonfinancial services to assist older clients), *CPA SysTrust* (increasing confidence in systems that support a business or activity), and *CPA Performance View* (facilitating an entity's development of a performance measurement system tailored to its unique mission and strategic plan).

For the increasing number of CPAs who are members of management in corporations of all sizes—referred to as members in "business and industry"—the AICPA established the *Center for Excellence in Financial Management* (CEFM). The CEFM is a virtual resource for the many AICPA programs, products, services, internal resources, and external partnerships that support the work of business and industry members. Those offerings include a broad benchmarking program, special conferences, group and self-study professional education courses, research on leading-edge management accounting topics, and new publications. The CEFM also aims to keep members current on the skills, knowledge, technologies, and management techniques required by CPAs to fill decision-making roles as key members of their companies' management teams.

Embracing the talent and multiple perspectives offered by America's many demographic groups, the AICPA has adopted a diversity statement that it hopes will serve as a model for the CPA profession as well as other professional organizations. In that statement, the AICPA vows to take the lead in encouraging, valuing, and fostering diversity in its membership and the work force by identifying, recognizing, and supporting strategies and efforts within the organization and the profession dedicated to achieving those diversity objectives.

In all its wide-ranging efforts on behalf of the CPA profession, the AICPA maintains the goal of becoming the best professional association in existence. In June 1998, it became the first professional membership organization in the United States to earn the *ISO 9001* certification, awarded by the International Organization of Standards using a certification system based on a series of international standards for quality management and assurance.

Organizationally, the AICPA is member-driven and -managed. It carries out its mission and objectives through the volunteer work of approximately 2,000 members who serve on a governing council, board of directors, boards, committees, subcommittees, and task forces. The governing council, the nearly 300-member governing body of the AICPA, meets twice a year and is responsible for establishing general policy. To ensure representation from all fifty-four accountancy jurisdictions, one AICPA member is designated by each CPA state society for a one-year term, and members from state societies with vacancies on the council are elected each year for a three-year term. In addition, the board of directors, past chairs, and twenty-one members-at-large serve on the council.

The board of directors, the executive committee of the council, advances the Institute's continuing objectives through leadership and management. Its twenty-three members consist of sixteen directors and three public (non-CPA) members who serve for three-year terms, as well as the chair, vice chair, immediate past chair, and the president, who is a member of the Institute staff.

With a staff of approximately seven hundred, the AICPA has four office locations. Its headquarters is located at 1211 Avenue of the Americas, New York, NY 10036-8775. The other sites are in Washington, D.C.; Jersey City, New Jersey; and Lewisville, Texas.

(SEE ALSO: *Accounting*; *Accounting: historical perspectives*)

BARRY C. MELANCON

AMERICAN MANAGEMENT ASSOCIATION

The American Management Association (AMA) is the world's leading membership-based management development organization. The business education and management development programs offered by the AMA provide its members and customers the opportunity to learn superior business skills and the best management practices available. The AMA fulfills this goal through a variety of seminars, conferences, assessments, customized learning solutions, books, and on-line resources. The range of programs offered by the AMA includes finance, human resources, sales and marketing, manufacturing, and international management, as well as numerous others.

The philosophy of the AMA is to be a nonprofit, membership-based educational organization that assists individuals and enterprises in the development of organizational effectiveness, which is the primary sustainable competitive advantage in a global economy. A major goal of the

AMA is to identify the best management practices worldwide to provide assessment, design, development, self-development, and instruction services. The AMA meets this goal with an abundance of print and electronic media and learning methodologies, which are designed for the sole purpose of enhancing the growth of individuals and organizations.

The origins of the AMA can be traced back to 1913, when the National Association of Corporation Schools was founded. Around 1922, the National Association of Corporation Schools merged with the Industrial Relations Association of America, which had been founded in 1918. The result of the merger was the National Personnel Association. Shortly after the merger, in 1923, the National Personnel Association's board of directors chose the new name of the American Management Association. The modern AMA, as it is known today, began with a consolidation of five closely related national associations, which were all dedicated to management education. The consolidation of the organizations into one organization prompted the regents of the State University of New York to grant the AMA the title of an educational organization.

The AMA offers numerous beneficial programs aimed at a variety of people. In addition to its traditional programs, the AMA also provides programs for high school and college students and has special partnerships with local management training organizations. More information is available from the American Management Association at 1601 Broadway, New York, NY 10019; (212) 586-8100 (phone), (212) 903-8168 (fax), (800) 262-9699 (customer service); or www.amanet.org.

NIKOLE M. POGEMAN

AMERICAN MARKETING ASSOCIATION

During the mid-1930s, the American Marketing Society (organized in 1931) and the National Association of Teachers of Marketing (founded in 1915) arrived at two realizations: both organizations held common interests in marketing, and many of their publications and memberships overlapped. Following such realizations, the idea of merging the groups became a reality in 1937 with the inception of the American Marketing Association (AMA).

AMA is a professional, nonprofit organization for marketers with more than 500 North American professional chapters and worldwide membership (in ninety-two countries) in excess of 45,000. AMA also furthers students' professional development through approximately 400 collegiate chapters globally.

AMA was organized to advance marketing science and has always emphasized improving marketing management through marketing knowledge gained through researching, recording, and disseminating information. Today, AMA strives to encourage greater interest in and concern for education, to assist marketing professionals in their efforts toward personal and career development, and to promote integration of ethical considerations and general marketing practices.

In 1938, AMA agreed to work with the U.S. Bureau of the Census to unify government agency marketing definitions. The AMA board debated appropriate definitions and, in 1985, approved definitions for marketing ("The process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives)" and marketing research (the "function that links the consumer, customer, and public to the marketer through information.") (AMA, *Definitions*, 1999).

AMA disseminates information through four scholarly journals, which provide forums for sharing marketing research efforts; three business magazines, which provide discussions on emerging marketing issues for senior-level marketing executives; and one newsletter, which addresses all aspects of marketing, including insights on ethics, new products, and more. Online versions of these publications are available at www.ama.org/pub. More information is available from AMA at 250 South Wacker Dr., Suite 200, Chicago, Illinois 60606; (312) 648-0536 or (800) AMA-1150; or, http://www.ama.org.

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Mary Jean Lush
Val Hinton

AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act of 1990 (ADA) is a comprehensive civil rights act for people with disabilities. On July 26, 1990, President George Bush signed the ADA into law as wide-ranging legislation intended to make American society more accessible to people with disabilities and to prohibit discrimination on the basis of disability. The act is divided into five titles:

1. Employment. Businesses must provide reasonable accommodations in all aspects of employment to protect the rights of individuals with disabilities.
2. Public services. People with disabilities cannot be denied participation in public service programs or activities that are available to people without disabilities.
3. Public accommodations. All new construction must be accessible to individuals with disabilities.
4. Telecommunications. Telecommunication companies must have a telephone relay service for individuals who use telecommunications devices for the deaf (TTYs) or similar devices.
5. Miscellaneous. This title includes a provision prohibiting coercing, threatening, or retaliating against individuals with disabilities or those assisting them in asserting their rights under the ADA.

The protection of the ADA applies primarily, but not exclusively, to individuals with physical and mental disabilities.

Built on a foundation of statutory, legal, and programmatic experience, the ADA was modeled after the Civil Rights Act of 1964 and the Rehabilitation Act of 1973. In order to understand the basis for the enactment of the ADA, one must look at certain historical events of the 1970s and the disability rights movement. First and foremost has been the desire of individuals with disabilities to work toward their goal of full participation in American society, which led to the Rehabilitation Act of 1973 and the Individuals with Disabilities Education Act of 1974 that so strongly influenced the ADA.

Effects the ADA may have on businesses include restructuring or altering the layout of a building, modifying equipment, and removing barriers. For example, in September 1999, Greyhound Bus Lines of Dallas, Texas, removed architectural barriers and began to provide assistance to passengers with disabilities by means of lift-equipped buses. Another example of the effects of the ADA occurred in February 1997, when Harrison County, Mississippi, gave people who are deaf or hard of hearing an equal opportunity to serve as jurors.

The Americans with Disabilities Act of 1990 has been regarded as the most sweeping piece of legislation since the Civil Rights Act of 1964. More information on the ADA is available at (800)514-0301 (voice) or (800)514-0383 (TDD).

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U.S. Department of Justice Web Site; http://www.usdoj.gov/crt/ada/adahom1.htm

NIKOLE M. POGEMAN

ANALYTICAL PROCEDURES

Analytical procedures have become increasingly important to audit firms and are now considered to be an integral part of the audit process. The importance of analytical procedures is demonstrated by the fact that the Auditing Standards Board, the board that establishes the standards for conducting financial statement audits, has required that analytical procedures be performed during all audits of financial statements. The Auditing Standards Board did so through the issuance of Statement on Auditing Standards (SAS) No. 56 in 1988, which requires that analytical procedures be used by auditors as they plan the audit and also in the final review of the financial statements. In addition, SAS No. 56 encourages auditors to use analytical procedures as one of the procedures they use to gather evidence related to account balances (referred to in auditing as a substantive test). The purpose of this article is to provide the reader with a general understanding of analytical procedures and to describe the process that auditors use in applying analytical procedures.

SAS No. 56 describes analytical procedures as the ''evaluation of financial information made by a study of plausible relationships among both financial and nonfinancial data'' (AICPA, 1998, 56 p. 1). Accounting researchers have helped to clarify the process that auditors use to perform analytical procedures by developing models that describe the various stages of the process. One such model developed by Hirst and Koonce (1996) describes the performance of analytical procedures as consisting of five components: expectation development, explanation generation, information search and explanation evaluation, decision making, and documentation. Due to the importance of each of these five components to understanding the analytical procedures process, each of them is described in more detail.

The first step in the analytical procedures process is the development of an expected account balance. SAS No. 56 and auditing textbooks (e.g., O'Reilly et al., 1998) provide some guidance as to the sources of information an auditor can use to develop these expectations. Examples of such sources include the following:

- Financial information from comparable prior periods adjusted for any changes expected to affect the current-period balances. For example, an expectation of sales revenues for the current year might be based on the prior year's sales, adjusted for factors such as price increases or the known addition or loss of major customers.
- Expected results based on budgets or forecasts prepared by the client or projections of expected results prepared by the auditor from interim periods or prior comparable periods.
- Available information from the company's industry. For example, changes in sales revenue or gross margin percentages might be based on available data from industrywide statistics.
- Nonfinancial information. For example, sales revenue for a client from the hotel industry might be based on available data as to room occupancy rates.

After an auditor has developed an expectation for a particular account balance (e.g., sales revenue), the next step in the analytical procedures process is to compare the expected balance to the actual balance. If there is no significant difference (referred to by auditors as a material difference) between the expected and actual balance, this conclusion provides audit evidence in support of the account balance being examined. However, if there is a material difference between the expected and actual balance, the auditor will investigate this difference further. At this point the auditor will develop an explanation for the difference. Hirst and Koonce (1996) interviewed auditors from each of the six largest accounting firms and found that the source of the explanation usually depends on what types of analytical procedures are being performed. If analytical procedures are being performed during the planning phase of the audit, the auditor usually asks the client the reason for the unexpected difference. However, if the analytical procedures are being performed as a substantive test (method of obtaining corroborating evidence) or during the final review phase of the audit, in addition to asking the client, auditors will often generate their own explanation or ask other members of the audit team for an explanation.

When developing an explanation for an unexpected change in account balances, an auditor considers both error and nonerror explanations. Nonerror explanations are sometimes referred to as environmental explanations, since they refer to changes in the business environment in which the client operates. For example, an environmental explanation for an unexpected decline in gross profit (sales revenue less cost of sales) may be that the client faces increasing foreign competition and has been forced to reduce selling prices. An error explanation, on the other hand, might be that the client has failed to record a profitable sale to a major customer. If this mistake is unintentional, then auditors refer to the mistake as an "error." However, if this mistake was intentional (i.e., the client failed to record the sale on purpose), auditors refer to the mistake as a "fraud." Auditors are much more concerned about errors and fraud than changes resulting from environmental factors. In fact, auditors are most concerned about fraud, since this raises doubts about the integrity of the client as well as about the process of recording transactions affecting other account balances.

Once an auditor has a potential explanation, whether self-generated or obtained from the client, the next step in the analytical procedures process is to search for information that can be used to evaluate the adequacy of the explanation. Similar to the explanation generation phase of the process, the extent of information search and explanation evaluation depends on the type of analytical procedures being performed. Hirst and Koonce (1996) found that during the planning phase of analytical procedures, auditors do little if any follow-up work to evaluate an explanation. Instead, consistent with SAS No. 56, auditors typically use analytical procedures at the planning stage to improve their understanding of the client's business and to develop the audit plan for the engagement. For example, if analytical procedures performed on inventory during audit planning indicated the inventory balance was higher than expected, the auditor would most likely adjust the audit plan by increasing the number of audit tests performed on inventory or assigning more experienced personnel to the audit of inventory. Thus, if an error or fraud has occurred with inventory, the revised audit plan for obtaining corroborating evidence will lead to detection of the error or fraud.

If analytical procedures are being performed as a substantive test, the auditor will need to gather information to evaluate the explanation being considered, since the primary purpose of substantive analytical procedures is to provide evidence as to the validity of an account balance. The type and amount of corroboration for the explanation will vary based on factors such as the size of the unexpected difference, the significance of the difference to the overall financial statements, and the risks (e.g., internal control and inherent) associated with the account balance(s) affected. As any of these factors increase, the reliability of the information obtained in support of the explanation should also increase. SAS No. 56 provides guidance for auditors in the evaluation of the reliability of data. Some of the factors to be considered by the auditors include the following:

- Data obtained from independent sources outside the entity are more reliable than data obtained from sources within the entity.
- If data are obtained from within the entity, data obtained from sources independent from the amount being audited are more reliable.
- Data developed under a system with adequate controls are more reliable than data from a system with poor controls.

After an auditor gathers information for purposes of evaluating an analytical procedures explanation, it is a matter of professional judgment in determining whether the evidence adequately supports the explanation. This is one of the most important steps of the analytical procedures process and is referred to as the decision phase of the process. Factors the auditor should consider in evaluating the acceptability of an explanation include the materiality of the unexpected difference, reliability of the evidence obtained to support the explanation, and whether the explanation is sufficient to explain a material (significant) portion of the unexpected difference. If, after evaluating the evidence, the auditor finds that the explanation being considered does not adequately explain the unexpected difference, the auditor should return to the "explanation generation" phase of the process. If the auditor believes that the audit evidence obtained adequately supports the explanation, the auditor may proceed to the final step of the process, which is "documentation." While the extent of written documentation will vary depending on the materiality of the unexpected difference, the audit work papers will generally include a written description of material unexpected differences, an explanation for the difference, evidence that corroborates the explanation, and the judgment of the auditor as to the adequacy of the explanation.

The purpose of this article has been to provide the reader with a basic understanding of analytical procedures. Space limitations, however, preclude discussing in more detail some of the complexities associated with analytical procedures. Thus, the interested reader is referred to Statement on Auditing Standards No. 56 (AICPA, 1988) or to *Montgomery's Auditing* (O'Reilly et al., 1998) for a more in-depth discussion. Further, while the focus of this article has been on the use of analytical procedures during financial statement audits, portions of analytical procedures can also be helpful to both management and investors. For example, managers of a business may develop certain key ratios and statistics, which can be used to monitor the progress of the business. For example, a manager may use data such as the number of new customers, number of customer complaints, and other customer satisfaction measures to monitor the sales revenue and profitability of the company. An investor might also use analytical procedures to evaluate his or her investment portfolio. For example, an investor may try to forecast the future sales of a company based on knowledge of the industry in which the company operates and the prior sales history of the company. The sales forecast could then be used to develop an earnings forecast for that company, which is a critical component in developing an investment decision. Thus, while analytical procedures are an integral part of the audit process, they can also be a useful tool for managers and investors.

(SEE ALSO: *Financial statement analysis*; *Accounting*; *Auditing*)

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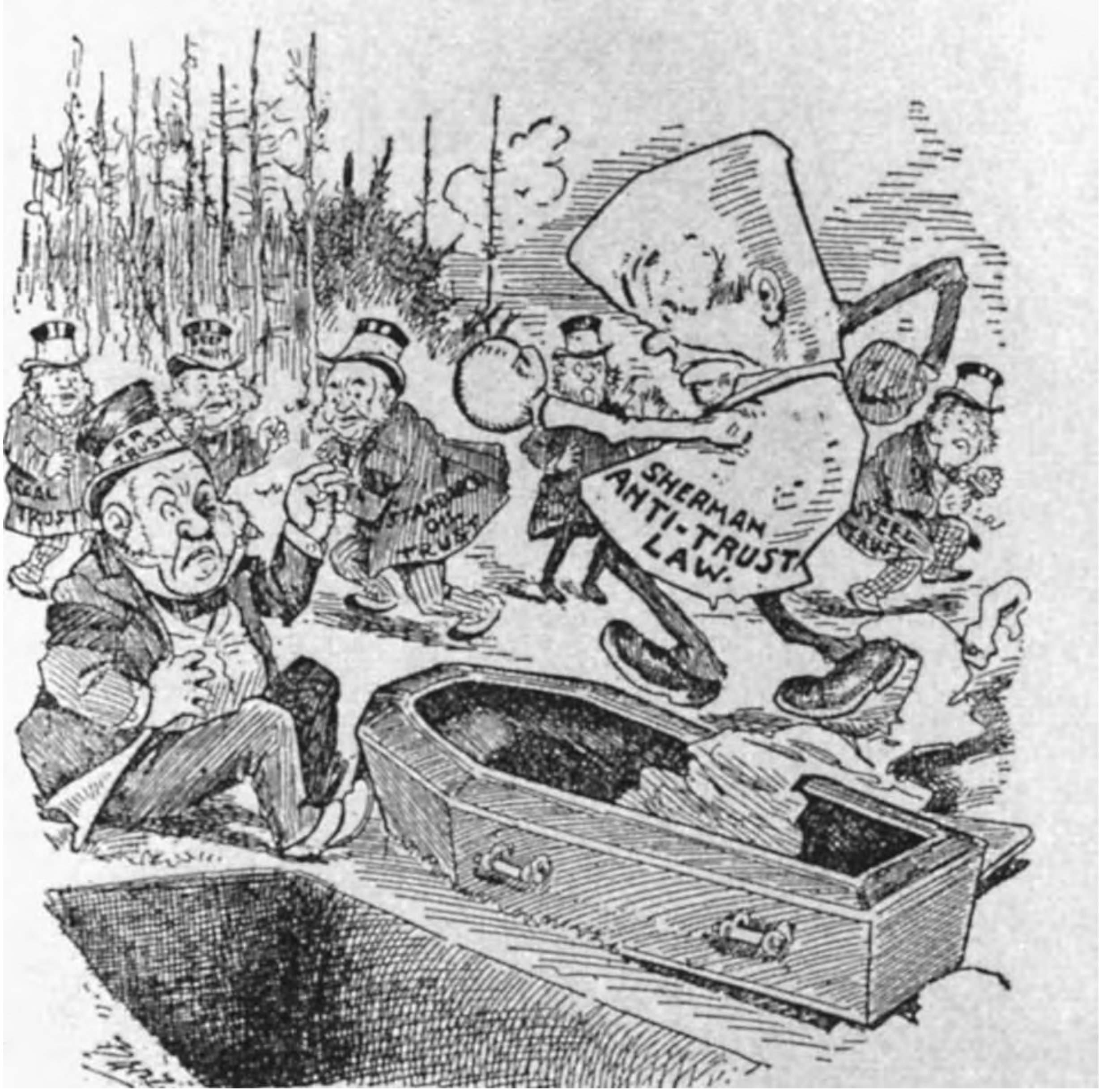
JEAN C. BEDARD
JAMES J. MARONEY

ANTITRUST LEGISLATION

In the United States, toward the last part of the nineteenth century, widespread business combinations known as trust agreements existed. These agreements usually involved two or more companies that combined with the purpose of raising prices and lowering output, giving the trustees the power to control competition and maximize profits at the public's expense. These trust agreements would result in a monopoly. To combat this sort of business behavior, Congress passed antitrust legislation.

In 1890 Congress passed the Sherman Antitrust Act, which forbade all combinations or conspiracies in restraint of trade. The act contained two substantive provisions. Section 1 declared illegal contracts and conspiracies in restraint of trade, and Section 2 prohibited monopolization and attempts to monopolize. When an injured party or the government filed suits, the courts could order the guilty firms to stop their illegal behavior or the firms could be dissolved. The Sherman Antitrust Act pertained only to trade within the states, and monopolies still flourished as companies found ways around the law.

In 1914 Congress passed the Clayton Act as an amendment to the Sherman Act. The Clayton Act made certain practices illegal when their ef-



A cartoon illustrating antitrust legislation attacking monopolies.

fect was to lessen competition or to create a monopoly. The main provisions of this act included (1) forbidding discrimination in price, services, or facilities between customers; (2) determining that antitrust laws were not applicable to labor organizations; (3) prohibiting requirements that customers buy additional items in order to obtain products desired; and (4) making it illegal for one corporation to acquire the stock of another with intention of creating a monopoly. Because loopholes were also present in the Clayton Act, the Federal Trade Commission (FTC) was established to enforce the antitrust legislation.

Passed in 1914, the Federal Trade Commission Act provided that "unfair methods of competition in or affecting commerce are hereby declared unlawful." The FTC consists of five members appointed by the president and has the power to investigate persons, partnerships, or corporations in relation to antitrust acts. Examples of unlawful trade practices include misbranding goods quality, origin, or durability; using false advertising; mislabeling to mislead consumer about product size; and advertising or selling rebuilt goods as new. The act also gave the FTC the power to institute court proceedings against alleged violators and provided the penalties if found guilty.

The Robinson-Patman Act of 1936 strengthened the price discrimination provisions of the Clayton Act. One amendment involved the discrimination in rebates, discounts, or advertising service charges; underselling and penalties. Another provided for the exemption of non-profit institutions from price-discrimination provisions. The main purpose of this act was to justify the differences in product costs between customers and clarify the Robinson-Patman Act.

The Celler-Kefauver Antimerger Act, passed in 1950, extended the Clayton Act's injunction against mergers. Since the purpose of this act was to forbid mergers that prevented competition, corporations that were major competitors were prohibited from merging in any manner. This amendment extended the FTC's jurisdiction to all corporations. This act, however, was not intended to stop the merger of two smaller companies or the sale of one in a failing condition. Due to court decisions that had weakened the Clayton Act, the Celler-Kefauver Antimerger Act was necessary to restrict mergers.

Although antitrust laws have contributed enormously to improving the degree of competition in our system, they have not been a complete success. A sizable number of citizens would like to see these laws broadened to cover professional baseball teams, labor unions, and professional organizations. Without the antitrust legislation that now exists, however, our economy would be worse off in the end.

(SEE ALSO: *Sherman Antitrust Act of 1890*; *Robinson-Patman Act of 1936*; *Federal Trade Commission Act of 1914*)

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JANEL KUPFERSCHMID

ARTIFICIAL INTELLIGENCE

> *Computer systems are becoming commonplace; indeed, they are almost ubiquitous. We find them central to the functioning of most business, governmental, military, environmental, and health-care organizations. They are also a part of many educational and training programs. But these computer systems, while increasingly affecting our lives, are rigid, complex and incapable of rapid change. To help us and our organizations cope with the unpredictable eventualities of an ever-more volatile world, these systems need capabilities that will enable them to adapt readily to change. They need to be intelligent. Our national competitiveness depends increasingly on capacities for accessing, processing, and analyzing information. The computer systems used for such purposes must also be intelligent. Health-care providers require easy access to information systems so they can track health-care delivery and identify the most recent and effective medical treatments for their patients' conditions. Crisis management teams must be able to explore alternative courses of action and support decision making. Educators need systems that adapt to a student's individual needs and abilities. Businesses require flexible manufacturing and software design aids to maintain their leadership position in information technology, and to regain it in manufacturing.* (Grosz and Davis, 1994)

The history of artificial intelligence (AI) predates the development of the first computing machines. On a general level, intelligence has been the subject of philosophical study for 2000 years. At the computational level, mathematician Alan Turing constructed a framework for AI during the era of analog computers.

While precise definitions are still the subject of debate, AI may be usefully thought of as *the branch of computer science that is concerned with the automation of intelligent behavior*. The intent of AI is to develop systems that have the ability to perceive and to learn, to accomplish physical tasks, and to emulate human decision making. AI seeks to design and develop intelligent agents as well as to understand them. Currently, the main fields of research and development include the following:

1. *Natural languages*: These studies focus on problems related to natural language interface, machine translation, understanding spoken language, and so forth.
2. *Expert systems*: No generalizable solutions are researched, but expertise is used to deal with ill-defined problems and relationships.
3. *Cognition and learning*: Investigations are being made into modes of thinking, learning, and problem solving.
4. *Computer vision*: Efforts are being made to develop principles and algorithms for machine vision and the interpretation of visual data.
5. *Automatic deduction*: This area deals with the resolution of problems, theorem proving, and logic programming.

FOUNDATIONS

The term "AI" was applied about 1956, giving a formal name to work that had been developing over the previous five or six years. Individuals and organizations have an abiding interest in AI for several important reasons, including the following:

1. To preserve expertise that might be lost when an acknowledged expert is unavailable.
2. To create organizational knowledge bases so that others may learn from past problem-solving successes.
3. To help decision makers be consistent in their evaluation of complex problems.

During its early years AI was dominated by reliance on logic as a means of representing knowledge and on logical inference as the primary mechanism for intelligent reasoning. In the 1990s other paradigms arrived on the scene, some of which had a dramatic impact. *Artificial neural networks* (ANNs) were motivated by assumptions about how the brain functions—particularly the ideas of massively parallel connections, each of which performs simple computational tasks. Taken together, they represent knowledge as a property of patterns of relationships. *Genetic algorithms* apply principles of biological evolution to the problems of searching complex solution spaces. The programs do not use logical reasoning either, but evolve toward better and better solutions to complex problems.

Multiagent systems have recently come to the fore of AI research. This emergence has been driven by a recognition that intelligence may be reflected by the collective behaviors of large numbers of very simple interacting members of a community of agents. These agents can be computers, software modules, or virtually any object that can perceive aspects of its environment and proceed in a rational way toward accomplishing a goal.

A variety of disciplines have influenced the development of AI. These include philosophy (logic), mathematics (intractibility, computability, algorithms), psychology (cognition), engineering (computer hardware and software), and linguistics (knowledge representation and natural-language processing).

Long before the development of computers, the notion that thinking was a form of computation motivated the formalization of logic. These efforts continue today. Graph theory provided the architecture for searching a solution space for a problem. Operations research, with its focus on optimization algorithms, used graph theory and other methods to solve complex decision-making problems.

In 1950, Alan Turing proposed what has become known as the Turing Test for defining intelligent behavior. The idea was to specify requirements that a computer would have to exhibit in order to demonstrate intelligence. Briefly, the Turing Test proposes that the computer should be interrogated via telecommunications by a human. Intelligence is exhibited by the computer if the interrogator cannot tell whether there is a human or a computer at the other end. In order to pass the test, a computer would need to have capabilities for natural-language processing, knowledge representation, automated reasoning, and machine learning.

AN EVOLUTION OF APPLICATIONS

While computer systems have become commonplace, they are generally rigid, complex, and incapable of rapid change. According to *A Report to ARPA on Twenty-First Century Intelligent Systems*, for us and our organizations to cope with the unpredictable eventualities of an ever-more volatile world, these systems need capabilities that will enable them to adapt readily to change. The report argues that our national competitiveness depends increasingly on capacities for accessing, processing, and analyzing information (Grosz and Davis, 1994).

One of the early milestones in AI was Newell and Simon's General Problem Solver (GPS). The program was designed to imitate human problem-solving methods. This and other developments such as Logic Theorist and the Geometry Theorem Prover generated enthusiasm for the future of AI. Simon went so far as to assert that in the near-term future the problems that computers could solve would be coextensive with the range of problems to which the human mind has been applied.

Soon difficulties in achieving this objective began to manifest themselves. In scaling up from earlier successes, problems of intractability were encountered. A search for alternative approaches led to attempts to solve typically occurring cases in narrow areas of expertise. This prompted the development of expert systems. A seminal model was MYCIN, developed to diagnose blood infections. Having about 450 rules, MYCIN was able to perform as well as many experts. This and other expert-systems research led to the first commercial expert system, R1, implemented at Digital Equipment Corporation (DEC) to help configure orders for new computer systems. Subsequent to R1's implementation, it was estimated to save DEC about $40 million a year.

Other classic systems include the PROSPECTOR program for determining the probable location and type of ore deposits and the INTERNIST program for performing medical diagnosis in internal medicine.

THE FUTURE

A Report to ARPA on Twenty-First Century Intelligent Systems identified four types of systems that will have a substantial impact on applications: intelligent simulation, intelligent information resources, intelligent project coaches, and robot teams (Grosz and Davis, 1994).

Intelligent simulations generate realistic simulated worlds that enable extensive affordable training and education that can be made available any time and anywhere. Examples may be hurricane crisis management, exploration of the impacts of different economic theories, tests of products on simulated customers, and technological design—testing features through simulation that would cost millions of dollars to test using an actual prototype.

Intelligent information resources systems (IRSS) will enable easy access to information related to a specific problem. For instance, a rural doctor whose patient presents with a rare condition might use IRSS to help assess different treatments or identify new ones. An educator might find relevant background materials, including information about similar courses taught elsewhere.

Intelligent project coaches (IPC) could function as co-workers, assisting and collaborating with design or operations teams for complex systems. Such systems could remember and recall the rationale of previous decisions and, in times of crisis, explain the methods and reasoning previously used to handle that situation. An IPC for aircraft design, for example, could enhance collaboration by keeping communication flowing among the large, distributed design staff, the program managers, the customer, and the subcontractors.

Robot teams could contribute to manufacturing by operating in a dynamic environment with minimal instrumentation, thus providing the benefits of economies of scale. They could also participate in automating sophisticated laboratory procedures that require sensing, manipulation, planning, and transport.

CONCLUSION

AI is a young field and faces many complexities. Nonetheless, the Spring 1998 issue of *AI Magazine* contained articles on the following innovative applications of AI: This is suggestive of the broad potential of AI in the future.

1. "Case- and Constraint-Based Project Planning for Apartment Construction"
2. "CREWS_NS: Scheduling Train Crews in The Netherlands"
3. "An Intelligent System for Case Review and Risk Assessment in Social Services"
4. "CHEMREG: Using Case-Based Reasoning to Support Health and Safety Compliance in the Chemical Industry"
5. "MITA: An Information-Extraction Approach to the Analysis of Free-Form Text in Life Insurance Applications"

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JAMES V. HANSEN

ASSURANCE SERVICES

Assurance services are a class of services provided by certified public accountants (CPAs) in public practice. While the term is sometimes used inconsistently among individual CPA firms, the American Institute of Certified Public Accountants (AICPA) Special Committee on Assurance Services defined assurance services as "independent professional services that improve the quality of information, or its context, for decisionmakers."

Assurance services are rooted in the CPA's tradition of independent verification of data prepared by others. They differ from many services historically provided by CPAs in that they represent an expansion of the information and forms of reports provided. Indeed, they represent an evolution in the nature of services provided by CPAs, as CPAs have begun to provide services not just on accounting information but on many other types of information that people need in order to make decisions.

THE EVOLUTION OF CPA SERVICES

Since the early part of the twentieth century, CPAs have audited financial statements. The *audit* is the CPA's defining service and, aside from preparation of income taxes, the service most closely associated with the CPA profession. In an audit of financial statements, the CPA examines the transactions that underlie an entity's financial statements and reports whether the financial statements are fairly stated in conformity with generally accepted accounting principles. Such an opinion is required by the Securities and Exchange Commission (SEC) for companies whose stock is publicly traded and is often demanded by others, such as lenders, for entities that are not subject to the SEC.

Beginning in the 1970s, financial statement users requested that CPAs provide some of the benefits of audits at a lower cost. As a result, CPAs began providing a lower-level service, called a *review*, on financial statements. Reviews are based on inquiry and analytical procedures applied to financial statement amounts, rather than on the more rigorous procedures required in an audit, such as physical inspection and confirmation with third parties. The review culminates in a report that provides limited assurance, that is, that the CPA is not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in conformity with generally accepted accounting principles. Reviews are used for quarterly financial statements of publicly held companies. Reviews are performed for privately owned companies when the financial statement user wants some assurance about the statements but do not require the level of assurance provided in an audit.

CPAs also provide a third level of service on financial statements, the *compilation.* This service, provided only to privately owned companies, is usually done in connection with helping the company record its transactions and transform its records into financial statements. The accountant does not do any tests of the underlying data, but helps put the data into financial statement form and reads the statements for material misstatements. The compilation report expresses no assurance, but if the accountant discovers material misstatements, they must be corrected or described in the CPA's report.

The 1980s brought additional expansion of the CPA's role. Users wanted CPAs to use the audit and review services to report on subjects in addition to financial statements, such as the effectiveness of internal control and the company's compliance with laws, regulations, or contracts. The profession's response was the creation of standards for *attestation* engagements. In an attestation engagement, the CPA applies the tools used in audits and reviews to provide assurance on whether the subject matter of the engagement (such as internal control or management's discussion and analysis of operations) complies with applicable criteria for measurement and disclosure. The result is a report much like an audit (reasonable assurance) or review (limited assurance) of financial statements. In addition, CPAs can apply procedures specifically designed by the expected users of the report to financial or nonfinancial items. This service is neither an audit nor a review. These engagements, called *agreed-upon procedures* engagements, result in a report in which the CPA describes the procedures applied and their results but provides no overall conclusion.

By the 1990s CPAs were being asked to expand still further into additional services, including those that involve subjects far removed from financial reporting and that do not involve an explicit report or conclusion. This area of service—assurance services—is an extension of the audit/attest tradition. It is generally distinct from common consulting services, which generally either provide advice to clients or create internal systems. Probably the most famous assurance service is that provided in controlling and counting the ballots for the annual Oscars ceremony. Another common assurance service involves CPAs observing the drawing of numbers in state lotteries.

Figure 1 is a pictorial depiction of the relationship among CPA services.

Assurance services might involve the type of reports provided in more traditional attestation engagements or they might provide less structured communications, such as reports without explicit conclusions or reports that are issued only when there are problems. Assurance services are often desired to be more customized to information needs of decision makers in specific circumstances. To be responsive to those needs, the form of CPA communication is expected to be more flexible. Thus, a significant difference between assurance and attestation engagements is that assurance engagements do not necessarily result in a standard form of report, whereas attestation engagements (and more familiar audits and reviews) do. Yet assurance services require adherence to key professional qualities by practitioners.

ELEMENTS OF AN ASSURANCE ENGAGEMENT

The important elements involved in assurance engagement are:

- Independence
- Professionalism

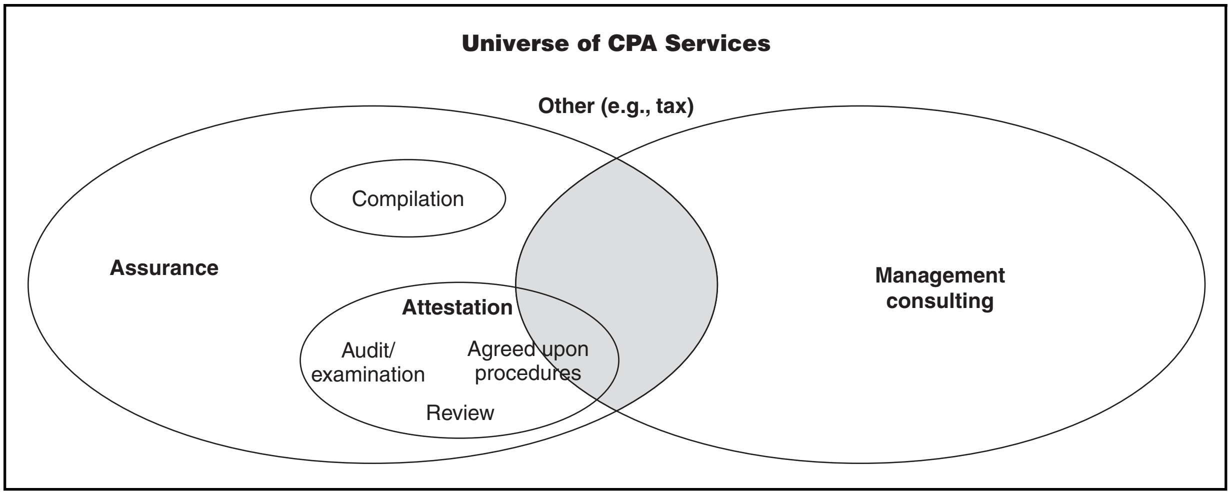

Figure 1

SOURCE: *Assurance Services: Definition and Interpretive Commentary.* AIPCA Committee on Assurance Services, Final Report.

- Information or context improvement
- Decision makers

The CPA should be independent in order to provide an assurance service; that is, he or she should have no vested interest in the information reported on. The CPA's only interest should be the accuracy of the information, not whether the information portrays results favorable or unfavorable to either the entity that prepares the information or the one that uses it.

An assurance service is a professional service, meaning it draws on the CPA's experience, expertise, and judgment. It is based on the skills brought to bear in more traditional services, such as measurement, analysis, testing, and reporting.

Information in an assurance service can be financial or nonfinancial, historical or forward-looking, discrete data or information about systems, internal or external to the decision maker. The information's context relates to how it is presented. An assurance service improves the information or its context by providing assurance about its reliability, increasing its relevance, or making it easier to use and understand.

Decision makers are the users of the information and immediate beneficiaries of the assurance service. They might be internal to an entity, such as the board of directors, or a trading partner, such as a creditor or customer. The goal of an assurance service is to improve the information or its context so that decision makers can make more informed—and presumably better—decisions. The decision maker need not be the party engaging the CPA or paying for the service.

The needs of decision makers are evolving. For decades their needs were generally met by periodic cost-based financial statements. As information technology advances and needs become more decision-specific, decision makers are likely to:

Replace their need for . . .	With a need for . . .
periodic information	real-time or continuous data
historical data	forward-looking data
cost-based information	value-based information
financial information	comprehensive data that includes nonfinancial information
static statements	searchable databases

Assurance services, how they are delivered, and the types of information they deal with are evolving to meet these changing needs.

Although the needs of each decision maker are unique, in research done by the Special Committee on Assurance Services, decision makers expressed keen interest in better information about topics such as:

- Business risks
- Product quality
- Performance measures
- Quality of processes and systems
- Strategic plan execution
- Government performance

TYPES OF ASSURANCE SERVICES

The Special Committee on Assurance Services identified hundreds of assurance services that CPAs provide. It also identified several services that it believed would be of particular appeal to decision makers in the near future. They included the following.

Comprehensive risk assessments. The CPA identifies and assesses the various risks facing an organization, such as the operating environment, operating systems, or information systems. The risks might be internal, external, or regulatory. The CPA can help prioritize the risks and assess the entity's efforts to control or mitigate risks faced.

Business performance measurement. Many organizations use, or should use, data to run their businesses other than that emanating from the financial reporting system. The service deals with identifying or providing explicit assurance on the financial or nonfinancial measures used to evaluate the effectiveness or efficiency of the organization's activities. While CPAs have historically been involved in the development of financial statement information, their skills and knowledge can add similar value to the creation of other information that can monitor the organization's results and its effectiveness in implementing strategic plans.

Electronic commerce. As more business is conducted electronically (via the Internet or in business-to-business electronic data interchange systems) participants have concerns about the integrity and security of data transmitted in furtherance of those transactions. An assurance service can help to address the risks and promote the integrity and security of electronic transmissions, electronic documents, and the supporting systems. One such service, CPA WebTrust, provides explicit assurance about the disclosure of an entity's business policies and about the controls over privacy and information integrity in consumer purchases over the Internet.

Systems reliability. As information technology advances, it becomes increasingly common for critical information to be produced and acted on electronically. Accordingly, decision makers need confidence that the information is continuously reliable. There is an increased need for assurance that systems are designed and operated to produce reliable data in such areas as information about customers, suppliers, and employees, project costing, rights and obligations related to contractual agreements, and competitors and market conditions. In systems reliability engagements, CPAs provide assurance about the design and operation of such systems.

Elder care services. The CPA assists the increasing population of older adults with a wide range of services such as bill paying, providing assurance that health care providers are providing services in conformity with the client's criteria, and consulting on care alternatives and how to pay for them. The CPA provides independent, objective information to protect vulnerable clients from potentially unethical individuals and businesses as well as more traditional services (such as financial control) for nontraditional clients.

Policy compliance. The CPA provides assurance that a company complies with its own policies. The policies—such as ones involving treatment of women or minorities, conflicts of interest, animal testing, environmental matters, or customer service-might be based on internal concerns, calls for social accountability, or laws and regulations.

Trading partner accountability. The CPA provides assurance that the client's trading partners—such as suppliers, customers, or joint venture partners—have appropriately fulfilled their responsibilities. Common situations involve collecting rents or royalties based on sales made by another entity or agreements regarding use of lowest prices or specific billing practices.

Mergers and acquisitions. The CPA applies the types of services done on a client's records and practices to a potential acquisition. He or she can, for example, provide insights into the acquisition target's business risks, appropriateness of accounting methods, the value of its assets, or the adequacy of its systems and controls.

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DON M. PALLAIS

ATTESTATION

(SEE: *Assurance Services*)

AUDIT COMMITTEES

Audit committees are a key institution in the context of corporate governance because they help boards of directors fulfill their financial and fiduciary responsibilities to shareholders. Through their audit committees, boards of directors establish a direct line of communication between themselves and the internal and external auditors as well as the chief financial officer. Such an organizational structure and reporting responsibility in an environment of free and unrestricted access enables full boards of directors not only to gain assurance about the quality of financial reporting and audit processes, but also to approve of significant accounting policy decisions. Moreover, strong and effective audit committees, through their planning, review, and monitoring activities, can recognize problem areas and take corrective action before such problems impact the company's financial statements and investors. Thus, audit committees have an important role in helping boards of directors avoid litigation risk because such committees provide due diligence related to financial reporting.

REQUIREMENT FOR AUDIT COMMITTEES

Audit committees have long been seen as an important group in assuring greater corporate accountability in the United States. The value of such committees has been noted by the U.S. Congress, the U.S. Securities and Exchange Commission, the New York Stock Exchange, and the American Institute of Certified Public Accountants. Audit committees are required by the New York Stock Exchange, American Stock Exchange, and National Association of Securities Dealers (NASDAQ/NMS issuers).

Key recommendations and decisions in the evolution of audit committees in the United States include the following

1940 The Securities and Exchange Commission (SEC) recommended the establishment of audit committees (Accounting Series Release No. 19). Specifically, the SEC recommended that shareholders elect the auditors at annual meetings and a committee of nonofficer directors nominate the auditors. Also, the New York Stock Exchange Board of Governors issued a similar recommendation.

1967 The executive committee of the American Institute of Certified Public Accountants (AICPA) recommended that publicly held corporations establish audit committees to nominate the auditors and discuss the audit.

1972 The SEC issued Accounting Series Release No. 123, "Standing Audit Committees Composed of Outside Directors."

1973 The New York Stock Exchange (NYSE) issued a white paper, "Recommendations and Comments on Financial Reporting to Shareholders and Related Matters," strongly recommending that each listed company form an audit committee.

1974 The SEC amended Regulation 14A dealing with the proxy rules. Registrants are required to disclose in their proxy statements the existence of audit committees and the names of the committee members.

1977 A NYSE audit committee policy statement required each domestic corporation listed on the exchange to establish and maintain an audit committee of outside directors before July 1, 1978.

1987 The National Commission on Fraudulent Financial Reporting recommended that the SEC require that all public companies have audit committees.

1987 The National Association of Securities Dealers required each NASDAQ/NMS issuer to establish an audit committee.

1991 Congress passed the Federal Deposit Insurance Corporation Improvement Act. The law provided for the establishment of audit committees for insured depository institutions that have total assets of $150,000,000 or more.

1993 American Stock Exchange required its listed companies to establish audit committees.

1994 The American Law Institute issued *Principles of Corporate Governance: Analysis and Recommendations*. The Institute strongly supported and endorsed the concept of audit committees.

1999 The Independence Standards Board issued its first standard, "Independence Discussions with Audit Committees," which requires independent auditors to issue an annual independence confirmation to the audit committee of the company.

1999 The SEC approved changes to its rules to implement several of the recommendations by the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees. Registrants are required to disclose information about audit committee composition and practices.

In addition to the presence of audit committees on U.S. stock exchanges, a number of stock exchanges in Canada, Europe, Africa, the Middle East, and the Asia/Pacific region have adopted audit committees. As worldwide financial markets expand and more companies are listed on major stock exchanges in different countries, the international investing public's demand for consistent and equal oversight protection through the use of audit committees will continue. In addition, international investors are concerned about the quality of corporate governance because of the impact of financial collapses and alleged frauds on securities markets.

In response, a number of stock exchanges have adopted audit committees to increase transparency and competence in the management of their listed member companies in order to deal effectively with attracting foreign equity investment.

ORGANIZATION AND STRUCTURE OF AUDIT COMMITTEES

Boards of directors form their audit committees by either passing a board resolution or amending corporate bylaws. Audit committees' responsibilities should be clearly defined and documented in their charter. Although the scope of the audit committees' responsibilities is predetermined by boards, the committees should be allowed to expand their charge with board approval and investigate significant matters that impact financial reporting disclosures.

Boards of directors should carefully give consideration to the following points with respect to their appointments of directors to audit committees:

1. *Number of directors*: The number of independent directors appointed to audit committees depends on the nature of the business and industry dynamics, the size of the company, and the size of the board of directors. The general consensus seems to be that three to five members are adequate.
2. *Composition*: Because members of audit committees have varied backgrounds and occupations, they provide a mix of skills and experience. Although the members have different levels of expertise, it is strongly advisable to have at least one individual who has a financial accounting background.
3. *Meetings*: Audit committees meet from one to four times each year, with three or four meetings being the most common schedules.

NATURE OF AUDIT COMMITTEES RESPONSIBILITIES

Boards of directors define the role and responsibilities of their audit committees. This jurisdictional charge is usually disclosed in the audit committees' written charter, which includes the terms of reference, such as mission statement, membership (size and composition), term of service, frequency of meetings, scope of responsibilities, and reporting responsibilities. Audit committees are primarily responsible for the quality related to such matters as:

- External auditing process
- Internal auditing process
- Internal controls
- Conflicts of interest (code of corporate conduct, fraud presentation)
- Financial reporting process
- Regulatory and legal matters
- Other matters (interim reporting, information technology, officers' expense accounts)

Although boards of directors have defined the responsibilities of audit committees, boards may expand the scope of the audit committees' charter; however, boards should avoid diluting the committees' charge with information overload. Recognizing that audit committees operate on a part-time basis and serve in an advisory capacity to boards, it is essential that boards place limitations on the scope of the committees' charge. Such a scope limitation enables boards to evaluate the committees' performance as well as protect the committees against legal claims for their inactions that are outside their charge. An illustration of the roles and responsibilities of audit committees is disclosed in the annual proxy statement of a company.

BLUE RIBBON COMMITTEE ON IMPROVING THE EFFECTIVENESS OF CORPORATE AUDIT COMMITTEES

On September 28, 1998, Arthur Levitt, chairman of the SEC, presented an address at the New York University Center for Law and Business entitled "The Numbers Game." He discussed matters related to the issues involving the quality of financial reporting (e.g., earnings management, reserves, audit adjustments, revenue recognition, creative acquisition accounting, in-process research and development, and restructuring charges). Because these issues impact a firm's quality of earnings and market capitalization (e.g., price-earnings ratios), Levitt requested a response from the entire financial community.

In response to Levitt's concerns, in October 1998, the New York Stock Exchange and the National Association of Securities Dealers created the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees. In February 1999, the committee issued its report, which contains ten recommendations designed to (1) strengthen the independence of audit committees; (2) increase the effectiveness of audit committees; and (3) improve the relationship between boards and their audit committees the activities of auditors and management. In December 1999, the SEC approved changes to its rules to implement several of the Blue Ribbon Committee's recommendations with respect to audit committee composition and practices.

In view of the aforementioned recommendations of the Blue Ribbon Committee, it is clearly evident that the scope for the responsibilities of audit committees will significantly increase. Therefore, it is essential that audit committees engage in an active continuous educational improvement program to help their boards discharge their fiduciary responsibilities to shareholders.

The duties of the Audit Committee are (a) to recommend to the Board of Directors a firm of independent accountants to perform the examination of the annual financial statements of the Company; (b) to review with the independent accountants and with the Controller the proposed scope of the annual audit, past audit experience, the Company's internal audit program, recently completed internal audits and other matters bearing upon the scope of the audit; (c) to review with the independent accountants and with the Controller significant matters revealed in the course of the audit of the annual financial statements of the Company; (d) to review on a regular basis whether the Company's Standards of Business Conduct and Corporate Policies relating thereto has been communicated by the Company to all key employees of the Company and its subsidiaries throughout the world with a direction that all such key employees certify that they have read, understand and are not aware of any violation of the Standards of Business Conduct; (e) to review with the Controller any suggestions and recommendations of the independent accountants concerning the internal control standards and accounting procedures of the Company; (f) to meet on a regular basis with a representative or representatives of the Internal Audit Department of the Company and to review the Internal Audit Department's Reports of Operations; and (g) to report its activities and actions to the Board at least once each fiscal year.

(SEE ALSO: *Auditing*; *Securities and Exchange Commission*)

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LOUIS BRAIOTTA, JR.

AUDITING

The objective of an audit is to provide assurance that an assertion corresponds with some established criteria. An audit involves gathering and evaluating evidence to support the assertions and preparing a communication indicating the work done by the auditor and his or her opinion regarding the degree of correspondence between the assertions and established criteria.

TYPES OF AUDITS

Two primary types of audits are financial audits and compliance audits. In a financial audit, the management of a business asserts that the financial statements are prepared in accordance with generally accepted accounting principles (GAAP), which are the applicable criteria. The financial statement auditor attests to the degree of correspondence between those financial statements and GAAP. In a compliance audit, an individual or business asserts that it is complying with specific laws, regulations, policies or procedures. The compliance auditor provides assurance that the entity is, in fact, complying with those applicable criteria. More details are provided below.

Audits are related to a wide range of criteria. Operational, or performance, audits evaluate the effectiveness and/or efficiency of an organization. For example, an auditor may determine whether or not a recipient of government funds is performing the funded services in a cost-efficient manner. The term "attestation engagement" includes audits and other services in which an auditor is engaged to issue a written communication that expresses a conclusion about the reliability of a written assertion that is the responsibility of another party. For example, an auditor may attest to the reliability of awards programs. The key components are an assertion made by one party with the expectation that a third party will rely on it and an attestor providing a written report on the assertion. Assurance services are independent professional services, including attestation services, that improve the quality of information or its context for decision makers. Developing areas for assurance services include Webtrust, which provides assurance regarding controls related to electronic commerce.

TYPES OF AUDITORS

The three broad groups of auditors are external, internal, and governmental. Certified public accountants (CPAs) are external, independent auditors who are licensed by individual states to provide auditing services. The public accounting profession has played an active role in developing and providing attestation services. The American Institute of Certified Public Accountants (AICPA), a voluntary national professional organization, represents the accounting profession in the United States in general and the public accounting profession in particular. The AICPA publishes books, journals, and other materials, manages a Web site (www.aicpa.org), lobbies legislators, and sets professional standards. State professional societies, such as the New York State Society of CPAs, provide support on a local level. The United States Securities and Exchange Commission (SEC), in requiring publicly held companies to have annual audits, promoted the role of the CPA in providing services of this nature (i.e. independent, professional, external verification). SEC requirements are discussed below.

Internal auditors are employees of organizations. In publicly owned companies, internal auditors typically report to senior management and the board of directors, through its audit committee. Internal auditors are primarily involved in compliance and operational audits. The Institute of Internal Auditors (IIA), an international organization, is the professional organization representing the internal auditing profession. The IIA publishes materials, encourages local chapter activities, offers certification as a certified internal auditor (CIA), and provides general support for practicing internal auditors. (For more information, go to http://nan.shh.fi/raw/iia/.)

Government auditors evaluate their own agencies and those for which they are responsible, including recipients of funds. These auditors exist on the national, state, and local levels. Internal Revenue Service (IRS) auditors and General Accounting Office (GAO) auditors are the most visible government auditors. IRS auditors examine tax returns. (For more information, go to http://www.irs.gov/.) The GAO is responsible for oversight, review, and evaluation of federal agencies and recipients of federal funds. The GAO reports to the U.S. Congress. (For more information, go to http://www.gao.gov/index.htm.)

FINANCIAL AUDITS

The objective of a financial audit is to determine whether the financial statements are prepared in accordance with generally accepted accounting principles (GAAP). The management of an organization is responsible for preparing the financial statements. The auditor is responsible for rendering an opinion on the fairness of those financial statements based on his or her audit.

When preparing the financial statements, management must follow GAAP, which are the principles and practices that govern financial reporting. Formal Statements of Financial Accounting Standards are issued by the Financial Accounting Standards Board (FASB), an independent standards-setting organization in the United States. (For more information, go to www.rutgers.edu/Accounting/raw/fasb/.) The Audit Committee of the company's board of directors acts as a liaison with the auditors who are performing the financial statement audit.

SECURITIES AND EXCHANGE ACT OF 1934

The Securities and Exchange Act of 1934 requires publicly held companies to file Form 10-Ks with the Securities and Exchange Commission (SEC) within 90 days after the end of the fiscal year. This filing must include audited financial statements and an independent auditors report. The SEC was established to protect investors, and the requirement to publish audited annual financial statements plays a role in meeting that objective. (For more information, go to www.sec.gov.)

Nonpublic companies may have their financial statements audited for several reasons. The company may be planning to go public in the near future and will need audited financial statements for several years prior to an initial public offering. A bank or other creditor may require audited financial statements annually. A business may voluntarily hire an auditor to provide the owners with assurance that its financial statements are reliable.

CPA FIRMS

Audited financial statements that will be submitted to the SEC or to others are audited by CPAs. These CPAs practice in public accounting firms, many of which are referred to as professional services firms. The largest firms are commonly referred to as "The Big Five." These five firms are: Arthur Andersen & Co. (http://www.arthurandersen.com/), Deloitte & Touche (http://www.dttus.com/), Ernst & Young (http://www.ey.com), KPMG Peat Marwick (http://www.kpmgcampus.com/), and PricewaterhouseCooper (http://www.pwcglobal.com/). These companies, and many other public accounting firms, operate as limited liability partnerships (LLPs) and thus carry LLP designation in their names. In addition to accounting and auditing services, many CPA firms offer tax and consulting services. These consulting services include systems design, litigation support, pension and benefits consulting, and financial planning.

GENERALLY ACCEPTED AUDITING STANDARDS

The external, independent CPA must follow generally accepted auditing standards (GAAS) when performing the financial statement audit. These ten broad standards include three general requirements for the individual auditor, three standards for fieldwork, and four reporting standards. Authoritative guidance regarding the application of these ten general standards is provided in Statements on Auditing Standards (SASs), which are issued by the AICPA's Auditing Standards Board.

The general standards require the CPA to be proficient in accounting and auditing, to be independent from his or her client, and to exercise due professional care. Before accepting an audit client, the auditor must determine if he or she will be able to provide the necessary services on a timely basis and must have no financial or managerial relationship with the company whose financial statements are being audited.

The fieldwork standards address what is required when actually performing the audit work.

The auditor must plan the engagement and supervise assistants. The auditor must obtain an understanding of the company's internal controls. The auditor must obtain sufficient competent evidence to support the financial statement assertions.

The reporting standards set requirements for the auditor's report. The report must explicitly refer to GAAP and must state an opinion on the financial statements as a whole. If there has been a change in accounting principles used by the company or inadequate disclosure of significant information, the auditor's report should address those issues.

TYPES OF AUDITOR'S REPORTS

The auditor can issue five types of reports on financial statements: unqualified opinion, unqualified opinion with explanatory language, qualified opinion, adverse opinion, or disclaimer of opinion.

If the financial statements present fairly, in all material respects, an entity's financial position (i.e., the balance sheet), results of operations (i.e., the income statement), and cash flows (i.e., the statement of cash flows) in conformity with GAAP, and if the audit is performed in accordance with GAAS, then a standard unqualified report can be issued. The standard unqualified report is as follows:

Independent Auditor's Report

> *We have audited the accompanying balance sheets of X company as of December 31, 20X2 and 20X1, and the related statements of income, retained earnings, and cash flows for the years then ended. These financial statements are the responsibility of the Company's Management. Our responsibility is to express an opinion on these financial statements based on our audits.*
>
> *We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.*
>
> *In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of X Company as of [at] December 31, 20X2 and 20X1, and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.*

Under certain circumstances, which are specified in the professional guidance, an auditor adds explanatory words or paragraph to a report in which an unqualified opinion is expressed. The unqualified opinion is not affected. There are nine situations in which such explanations are allowed. Among the most common are those instances in which there has been a change in accounting principle with which the auditor concurs. In such instances, the auditor adds a paragraph after the opinion paragraph. The additional paragraph identifies briefly the accounting change.

The auditor would issue a qualified opinion in situations where the auditor views a departure from GAAP as being material, but not pervasive or highly material relative to the entire set of financial statements; or when the auditor has not been able to obtain sufficient competent evidence pertaining to a material, but not pervasive or highly material, part of the financial statements. The auditor must add an explanatory paragraph before the opinion paragraph describing the reason for the qualification and then qualify the opinion paragraph. In the case of inadequate evidence, which is referred to as a scope limitation, the second paragraph of the report would also been modified.

If, in the auditor's judgment, pervasive or highly material deviation(s) from GAAP exist and the auditee cannot be persuaded to adjust the financial statements to the satisfaction of the auditor, then the auditor must express an adverse opinion. In this condition, the auditor expresses an opinion that the financial statements taken as a whole do not present fairly the financial position, results of operations, and cash flows of the company in accordance with GAAP.

A disclaimer of opinion, which basically means giving no opinion, is issued when the scope limitation (typically lack of evidence regarding financial statement assertions) is so pervasive or highly material that the auditor cannot draw conclusions as to the fairness of the financial statements, taken as a whole. A disclaimer is also issued when the auditor lacks independence from the auditee. Disclaiming an opinion is also permitted, but not required, in conditions of major uncertainty about the company's ability to continue as a going concern for a year following the date of the financial statements.

CODE OF PROFESSIONAL CONDUCT

The AICPA Code of Professional Conduct guides the CPA in the performance of professional services, including audits. The code consists of principles, rules, interpretations, and rulings, going from the very broad to the very specific.

The six ethical principles of professional conduct provide the basis for the rest of the code. CPAs are expected to exercise professional and moral judgments in all their activities. CPAs should act in the public interest. CPAs should perform all their work with the highest sense of integrity. CPAs should be free of conflicts of interest when performing professional services. CPAs should observe the profession's technical and ethical standards. CPAs in public practice should observe these principles of the Code of Professional Conduct in determining the scope and nature of services to be provided.

The rules address more specific ethical concerns. CPAs are required to be independent, to act with integrity and objectivity, and to follow and comply with applicable standards. When expressing an opinion on financial statements, the CPA must use GAAP as the criteria for evaluating fairness. Client information is confidential. Contingent fees, commissions, or referral fees are not acceptable when providing audit services. CPAs shall not commit discreditable acts, advertise in deceptive ways, or practice in a form of organization that is not permitted by state law.

The interpretations provide more detail regarding the rules. The independence rule has the most interpretations. Interpretations give guidance on issues such as financial and managerial relationships with the client, honorary directorships, loans, litigation, and firm and family relationships. Interpretations of other rules address issues such as conflicts of interest, competency, departures from promulgated GAAP, disclosure of confidential client information, sale of a practice, contingent fees in tax matters, client's records, governmental requirements in attest services, and CPAs operating a separate business.

Rulings are answers to specific questions. They provide guidance to CPAs regarding particular concerns that surface in providing professional services. Examples include whether or not a CPA can accept a gift from a client, when an individual can refer to him- or herself as a CPA, and the recruiting of personnel to fill a client position.

COMPLIANCE AUDITS

The objective of a compliance audit is to determine whether the auditee is following prescribed laws, regulations, policies, or procedures. These audits can be performed within a business organization for internal purposes or in response to requirements by outside groups, particularly government. Compliance audits can also be performed on individuals, for example, a compliance audit of an individual's tax return.

Typically, internal auditors are involved with compliance audits, within an organization, although independent CPAs perform this work as well. A compliance audit may focus on internal controls and whether or not the organization is following the internally prescribed policies and procedures. As part of the compliance audit, the auditor will obtain evidence supporting the assertion that the controls are being followed. Based on the auditor's evaluation of the evidence, he or she will usually write a report discussing the findings and making recommendations for improvement. A compliance audit could also look at external laws and regulations. The auditor would assess whether or not the organization, or the applicable part of the organization such as the marketing department, is adhering to specific laws and regulations, such as the Foreign Corrupt Practice Act of 1977. This law prohibits business entities from bribing officials of other governments in order to win business contracts.

Standards to be used when auditing federal government agencies and recipients of federal funds are found in ''Government Auditing Standards,'' issued by the Comptroller General of the United States. This publication, which is referred to as the ''Yellow Book,'' includes additional auditing standards that must be followed, in addition to GAAS. As part of any Yellow Book audit, the auditor must evaluate compliance with laws and regulations.

The auditor must perform several steps. First, the auditor must identify pertinent laws and regulations. Then, the auditor assesses the risks of material noncompliance; in so doing, the auditor must consider and assess internal controls. Next, the auditor designs steps and procedures to test compliance with laws and regulations to provide reasonable assurance that both unintentional and intentional instances of material noncompliance are detected. The auditor must issue a report on the tests of compliance in which all instances of noncompliance or illegal acts must be reported.

(SEE ALSO: *Assurance services*; *Audit Committees*; *Government Auditing Standards*)

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MOHAMMAD J. ABDOLMOHAMMADI
ELLIOTT S. LEVY

AUDITOR REPORTS

(SEE: *Auditing*)

AUTHORITY

(SEE: *Management: Authority and Responsibility*)

B

BABY BOOMERS

(SEE: *Lifestyles*)

BAIT AND SWITCH ADVERTISING

(SEE: *Advertising*)

BALANCE OF TRADE

Even though the United States has many natural resources and the ways and means to use them in manufacturing, it cannot provide its people with all that they want or need. For this reason, the United States participates in international trade, which is the exchange of goods and services with other nations. Without international trade, goods would either cost more or not be available.

Throughout the world, there are substantial differences in the natural resources available. For example, Canada, with its huge forests, is a major producer of lumber and paper products; the Middle East has rich oil reserves; and the coastal regions of the world are leaders in the fishing industry.

Without international trade, each country would have to be totally self-sufficient. Each would have to make do only with what it could produce on its own. This would be the same as an individual being totally self-sufficient, providing all goods and services, such as clothing and food, that would fulfill all wants and needs. International trade allows each nation to specialize in the production of those goods it can produce most efficiently. Specialization, in turn, causes total production to be greater than it would be if each nation tried to be self-sufficient.

Goods and services sold to other countries are called exports; goods and services bought from other countries are called imports. The U.S. Bureau of the Census, Foreign Trade Division, indicates that U.S. exports include such goods as corn, wheat, soybeans, plastics, iron and steel products, chemicals, and machinery, while imports include such goods as chemicals, crude oil, machinery, diamonds, and coffee.

The balance of trade is the difference between the dollar amount of exports and the dollar amount of imports. The United States has many trade partners. Table 1 shows the U.S. balance of trade with three selected nations.

In order to have a trade surplus, a country must export (sell) more than it imports (buys). The opposite of a trade surplus is a trade deficit. This occurs when a country imports (buys) more than it exports (sells). As can be seen from Table 1, a country can have a trade surplus with one country and a trade deficit with another. The Bureau of the Census records indicate that for the month of November 1998 the United States had a trade surplus with such countries as Saudi Arabia, the Netherlands, Australia, and Brazil. During the same month, the United States had a

United States Trade with Selected Countries, 1998

Country	Goods Exported (In Millions)	minus	Good Imported (In Millions)	equals	Balance of Trade
Japan	58	–	122	=	–64
Canada	154	–	175	=	–21
Australia	12	–	5	=	+7
(exports – imports = balance of trade)					

Table 1

SOURCE: U.S. Bureau of the Census, Foreign Trade Division, 1998.

trade deficit with such countries as Japan, China, Canada, and Mexico.

The Bureau of the Census also reports that the United States experienced its first trade deficit (total of all exports minus total of all imports) of the twentieth century in 1971, with a trade deficit of approximately $1.5 billion. A record high trade deficit occurred in 1998, when imports exceeded exports by approximately $230 billion. Table 2 shows the U.S. balance of trade for the years 1960 through 1998. As can be easily seen in the table, the U.S. trade deficit continues to increase.

As stated earlier, total production increases when a nation specializes in the production of those goods it can produce most efficiently instead of attempting to be totally self-sufficient. Allen Smith (1986), states that "a country that can produce a product more efficiently than another country is said to have an absolute advantage in the production of that product" (p. 315). When a nation can use fewer resources to produce the same amount of a product, it has an absolute advantage in the production of that product. For example, Brazil has an absolute advantage over the United States in the production of coffee, and the Middle East has an absolute advantage over the United States in the production of crude oil. Because of its ideal climate, Ecuador can produce bananas more efficiently than the United States; therefore, Ecuador has an absolute advantage over the United States in the production of bananas. However, the United States has an absolute advantage over Ecuador in the production of most products. Both nations benefit by trading those products that each nation can produce more efficiently. Nations usually will not trade with other nations unless there are gains to be made by each nation. However, the gains made will not necessarily be equal.

Smith (1986) also states that "any time a nation has an absolute advantage in the production of two goods or services, the nation has a comparative advantage in the production of that good or service where the absolute advantage is greater" (p. 315). In other words, if a nation has a two-to-one absolute advantage in the production of one product and a three-to-one absolute advantage in the production of another product, the comparative advantage lies with the product with the larger ratio. Smith (1986) also states that "even though a nation has an absolute disadvantage in the production of two products, it has a comparative advantage in the production of that product in which the absolute disadvantage is less" (p. 316). For example, even though a nation has a disadvantage in the production of a certain product, if that disadvantage is small compared to its disadvantage in the production of other products, it still has a comparative advantage with the former product.

When the United States buys goods from another country, it usually pays for the goods in the currency of the exporting country. There are many transactions that involve the exchange of money between nations. The balance of payments is an accounting record of the difference

Trade Balance
Goods on a Census Basis

VALUE IN MILLIONS OF DOLLARS
1960 THRU 1998

Year	Balance	Total Exports	Total Imports
1960	4,609	19,626	15,018
1961	5,476	20,190	14,714
1962	4,583	20,973	16,390
1963	5,289	22,427	17,138
1964	7,006	25,690	18,684
1965	5,333	26,699	21,366
1966	3,830	29,372	25,542
1967	4,122	30,934	26,812
1968	837	34,063	33,226
1969	1,290	37,332	36,042
1970	3,225	43,176	39,951
1971	–1,476	44,087	45,563
1972	–5,729	49,854	55,583
1973	2,389	71,865	69,476
1974	–3,884	99,437	103,321
1975	9,551	108,856	99,305
1976	–7,820	116,794	124,614
1977	–28,353	123,182	151,534
1978	–30,205	145,847	176,052
1979	–23,922	186,363	210,285
1980	–19,696	225,566	245,262
1981	–22,267	238,715	260,982
1982	–27,510	216,442	243,952
1983	–52,409	205,639	258,048
1984	–106,702	223,976	330,678
1985	–117,711	218,815	336,526
1986	–138,280	227,159	365,438
1987	–152,119	254,122	406,241
1988	–118,526	322,426	440,952
1989	–109,400	363,812	473,211
1990	–101,719	393,592	495,311
1991	–66,723	421,730	488,453
1992	–84,501	448,164	532,665
1993	–115,568	465,091	580,659
1994	–150,630	512,626	663,256
1995	–158,801	584,742	743,543
1996	–170,214	625,075	795,289
1997	–181,488	689,182	870,671
1998	–230,852	682,977	913,828

Table 2

NOTE: Balances are rounded.

SOURCE: U.S. Bureau of the Census, Foreign Trade Division, February 19, 1999.

between the amount of money that a country receives and the amount of money that it pays out during a year. A positive balance of payments means that a country receives more money in a year than it pays out. Likewise, a negative balance of payments occurs when a country pays out more money than it takes in. Any transaction that involves payments between countries is included in the balance of payments. The largest component of the balance of payments is the balance of trade, but many more financial transactions are included, such as foreign aid to other nations, government support of military personnel stationed in other nations, and money spent by tourists.

The importing and exporting of goods and services are controlled by the U.S. government. Three of the most common barriers to trade are tariffs, import quotas, and embargoes. A tariff is a tax imposed by the government on imported goods. An import quota places a limit on the amount of a product that may be imported or exported during a given period of time. An embargo occurs when the government halts the import or export of a certain product.

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LISA S. HUDDLESTUN

BANKRUPTCY

Bankruptcy law was created initially to enable persons inundated with debt to have a new beginning. It is also designed to permit individuals and business entities to have additional time to pay and compromise existing debts without liquidating all assets. The U.S. Constitution, Article 1, Section 8(4) grants the power exclusively to Congress "[T]o establish . . . uniform laws on the subject of bankruptcies throughout the United States." The current Code is based on the Bankruptcy Reform Act of 1978 as amended. Bankruptcy Courts, under the supervision of U.S. District Courts, administer petitions under the statute.

The Code is divided into a number of chapters, the most important of which are Chapter 7 ("Liquidation"), Chapter 11, ("Reorganization"), and Chapter 13, ("Adjustment of Debts of an Individual with Regular Income"). The remaining chapters concern definitions, case administration, a discussion of creditors' claims, debtors' duties, estate of the debtor, U.S. trustees, municipal indebtedness, and debts of farm families.

CHAPTER 7: LIQUIDATION

A Chapter 7 proceeding is "bankruptcy" as envisioned by most persons. The crux of such a proceeding is the collection and reduction to cash of all nonexempt assets owned by the debtor; the monies, to the extent available, are distributed to classes of creditors.

Petition. The proceeding is begun by the filing of a petition with the clerk of the Bankruptcy Court. The petition may be "voluntary" or "involuntary." A "voluntary" petition is one filed by the debtor individually or with the debtor's spouse. The filing of a voluntary petition operates automatically as an order of relief, which means that all nonexempt civil lawsuits and any other civil proceedings (e.g., foreclosures and sheriff's seizures) are suspended.

An involuntary proceeding may be begun by the filing of a petition as follows: (1) Where there are twelve or more creditors, then three or more creditors who are owed a minimum amount of $10,775 are required to file; or (2) if there are fewer than twelve claimants, then any one or more creditors with claims totaling at least $10,775 may file the petition. Farmers and nonprofit corporations are exempted from an involuntary filing. The court, after notice and hearing for cause, may require creditors filing an involuntary petition to post a bond to indemnify the debtor for damages in the event of a dismissal of the involuntary petition.

Creditor's meeting and appointment of a trustee. The debtor is required to file a list of creditors, a schedule of assets and liabilities, and a statement concerning details of the debtor's financial affairs. Within a reasonable time of filing of the petition, the court appoints an interim trustee and a first meeting of creditors is called. At such meeting, the debtor is required to undergo an examination under oath by the creditors. The creditors may then select a qualified person to act as trustee. If none is selected, then the interim trustee remains in such capacity. The duties of a trustee include collecting all assets owned by or owed to the debtor, examining and determining debts payable, accounting for all property received, instituting lawsuits if necessary to collect indebtedness due the estate, and reporting to the creditors at the final meeting of creditors.

Exemptions. The Bankruptcy Code is rather generous in its provisions concerning property the debtor may keep after filing for bankruptcy. The debtor is given the choice of choosing either exemptions provided by the laws of the state in which the debtor resides or exemptions permitted under the Code, whichever is more generous.

Under the Bankruptcy Act, a debtor may keep the following assets:

1. Debtor's interest up to $16,150 in realty used as a principal residence or as a burial plot
2. Debtor's interest in a motor vehicle up to $2,575 in value
3. Debtor's interest up to $425 in any one item or aggregate of $8,075 of unused exemption in household goods
4. Debtor's interest up to $1,075 in jewelry for personal, household, or family use
5. Debtor's interest in any other property up to $850 plus unused amount of the $8,075 exemption
6. Debtor's interest up to $1,625 in implements, professional books, or tools of the trade of the debtor or dependent
7. Unmatured life insurance contract owned by the debtor, except a credit life insurance contract

8. Debtor's interest up to $8,625 in unmatured life insurance
9. Professionally prescribed health aids for the debtor or dependent
10. Social Security, unemployment compensation, veteran's, disability, or illness benefits
11. Payments for losses payable under a crime victim's reparation statute; wrongful death benefits, life insurance proceeds; and award up to $16,150 arising from personal injury award.

Voidable transfers. In order to prevent certain creditors and insiders from gaining an unfair advantage over other creditors, the Code permits the trustee to set aside certain transfers of property made by the debtor that enabled the creditor to receive more than would otherwise have been received. A trustee, except for certain limited exceptions, may avoid the transfer of property of the debtor made to a creditor on account of an antecedent debt owed by the debtor made while the debtor was insolvent within 90 days before filing of the petition. If the transfer was made to an insider (to a relative, partner, or corporation with whom the debtor has a close relationship), then a transfer made within one year of filing may be avoided.

Fraudulent transfers. The trustee may avoid a transfer of assets made by the debtor to any transferee within one year of filing the petition where such transfer was made to defraud creditors or where the transfer was made for less than its fair market value. The trustee is empowered to invalidate such transfer after having returned the amount paid by a good-faith purchaser.

Exceptions to discharge. Although the debtor has the right to keep certain property, the debtor is not discharged from all debts. The following sums continue to be due and owing even after relief is granted:

1. Taxes due three years prior to filing
2. Payment for property obtained under false pretenses
3. Monies owed to creditors the debtor failed to list or schedule
4. Monies obtained through fraud, embezzlement, or larceny
5. Alimony, maintenance, and child support
6. Monies owed for willful and malicious injury by the debtor
7. Government fines, penalties, or forfeitures incurred within three years
8. Money due to a government unit or nonprofit institution of higher education for an educational loan within seven years unless payment would impose undue hardship upon the debtor or the debtor's dependents
9. Debts not dischargeable under a prior bankruptcy proceeding
10. Judgments arising due to driving while intoxicated
11. Credit card debts and cash advances exceeding $1,075 incurred within sixty days of filing and debt incurred within sixty days of filing for purchase of luxury goods over the sum of $1,075 to any one creditor

Priority of distribution. All creditors are not treated equally. There are several levels of priority in the distribution of assets. A creditor with a security lien on property (e.g., bank mortgage) has priority over other creditors.

In descending order, the following *unsecured* creditors are entitled to the expenses and claims:

1. Administrative expenses incurred by the trustee
2. Post-petition credit extended to debtors
3. Claims up to $4,300 for wages, salaries, or commissions earned by an individual within ninety days of filing of the petition
4. Claims for contributions to employee benefit plans up to $4,300 for services rendered up to 180 days before filing of petition

5. Claims up to $4,300 for a person operating a grain storage or fish produce storage or processing facility
6. Claims by consumers up to $1,950 for deposits made for purchase, lease, or rental of property or for the purchase or consumer goods or services
7. Claims for alimony, maintenance, or child support
8. Income and other taxes due to governmental units
9. The remaining unsecured creditors

CHAPTER 11: REORGANIZATION

One of the goals of the Bankruptcy Act is to allow a business to continue to operate, if possible, in order to prevent the inevitable discharge of employees from a bankrupt firm. Accordingly, Congress permits either a voluntary petition or involuntary petition under this Chapter. The proceedings may be commenced, with certain exceptions, by an individual or business entity, such as a partnership or corporation.

The debtor may file a voluntary petition within 120 days of the order of relief. An involuntary petition may be filed by the trustee, creditor's committee, creditor, and other interested parties if the debtor has not filed a plan within the said 120 days, or the plan filed by the debtor has not been accepted within 180 days.

The plan permits the debtor to remain in possession of the business unless there is fraud or gross mismanagement. The plan has to specify those claims or interests not impaired under the plan from those that will be so impaired. Each class of claims is to be treated equally unless the claimant otherwise consents. The plan may provide for the debtor to remain in possession; for certain assets to be transferred to other entities; for a consolidation or merger; for the sale of property subject to the rights of lienholders; for the satisfaction or modification of a lien; and other terms. The plan may impair a class of claims whether they are secured or unsecured.

The court must confirm the plan. Confirmation may be granted only if the plan complies with the statute, has been proposed in good faith, is not forbidden by law, is fair and equitable, has been accepted by at least one class of claimants, and confirmation of it is not likely to end in liquidation. A plan is fair and equitable as to secured claims if the holders thereof retain their lien on the secured property or receive equivalent value.

Collective bargaining agreements previously entered into by the debtor are subject to the plan. The plan must be offered by the debtor to the union and be discussed with the union; if there is no resolution, a hearing must be held by the court to determine whether a modification will be permitted.

CHAPTER 13: ADJUSTMENT OF DEBTS OF INDIVIDUAL WITH REGULAR INCOME

A gainfully employed person may be inundated with debts that cannot be paid in full but may be paid if that person were extended additional time to pay. Accordingly, Congress created a Chapter 13 filing that permits such a debtor with unsecured debts of less than $269,250 and secured debts of less than $807,750 to voluntarily file a plan that provides for the submission of earnings to a trustee, the payment in full of all allowable claims unless a creditor agrees otherwise, and the classification of claims with the same treatment of all claims within each class. The plan may modify the rights of holders of secured claims except holders of a security interest in real property used as a principal residence by the debtor.

The plan must be confirmed by the Bankruptcy Court. The court will do so if the plan was properly filed, fees were paid, the plan was made in good faith, and the value of property to be distributed allows holders of unsecured claims to receive no less than what they would have received under Chapter 7. As to secured claimants, the plan will be allowed where the holder of the claim has agreed to the plan, the plan provides that the holder retains the lien securing the property, and the value of property to be distributed is not less than the allowed amount of such claim. The debtor may, in the alternative, surrender the property securing the claim to the holder of the lien. Once the plan is confirmed and lived up to, the debtor will be discharged.

FUTURE TRENDS

Because of intense lobbying efforts by banks and other creditors' organizations, there have been proposals for significant changes in the law, such as the Bankruptcy Reform Act of 2000. This act would make all exemptions federal in nature, so that debtors in one state are not treated more advantageously than those in another. Debtors would be required to undergo credit counseling before filing a petition. Substantially enhanced requirements of proof of inability to pay within a five-year period would be necessary. Credit card debts would undergo much greater scrutiny. Resorting to Chapter 13 plans of payments would be made mandatory in some cases. Passage of such legislation appears to be dependent on the political party having control over both the Congress and the presidency.

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Roy J. Girasa

BANKS AND BANKING

(SEE: *Financial Institutions*)

BARBIE DOLLS

(SEE: *Classics*)

BARTER

(SEE: *Currency Exchange*)

BEHAVIORAL MANAGEMENT THOUGHTS

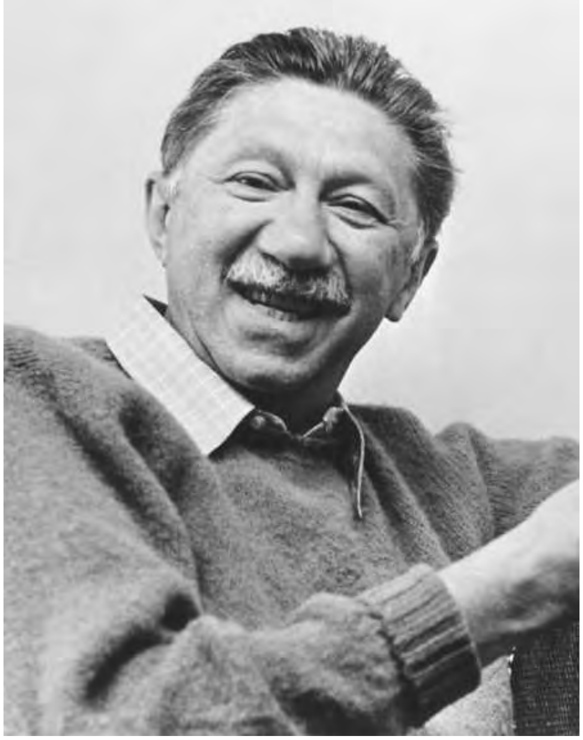
(SEE: *Management*)

BEHAVIORAL SCIENCE MOVEMENT

The exact date of when the behavioral science, or human relations, movement came into being is difficult to identify; however, it was not until the second half of the nineteenth century that much attention was paid to workers' needs, since there was little understanding of how those needs affect total worker productivity. Prior to that time, most managers viewed workers as a device that could be bought and sold like any other possession. Long hours, low wages, and miserable working conditions were the realities of the average worker's life.

Then, at the beginning of the twentieth century, Frederick Winslow Taylor, one of the most widely read theorists on management, introduced and developed the theory of scientific management. The basis for scientific management was technological in nature, emphasizing that the best way to increase output was to improve the methods used by workers. According to this perspective, the main focus of a leader should be on the needs of the organization, not the needs of the individual worker. Taylor and his followers were criticized on the grounds that scientific management tended to exploit workers more than it benefited them.

In the 1920s and early 1930s, the trend started by Taylor was gradually replaced by the behavioral science movement, initiated by Elton Mayo and his associates through the famous Hawthorne studies. Efficiency experts at the Hawthorne, Illinois, plant of Western Electric designed research to study the effects of illumination on worker productivity. At first, nothing about this research seemed exceptional enough to arouse any unusual interest, since efficiency experts had long tried to find the ideal mix of physical conditions, working hours, and working methods that would stimulate workers to pro-



Psychologist Abraham Maslow proposed a new motivation theory in 1943.

duce at maximum capacity. Yet by the time the Hawthorne studies were completed ten years later, there was little doubt that they were one of the most important organizational studies, causing the behavioral science movement to gather momentum. The major conclusion of the Hawthorne Studies was that attention to workers, not illumination, affected productivity. Essentially, then, the scientific management movement emphasized a concern for output, while the behavioral science movement stressed a concern for relationships among workers.

Various individuals have made important contributions to the behavioral science movement. In 1943 psychologist Abraham Maslow proposed a theory of motivation according to which workers' behavior is determined by a wide variety of needs. Motivation starts when an individual experiences a need; the individual then formulates a goal, which, upon achievement, will satisfy the need. Maslow identified these needs and arranged them in a hierarchy, positing that lower-level needs must be satisfied, at least in part, before an individual begins to strive to satisfy needs at a higher level (Maslow, 1954).

Douglas McGregor, Maslow's student, studied worker attitudes (McGregor, 1960). According to McGregor, traditional organizations are based on either of two sets of assumptions about human nature and human motivation, which he called Theory X and Theory Y. Theory X assumes that most people prefer to be directed; are not interested in assuming responsibility; and are motivated by money, fringe benefits, and the threat of punishment. Theory Y assumes that people are not, by nature, lazy and unreliable; it suggests that people can be basically self-directed and creative at work if properly motivated.

Management is often suspicious of strong informal work groups because of their potential power to control the behavior of their members, and as a result, the level of productivity. In 1950 George C. Homans developed a model of social systems that may be useful in identifying where these groups get their power to control behavior (Homans, 1950).

In the 1960s another psychologist, Frederick Herzberg, examined sources of worker satisfaction and dissatisfaction (Herzberg, 1959). Herzberg cited achievement, responsibility, advancement, and growth as job satisfiers—factors that motivate workers. He also proposed that other aspects of the job environment called job maintenance factors—company policy, supervision, working conditions, interpersonal relations, salary and benefits—contribute to the desired level of worker satisfaction, although these factors rarely motivate workers.

Also in the 1960s, another behavioral science researcher, Chris Argyris, presented his immaturity-maturity theory (Argyris, 1964). He said that keeping workers immature is built into the very nature of formal organizations. These concepts of formal organizations lead to assumptions about human nature that are incompatible with the proper development of maturity in the human personality. He saw a definite incongruity between the needs of a mature personality and the structure of formal organizations.

More and more leaders in both for-profit and nonprofit organizations recognize the importance of the goals of the behavioral science (human relations) movement. Those goals consist of fitting people into work situations in such a manner as to motivate them to work together harmoniously and to achieve a high level of productivity, while also providing economic, psychological, and social satisfaction.

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MARCIA ANDERSON

BENCHMARKING

Benchmarking is a process of comparing an organization's or company's performance to that of other organizations or companies using objective and subjective criteria. The process compares programs and strategic positions of competitors or exemplary organizations to those in the company reviewing its status for use as reference points in the formation of organization decisions and objectives. Comparing how an organization or company performs a specific activity with the methods of a competitor or some other organization doing the same thing is a way to identify the best practice and to learn how to lower costs, reduce defects, increase quality, or improve outcomes linked to organization or company excellence.

Organizations and companies use benchmarking to determine where inputs, processes, outputs, systems, and functions are significantly different from those of competitors or others. The common question is, What is the best practice for a particular activity or process? Data obtained are then used by the organization or company to introduce change into its activities in an attempt to achieve the best practice standard if theirs is not best. Comparison with competitors and exemplary organizations is helpful in determining whether the organization's or company's capabilities or processes are strengths or weaknesses. Significant favorable input, process, and output benchmark variances become the basis for strategies, objectives, and goals. Often, a general idea that improvement is possible is the reason for undertaking benchmarking. Benchmarking, then, means looking for and finding organizations or companies that are doing something in the best possible way and learning how they do it in order to emulate them. Organizations or companies often attempt to benchmark against the best in the world rather than the best in their particular industry.

A problem with benchmarking is it may restrict the focus to what is already being done. By emulating current exemplary processes, benchmarking is a catch-up managerial tool or technique rather than a way for the organization or company to gain managerial dominance or marketing share. Benchmarking can foster new ideas or processes when management uses noncompetitive organizations or companies outside its own industry as the basis of benchmarking. What if new ideas are not generated? It is possible that no one in some other organization or company has had a great idea that is applicable to the input, process, or outcome that the organization is attempting to improve or change by benchmarking.

Benchmarking is not a competitive analysis. Benchmarking is the basis for change. It is about learning. The organization performing the benchmark analysis uses the information found in the process to establish priorities and target process improvements that can change business or manufacturing practices. Benchmarking commonly takes one of four forms.

Generic benchmarking investigates activities that are or can be used in most businesses. This type of benchmarking makes the broadest use of data collection. One difficulty is in understanding how processes translate across industries. Yet generic benchmarking can often result in an organization's drastically altering its ideas about its performance capability and in the reengineering of business processes.

Functional benchmarking looks at similar practices and processes in organizations or companies in other industries. This type of benchmarking is an opportunity for breakthrough improvements by analyzing high-performance processes across a variety of industries and organizations.

Competitive benchmarking compares the organization's processes to those of direct competitors. In competitive benchmarking, a consultant or other third party rather than the organization itself collects and analyzes the data because of its proprietary nature.

Internal benchmarking compares processes or practices within the organization or company over time in light of established goals. Advantages of internal benchmarking include the ease of data collection and the definition of areas for future external investigations. The primary disadvantage of internal benchmarking is a lower probability that it will yield significant process improvement breakthroughs.

Each form of benchmarking has advantages and disadvantages, and some are simpler to conduct that others. Each benchmarking approach can be important for process analysis and improvement. Breakthrough improvements are generally attributed to the functional and generic types of benchmarking.

Eight steps are typically employed in the benchmarking process.

1. Identify processes, activities, or factors to benchmark and their primary characteristics.
2. Determine what form is to be used: generic, functional, competitive, or internal.
3. Determine who or what the benchmark target is: company, organization, industry, or process.
4. Determine specific benchmark values by collecting and analyzing information from surveys, interviews, industry information, direct contacts, business or trade publications, technical journals, and other sources of information.
5. Determine the best practice for each benchmarked item.
6. Evaluate the process to which benchmarks apply and establish objectives and improvement goals.
7. Implement plans and monitor results.
8. Recalibrate internal base benchmarks.

A recurring problem that must be addressed during the eight steps is the determination of criteria to ensure that inaccuracies or inconsistencies do not occur that will make any comparison meaningless.

The eight steps of the benchmarking process can be summarized as an improvement analysis. That is, the organization investigates another organization to find out what it does and how it is done. During the investigation, what goes right and what goes wrong is determined. This information is then used for the improvement of activities or processes. When the activities and processes of the organization making the investigation are equal to or better than the measurements found during the investigation, no change is warranted because the investigating organization has the better practice.

Another view of benchmarking is as an organization gap analysis. The organization determines what it lacks in terms of what it knows and how it does things. The shortfalls that initiate the gap analysis can be activities and processes or they can be tactics and strategies. The organization must then determine what other organization is good at doing those things that can be improved or changed for the better. A very systematic investigation is made of the organization with the best practices to discover what is done, how it is done, how it is implemented, and how it fits into the organization's operations. The findings of the systematic investigation then become the basis of revision or modification for the organization doing the investigation.

Benchmarking efforts typically collect information on responsibilities, program design, operating facilities, technical know-how, brand images, levels or integration, managerial talent, and cost or financial performance. Financial or cost data are often the category of greatest concern because these are factors in the input, processing, and output activities of the organization or company.

Benchmarking is frequently referred to as a "wake-up call." Organizations and companies benchmark for many reasons: They want to determine where they spend their time and how much value they add, or they are curious about how they stack up against others. Through the knowledge gained by benchmarking, organizations and companies redefine their roles, add more value, reduce costs, and improve performances.

The electronics industry has a unique style of benchmarking. Here benchmarking involves running a set of standard tests on a system to compare its performance with that of others. That is, it is a tool for measuring the power and performance of hardware and software systems and applications as well as the capacity of a system. There are four categories of benchmarking in the electronics industry:

- An application-based benchmark runs real applications or parts of applications either in full or modified versions.
- A synthetic benchmark emulates applications activity.
- A playback test uses logs of one type of system call (e.g., disk calls) and plays the calls back in isolation.
- An inspection test exercises a system or component to emulate an application activity.

The synthetic and playback benchmarks are used to get a rough idea of how a system or component performs. If application-based benchmarks are available that match the application, they are used to refine the evaluation. The inspection benchmarks are used to determine whether a system or component is functioning properly. These benchmarks use a well-defined testing methodology based on real-world use of a computer system. They measure performance in a deterministic and reproducible manner that allows the system administrator to judge the performance and capacity of the system. Benchmarks provide a means of determining tuning parameters, reliability, bottlenecks, and system capacity that can provide marketing and buying information.

Although benchmarking in the electronics industry is a testing mechanism or process, it, too, is a technique for learning, change, and process improvement. Benchmarking is an effective way to ensure continuous improvement or progress toward strategic goals and organizational priorities. A real benefit of benchmarking comes from the understanding of processes and practices that permit a transfer of best practices or performances into the organization. At its best, benchmarking stresses not only processes, quality, and output but also the importance of identifying and understanding the drivers of the activities.

(SEE ALSO: *Activity-based management costing*; *Performance Appraisal*; *Work Measurement*)

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Mary L. Fischer

BENEFITS

(SEE: *Employee Benefits*)

BONDS

A *bond* is a type of interest-bearing security issued by an organization that needs funds. The issuer—a corporation, governmental agency, or municipality—compensates the bondholders by paying interest for the life of the bond. At maturity, the bondholder will be repaid for the funds lent. Maturity dates vary, but bonds are most commonly used for long-term debt. The discussion here will focus primarily on such long-term bonds. Corporate bonds and government bonds from the perspective of issuers will be introduced first. Investing in bonds from the point of view of individuals will be discussed later.

CORPORATE BONDS

Most corporate bonds are sold in $1,000 denominations. This $1,000 is the *par* (or *face*) value of the bond. When bonds are issued, the actual price paid by the bondholder may be the par value (face value) or an amount below (referred to as issued at a *discount*) or above (referred to as issued at a *premium*) par value. Regardless of the amount received when they are issued, at maturity the corporation will pay the par value (or $1,000 per bond) to the bondholders. While the bonds are held by the bondholders, the corporation will pay the holders interest at a rate specified on the bond. Interest payments are usually made semi-annually. As an example, a corporation issues fifteen-year, 6 percent $1,000 bonds with a total par value of $300,000,000 on November 1, Year 1. If the bonds sell at par, the corporation would receive $300,000,000 at issuance (less the cost of underwriting). Over the fifteen years, the corporation would pay its bondholders $9,000,000 ($300,000,000 × 6% × ½ year) every six months on May 1 and on November 1, for total interest of $270,000,000 over the fifteen years. At maturity on November 1, Year 16, it would also return the $300,000,000 par value to the bondholders.

When corporations issue bonds, they generally do not sell directly to the public; rather, they sell their entire issues to underwriters, which act as "middlemen" for the corporation and the bondholders. The underwriter, in turn, will sell the bonds to the bondholders. As compensation for its services, the underwriter sells the bonds to the bondholders for slightly more than what it paid the corporation. Once the bonds are sold, the underwriter is no longer involved with the bond issue.

The *stated* (also called the *coupon* or *nominal*) rate of interest relative to the *market* (sometimes referred to as the *real* or *effective*) rate determines whether a bond will sell for an amount equal to its par value, at a discount, or at a premium. When purchasing a corporate bond, the investor knows the *stated* rate of interest, the rate that determines the periodic interest payment. This stated rate is fixed during the life of the bond. The market rate of interest (i.e., the interest rate demanded by investors in the market), however, fluctuates, usually on a daily basis in the secondary market. This fluctuation is due to a number of factors, some of which are federal monetary policy, investors' perception of growth and strength of the economy, and investors' increasing or decreasing fear regarding inflation. When the stated rate equals the market rate, the bonds sell at par value. If, however, the stated rate is less than the market rate, investors are unwilling to pay the par value of the bonds; thus the bonds would sell at a discount. As an example, a bond has a stated rate of interest of 6 percent, but the current market rate of return for bonds of similar quality is 7 percent. In order to induce the investor to buy the bonds, the bonds will sell for an amount less than par that provides the investor a 7 percent return, the market rate. The opposite relationship can also exist: that is where the stated rate of the bonds is greater than the market rate. In that situation, the bonds would sell for a premium. When the bonds are sold, the issuer will "lock in" the market rate of interest that existed on that date. This will be the *real* interest rate for the issuer over the life of the bond. Similarly, an investor will "lock in" that same market rate and will earn that return for the time he or she holds the bonds, possibly until the bonds mature.

If bonds sell at par, they are said to sell for 100, meaning they are selling for 100 percent of their par value. If bonds sold for 98½, they would have sold at a discount, in this case for 98½ percent of their par value. Bonds sold at a premium sell at an amount greater than 100 such as 101¼. As bond prices fall—that is sell for less than par value—the rate of return rises for the reasons stated above. Conversely, as bond prices rise, rate of return falls.

Bonds are *registered* in the name of the person who purchased them. The registered owner receives the interest on the interest payment date. With the use of electronic processing, however, most bonds are *book entry*, meaning there is no certificate or document issued. The bondholder holds a "virtual" bond, and the corporation's computer files merely contain the names and addresses of those to whom interest checks will be sent on the appropriate dates. Additionally, with the ability to transfer funds electronically, corporations are able to deposit interest payments directly into their bondholders' bank accounts.

Some corporate bonds are issued with a *call provision*. This allows the issuing corporation to "call" the bonds—that is, buy them back from the bondholders—before their maturity date. This call provision is likely to be exercised by the corporation if the market interest rates have fallen since the bonds were issued. This allows bonds with a high interest rate to be retired and replaced by lower-interest bonds.

Another feature of some bonds allows the bondholders to convert bonds into shares of common stock of the issuing company. These are referred to as *convertible bonds*. This is often an attractive feature to bondholders who want to switch from being a creditor of the corporation to an owner if the company's stock begins to appreciate in value. The conversion ratio (e.g., 40 shares of common stock for each $1000 bond) would be specified.

The bond market is dominated by institutional investors, such as insurance companies, mutual funds, and pension funds, but bonds can be purchased by individual investors as well. Bonds are traded in the both the *primary market* and the *secondary market*. The primary market refers to the initial sale of bonds by the underwriters. The secondary market refers to the sale of bonds subsequent to their original sale by issuer or underwriter.

Bonds are one of the primary ways corporations raise large amounts of capital. A corporation can sell previously unissued shares of stock (equity) to shareholders, or it can borrow the money by issuing bonds (debt). There are advantages and disadvantages to both.

By issuing equity, the corporation does not increase debt, thus avoiding paying interest to bondholders. This method of raising capital, however, causes a dilution of ownership to existing shareholders and, thus, may not be favored by the current owners. If the corporation issues bonds, it will be required to pay interest, but there will be no change in the ownership structure of the company. Furthermore, the corporation's management hopes—and expects—that they will earn a greater return than the interest they are paying on the bonds. As an example, if the cost of borrowing on bonds is 6 percent, but the corporation is able to earn 10 percent on the money it has borrowed from the bondholders, the 4 percent difference earned above the cost of borrowing accrues to the existing shareholders. Thus, shareholders earn a 4 percent return on funds borrowed from bondholders.

An important consideration for a corporation deciding whether to issue stocks or bonds is the tax deductibility of the bond interest. Interest paid on bonds is a tax-deductible expense on a corporation's income tax return, meaning their taxable income will be reduced by the amount of interest paid. Their *after-tax cost of borrowing* is, as a result, less than the interest paid on the bonds. As an example, if a corporation issues 6 percent bonds and has an average tax rate is 40 percent, the after-tax interest rate on the bonds is 3.6 percent [(6% × (1 − tax rate)].

GOVERNMENT BONDS

The U.S. federal government borrows large amounts of money. Since the late 1970s, the federal government has consistently spent more money than it has collected in taxes. (In the late 1990s, that trend began to reverse.) In order to have adequate money to pay for its expenditures, the United States borrows money. Bonds issued by the federal government have different names depending on their maturity date. Those which have a maturity date of less than a year are called "Treasury bills" (or "T-bills" for short). Debt instruments with maturities from one to ten years are called *notes*; those with maturities exceeding ten years are called *bonds.* Collectively all are referred to as *Treasuries.*

Federal bonds are auctioned according to a schedule, for example, thirteen-week T-bills are auctioned every Monday and two-year treasury notes on the last Wednesday of every month. The results of these auctions, including market interest rates, are reported in the financial press. These rates not only reflect the interest the bondholder will earn; they also influence interest rates for debts such as mortgages, car loans, and credit cards.

State and local governments also borrow money by selling municipal bonds (frequently referred to as "munis"). Municipal bonds are either *general obligation* or *revenue* bonds. General obligation bonds (also known as "GOs") will be paid off by money received from taxes and possibly by user fees. The costs of building schools and sewers are paid for through general obligation bonds. A revenue bond is one that is issued by an enterprise that serves a public function. Examples include airports, utility companies, toll roads, universities, and hospitals. The money to pay the bond interest and the bonds at maturity will be generated by these enterprises' revenue-generating activities.

While interest on corporate bonds is fully taxable to the bondholder, interest on Treasuries is exempt from state (but not federal) income tax. Interest on municipal bonds is exempt from federal income tax. If the municipal bond is issued by the jurisdiction in which the bondholder resides, the interest is tax-exempt by both the federal government *and* the state government. If there is a local income tax, the interest is tax-exempt at this level, too. Thus in some instances the bondholder has a triple exemption. Because of the tax-exempt nature of municipal bonds, their rates are usually one- to two-percentage points lower than that of comparable taxable corporate bond, for which there is no tax exemption.

INVESTING IN BONDS

There is no centralized market for corporate bonds excepted for those listed on exchanges. An investor who wishes to buy or sell bonds must contact a broker or dealer who might carry that particular bond in inventory. A dealer who does not have that bond would contact another dealer who did. Because of the transaction costs involved in buying and selling corporate bonds in the secondary market, they may not be an attractive investment for investors. Treasuries may be purchased directly from the government. They are also much more easily obtained in the secondary market from brokers because they are generally available.

Bonds typically earn a return greater than that offered by a bank on its savings account or certificates of deposit (CDs), which are among the safest of investments since they are currently guaranteed up to a value of $100,000 in insured banks.

Bonds are considered relatively safe for several reasons. When buying a bond, the bondholder knows how much interest will be paid periodically from the issuing corporation (or government). Thus, there is little uncertainty regarding the return.

Bonds are also considered relatively safe because the issuers of bonds most likely will be evaluated by one of the credit-rating agencies—Moody's, Standard & Poor's (S & P), or Fitch. These agencies evaluate the creditworthiness of corporations and of state and local governments.

Although bonds are among the safer investments, there are several risks associated with them. Probably the biggest risk to the investor is *market risk*. This is the risk an investor faces should interest rates *rise* after the bonds have been purchased. As mentioned above, when interest rates rise, the price of bonds falls (and vice versa). If an investor bought bonds that were yielding 6 percent, the return is 6 percent as long as the bonds are held, possibly until maturity. If interest rates rise above 6 percent, however, the bonds are no longer paying the market rate of interest. Furthermore, if the investors were to sell the bonds, they would sell for less than what was paid for them. *All* bonds—corporate, Treasuries, and munis—are subject to market risk.

Another risk associated with investing in corporate and municipal bonds (but not Treasuries) is the *credit risk* (or *credit-rating risk*) of the issuer. Since a bond is a loan, a bondholder has to assess the likelihood that the issuer will be able to pay the periodic interest payments and the bond's par value at maturity. Credit rating agencies are well respected and widely used to help an investor assess the credit risk of corporate and municipal bonds. Although the ratings the agencies use and how they determine them vary slightly, they generally rate the bonds from extremely safe investments to wildly speculative ones.

With Treasury bonds, there is virtually no credit risk since most investors see them as having the full faith of the U.S. government behind them. Because of this perceived absence of default, investors typically use the rate offered on Treasuries as the *benchmark* against which other investments are evaluated.

Another risk associated with investing in bonds is *call risk*. As mentioned previously, some bonds are *callable* at the discretion of the issuer. This means that the issuer may retire the bonds, paying the bondholder the par value (and usually a small "call premium" as well) and any accrued interest since the last interest payment date. The issuer returns the money to the investor. A corporation (or municipal government) usually calls bonds only when interest rates have fallen. If bonds are called, the investor now would be back in the market buying bonds yielding a lower return. Furthermore, if the investor had originally purchased the bonds at a premium, it is likely that the original purchase price would not be realized when the bond is called. Corporate and municipal bonds may be callable. U.S. Treasuries are not.

In spite of the risks mentioned, bonds are still considered an attractive investment for many investors. Prices of bonds are much less volatile when compared to prices of stocks. Defaults on bonds are also quite rare. Furthermore, even if a corporation faces liquidation because of financial distress, bondholders would be among the first to receive corporate assets, since they are creditors of the corporation. According to conventional wisdom, bonds strike an acceptable compromise between risk and return.

(SEE ALSO: *Capital markets*; *Finance*; *Financial institutions*)

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Allie F. Miller

BRANDING

(SEE: *Product Labeling*)

BREAK-EVEN ANALYSIS

(SEE: *Cost-Volume-Profit Analysis*)

BROKERS AND DEALERS

(SEE: *Financial Institutions*)

BUDGETS AND BUDGETING

A *budget* is a financial plan for the upcoming period. A *capital budget*, on the other hand, involves an organization's proposed long-range major projects. The focus of this section is on budget. Public and private entities both engage in the budgetary process. A government budget starts with the projection of sources and amounts of revenue and allocates the potential receipts among projects and legislatively mandated programs based on projected needs and public pressure. Government entities actually record budgets in the accounting records against which expenditures can be made.

A budget is a quantitative plan of operations that identifies the resources needed to fulfill the organization's goals and objectives. It includes both financial and nonfinancial aspects. *Budgeting* is the process of preparing a plan, commonly called a budget. A *master budget* comprises *operating budgets* and *financial budgets.* Operating budgets identify the use of resources in operating activities. They include production budgets, purchase budgets, human resources budgets, and sales budgets. Financial budgets identify sources and outflows of funds for the budgeted operations and the expected operating results for the period. Some variations of budgets are *continuous budgets* and *continuously updated budgets.* Rather than preparing one budget for the upcoming year, in a continuous budget one updates the budget for the following twelve months at the end of each month or each quarter. Such a budget remains more current and relevant. A good budget uses historical data as a base and for reference but at the same time incorporates anticipated costs and volumes based on a comprehensive knowledge and understanding of both internal and external factors that affect the business.

COMPONENTS OF THE MASTER BUDGET

The master budget includes a sales budget, which shows expected sales in units and in dollars. A merchandising firm needs to budget for the goods it needs to purchase for resale; these purchases become its cost of sales. A manufacturing organization's master budget includes a production budget, which uses the sales budget and inventory levels anticipated at the beginning and end of the period to determine how much to produce.

The production budget needs to be exploded into budgets for direct material, direct labor, and manufacturing overhead. Direct material and direct labor are items clearly identifiable in the finished product. Manufacturing overhead includes all costs of manufacturing *except for* direct material and direct labor, such as machine depreciation, utilities, and supervision. The direct material budget explodes the production into basic ingredients; quantities to be purchased are anticipated based on expected inventory levels at the beginning and end of the period. With the help of the purchasing department, the prices for the needed materials are computed to arrive at the material purchases budget. The direct labor budget uses industrial engineering guidelines and production needs to estimate labor requirements. The human resources department provides the labor rates for the skill levels required. Overhead costs are estimated based on production level and appropriate cost drivers (i.e., the factors that cause costs to vary). Some overhead costs are considered variable because they vary with the level of output. Others are considered fixed because the level of output does not affect the amount of those costs. For example, the production supervision cost is assumed to be the same regardless of how much is produced within a shift in a plant. One can, then, estimate production costs and cost per unit for goods to be produced. Cost of goods sold can now be determined based on the inventory levels of finished goods. Selling and general administration costs are then estimated, taking into consideration those costs that vary with sales, such as sales commission, as well as fixed costs that remain the same regardless of the level of sales, such as office rent. The information put together so far gives one all one needs to prepare a forecasted income statement.

At this point, one develops the cash budget. This item starts with cash at the beginning of the period plus cash that will be generated through collection of receivables, cash sales, and other sources minus anticipated minus cash disbursements, which include payroll disbursements, payment for taxes, and accounts payable depending on the terms for payment. The resulting cash balance may be negative—more disbursements than receipts; in this case, one determines borrowing needs. A positive cash balance may be more than needed for operating expense; such excess cash may be deposited in a temporary investment account. The final part of master budget preparation is the forecasted balance sheet, where the anticipated cash balance, investments, accounts receivable, inventory, fixed assets, accounts payable, wages payable, taxes payable, long-term liabilities, and equity accounts are recorded to assure that the two sides of the equation balance; that is assets = liabilities + equity.

THE BUDGETING PROCESS

Budgeting is—or should be—the result of teamwork. A *top-down budget* is a budget that is essentially imposed on the organization by top management. This may be an efficient way to prepare a budget but because of lack of participation by the employees, such budgets often bring with them a level of employee resentment and resistance that leads to problems in implementation of what is proposed. Employees do not feel a sense of ownership in a budget in which they have not been participants. A *participatory* or *bottom-up budget*, on the other hand, starts with the employees in each department determining their needs and requirements in order to achieve the company goals. Because employees feel a sense of ownership in such budgets, they attempt to meet or exceed those expectations. A balance between the two extremes can often be achieved. Top management should be involved in setting the tone and providing the guidelines and parameters within which the budget will be set. Incentives should be put into place so that those who achieve or exceed the budgetary expectations will receive suitable rewards for their efforts.

There must also be guidelines to discourage budgetary *slacks* and abuses whereby the requested budget amounts are in excess of anticipated needs in order for the department to look better and reap some rewards. A very tight budget, on the other hand, may prove discouraging and unattainable. No matter what approach is taken, it is important to realize that the budget should serve as a map and guideline in anticipating the future. Top management must take it seriously in order for the employees to take it seriously as well. At the same time, the budget should not be seen as a strict and unchangeable document. If opportunities arise, circumstances change, and unforeseen situations develop, there is no reason why the budget should be an impediment to exploring and taking advantage of such opportunities. Many companies form a budget committee to oversee the preparation and execution of the budget. The budget can also be seen as a tool that helps in bridging the communications gap between various parts of the organization. Sales, production, purchasing, receiving, industrial relations, sales promotion, warehousing, computing, treasury, quality control, and all other departments see their roles and understand the roles of the other players in achieving the goals of the organization. Such participation also necessitates budget negotiation among the various parties to the budgetary process until the budget is finalized. *Goal congruence* occurs when the goals of the employees and the goals of the company become intertwined and meshed together. A budget that does not consider the goals of the employees often fails. The finalization of the budget requires acceptance by the affected departments and approval and sign-off by top management. If circumstances change due to factors such as change in product mix, costs, selling prices, negotiated labor rates, or engineering specifications, there may be a need for budget revision.

OTHER BUDGETING TECHNIQUES

An *incremental budget* is a budget that is prepared based on prior-year figures, allowing for factors such as inflation. Although such an approach is used by some government entities, most people frown upon such a practice because it is contrary to the whole notion of a budget, which is supposed to be a calculated and wise anticipation of the future course of events with due consideration of all potential factors. A *zero-based budget*, on the other hand, is a budget that does not take anything for granted. It starts from point zero for each budgetary element and department each year and attempts to justify every dollar of expenditure. Although some industries had implemented such a method earlier, it was first used in preparing the state of Georgia's budget in the early 1970s and was later used to prepare the federal budget in late 1970s during President Carter's administration. However, it was soon abandoned because the paperwork generated and timeframe necessary to do this task proved to be too cumbersome for the federal government. *Kaisen budgeting*, a term borrowed from Japanese, is a budgeting approach that explicitly demands continuous improvement and incorporates all the expected improvements in the budget that results from such a process. *Activity-based budgeting* is a technique that focuses on costs of activities or cost drivers necessary for production and sales. Such an approach facilitates continuous improvement. An easily attainable budget often fails to bring out the employees' best efforts. A budget target that is very difficult to achieve can discourage managers from even trying to attain it. So budget targets should be challenging and at the same time attainable.

MONITORING THE BUDGET

A *flexible budget* modifies the budget to the actual level of performance. Obviously, if the original budget is prepared for say, one thousand units of a product, but two thousand units are produced, comparing the original budget to the actual volume of output does not provide meaningful information. Accordingly, the budgeted costs per unit for all variable costs can be used and multiplied by the actual volume of output to arrive at the flexible change proportionately to the level of output for the former and to the level of sales for the latter cost. Fixed costs, such as rent, however, do not normally change with the level of production or sales. These budgeted costs, therefore, are not adjusted and left intact even though the volume of sales and output may be different from the originally budgeted levels.

Ultimately, a good budget is one which not only uses good budgeting techniques but is also based on a sound knowledge of the business as well as the external factors that affect it. The budget serves as a planning tool for the organization as a whole as well as its subunits. It provides a frame of reference against which actual performance can be compared. It provides a means to determine and investigate variances. It also assists the company in planning again based on the feedback received considering the changing conditions. An attainable, fair, and participatory budget is also a good tool for communication, employee involvement, and motivation.

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ROGER K. DOOST

BUREAU OF LABOR STATISTICS

"Is employment below or above the level of last month?" "What has happened to prices during the past month?" Such questions—and thousands of others about a wide range of labor-related topics—are answered by personnel of the Bureau of Labor Statistics (BLS). When the BLS was established by Congress on June 27, 1884, its mission was stated in these words: "The general design and duties of the Bureau of Labor shall be to acquire and diffuse among the people of the United States useful information on subjects connected with labor, in the more general and comprehensive sense of that word, and especially upon its relation to capital, the hours of labor, social, intellectual, and moral prosperity." The BLS is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data to the citizens of the United States, the U.S. Congress, other federal agencies, state and local governments, businesses, and labor. The president appoints the head of the BLS, the commissioner, with approval by the Senate for a specific term that does not coincide with that of his administration.

The BLS is distinct from the policy-making and enforcement activities of the Department of Labor. The BLS is impartial, with a strong commitment to integrity and objectivity; its data have credibility because of the standards maintained throughout the agency. The major areas of BLS activity are as follows:

- Employment and unemployment
- Prices and living conditions
- Compensation and working conditions
- Productivity and technology
- Employment projections
- Safety and health statistics

Employment and unemployment: In addition to monthly figures on employment and unemployment, the BLS does a comprehensive breakdown of the age, sex, and racial and ethnic composition of the work force as well as of industries and occupations in which the workers are employed. Other characteristics are also tracked, including patterns of regional employment and the extent of participation in work by teenagers, blacks, Hispanics, women, and older Americans.

Price and living conditions: Each month the Consumer Price Index (CPI) and the Producers Price Index (PPI) are prepared. The BLS also reports how households spend their incomes.

Compensation and working conditions: Comprehensive studies of employee compensation—wages and benefits—are undertaken that relate to occupations, industries, and areas of the country. An initiative begun in 2000 will produce national employment cost indexes, employment cost levels, and employee benefit incidence.

Productivity and technology: This office produces productivity measures for industries and for major sectors of the U.S. economy. Additionally, it provides comparisons for key BLS labor statistics series as well as training and technical assistance in labor statistics to people from other countries.

Employment projections: There is much interest in the projections provided by this unit of the BLS. Information about future employment growth—and the nature of that growth—is of critical importance to public officials, businesses, young people preparing for careers, and those who design educational programs at all levels.

Safety and health statistics: The extent of workplace injuries and illnesses is the concern of the office that compiles safety and health statistics. Information analyzed and summarized includes job-related injuries and illnesses by industry, nature of the injury or illness, and the workers involved. There is also a compilation of work-related deaths. The statistics provided are useful in developing safety and health standards, in controlling work hazards, and in the allocation of resources for workplace inspection, training, and consultation services.

THE MANNER OF WORK AND SOURCES OF INFORMATION

The BLS, as is the case for all federal agencies, functions in an open environment. As changes are contemplated, they are discussed with users and advisory committees and described in published materials. Fair information practices are used; maintaining confidentiality of individual responses is assured. The BLS promises the public that users will be provided assistance in understanding the uses and limitations of data provided.

The BLS gathers its information from business and labor groups throughout the country through voluntary advisory councils. The councils were established in 1947; current members meet with BLS staff for discussions related to such matters as planned programs and day-to-day problems the BLS faces in collecting, recording, and analyzing statistics as well as in the publishing of reports.

KEY PUBLICATIONS

The most widely distributed publications, which are available in public as well as other libraries, include: *Monthly Labor Review*, *Employment and Earnings*, and *Occupational Outlook Quarterly*. Additionally, a variety of surveys, including those related to the Consumer Price Index and the Producer Price Index, are published.

RESPONSE TO CHANGE IN THE WORKPLACE

Rapid technological changes, globalization of world markets, and demographic shifts are all forces that are reshaping the U.S. workplace in relation to the nature and types of jobs, the composition of the work force, and workers' education, skills, and experiences. The BLS in its Revised Strategic Plan 1997-2002 stated that it "has been and will continue to be responsive to users' need to understand changes."

The BLS has undertaken efforts to improve its programs so that they capture workplace and work-force changes. The *Current Population Survey*, which provides monthly data on the demographic and educational characteristics of the work force, includes supplemental surveys on workplace issues such as contingent employment, worker displacement, and work schedules. A new monthly survey of job openings and labor turnover for the country and major industry sectors will provide information that had not been available earlier.

EMPLOYMENT OPPORTUNITIES

As of the end of 1999, there were approximately twenty-six hundred BLS employees working in Washington, D.C., and in the regional offices in eight cities: Boston, New York, Philadelphia, Atlanta, Chicago, Dallas, Kansas City, and San Francisco. The BLS reports that there is a continuing need for economists, mathematical statisticians, and computer specialists. There is a more limited need for administrative and financial specialists as well as for many types of technicians and assistants. Employment is restricted by law to U.S. citizens. Most professional jobs require a bachelor's degree or its equivalent in experience. Specific qualifications and educational requirements are described in BLS pamphlets available from the agency and also on the Internet (http://www.usajobs.opm.gov/).

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Bernard H. Newman

BUSINESS CYCLE

The business cycle is the ups and downs of the general level of economic activity. All modern, industrialized countries have fluctuations in their rates of economic activity, leading to the observation that one nation's economy is "booming" while another economy is in a "recession." When an economy goes from a positive to a negative rate of growth, it is said to have reached a "peak" and entered a recession. When an economy goes from a negative to a positive rate of growth, it is said to have reached a "trough" and entered a "recovery."

WHAT IS *THE* BUSINESS CYCLE?

Although something worthy of being called "the business cycle" does exist, attempts at finer classifications or subcategories of business cycles have not been particularly fruitful. Some economists have simply used a broad dichotomy between "major" and "minor" cycles. Descriptively this can be meaningful. A particularly severe recession is referred to as a "depression." The Depression of the 1930s was quantitatively different from the 1990-1991 recession. The output of the economy fell by almost 50 percent in the former and by less than 1 percent in the latter.

It is sometimes useful to speak of the cycles of specific time series; that is, the interest rate cycle, the inventory cycle, the construction cycle, and so forth. Given the diversity of general economic cycles, one can find turns in the general level of economic activity in which individual sectors of the economy do, at least for a time, appear to be independent of the rest of the economy. The most frequently mentioned individual cycles are the inventory cycle, the building or construction cycle, and the agricultural cycle. The standard business cycle is sometimes referred to as the inventory cycle, and some business cycle theorists popularly explain the severity of turns in the economy by the coincidence of timing in the individual cycles.

The idea of the timing of individual time series relative to the general level of business implies specific dates for the business cycle. How does one establish the peaks and troughs for the business cycle? To say whether something leads or lags the business cycle, one must have some frame of reference; hence, the business cycle is referred to as the *reference cycle* and its peaks and troughs as *reference turning points.* (See Table 1.)

For the United States, the reference turning points are established by the National Bureau of Economic Research (NBER), a nonprofit research organization. This organization, originally under the guidance of Wesley Claire Mitchell (1874–1948), pioneered business cycle research in the late 1920s. Today the NBER's decisions regarding the reference cycle are taken as gospel, although they are, in fact, quite subjective. No single time series or group of time series is decreed to be *the* reference cycle. A committee of professional business cycle analysts convened by the NBER establishes the official peaks and troughs in accordance with the following definition:

> *Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises: a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions and revivals which merge in the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic; in duration business cycles vary from more than one year to ten or twelve years; they are not divisible into shorter cycles of similar character with amplitudes approximately their own.* (Burns and Mitchell, 1946, p. 3)

With slight modification, this definition has been used since 1927. Although most of the definition is self-explanatory, it is not all that rigorous. It does not say something like, for example, if the total output of the economy (real GDP) falls at an annual rate of 1 percent for two consecutive quarters, we have entered a recession. The definition does say unambiguously that business cycles are "recurrent but not periodic." The only real constraint in the definition is that if you define a business cycle, say, from peak to peak, you should not be able to find another cycle of equal amplitude between those two peaks. If so, you did it wrong.

As of mid-2000, Table 1 is still relevant. The most recent turning point identified by the NBER was March 1991. As of April 2000, the U.S. economy continued to expand. Notice from the table that all that is established with regard to *the* business cycle is the peak and trough of each cycle. This determination tells us absolutely nothing about the rate of rise or fall in the general level of economic activity, nothing about the magnitude of the boom or the severity of the recession. The most commonly used series as a proxy for the business cycle when more than just turning points is required is real GDP if one can get by with quarterly data, or the industrial production index if monthly data are required. The industrial production index is a measure of economic activity published monthly by the Federal Reserve Board in Washington, D.C. As might be guessed from the attention given them by the media, the consumer price index and the unemployment rate are commonly used measures of the severity of the business cycle. Neither corresponds very closely to the reference cycle.

THEORIES OF THE BUSINESS CYCLE

The first lecture in an introductory economics course usually makes the point that the expenditures of one economic unit are the incomes of other economic units. This provides a fairly firm basis for expecting sympathetic movements in many sectors of the economy. A good theoretical basis and substantial empirical support exist for cumulative upward and downward movement in the economy. One sector's expansion is the basis for another sector's expansion, general prosperity lowers risk and makes credit more readily available, and so on; but the weakest part of business cycle theory and the toughest problem in forecasting is turning points. Why does the general upward or downward movement end? Sometimes it is obvious. When, for example, a war begins or ends with a commensurate and dramatic change in military expenditures, the cause of the beginning or end of an economic boom is fairly unambiguous. Historically, however, only a small minority of the turning points are the result of specific, identifiable occurrences. There are many theories as to other causes of the business cycle.

In 1917 an eminent American economist by the name of J. M. Clark published an article entitled "Business Acceleration and the Law of Demand: A Technical Factor in Economic Cycles." His technical factor was the observation that with a fixed capital-output ratio, a small percentage change in final sales would give rise to a large percentage change in investment. Each innovation generates a temporary demand for the required investment goods. Once the initial investment has been made, the replacement market requires a lower rate of investment. This is referred to as the *principle of acceleration.* If it takes $10 worth of steel mills to produce $1 worth of steel per year, growth in demand for steel by $1 will *temporarily* generate $10 worth of demand for steel mills.

Another early business cycle theorist, Joseph Schumpeter (1883–1950), noted that nothing is constant over the business cycle and nothing ever really returns to its starting place. That is what makes each business cycle unique. The economy grows and changes with each cycle—new products, new firms, new consumers. As Schumpeter observed in 1939, "As a matter of history, it is to physiology and zoology, not to mechanics, that our science is indebted for an analogous distinction which is at the threshold of all clear thinking about economic matters" (p. 37). The economy *grows* and changes. He referred to this as the process of "creative destruction."

Schumpeter concluded that what most of us consider "progress" is at the source of the prob-

Survey Of Current Business

BUSINESS CYCLE EXPANSIONS AND CONTRACTIONS

Business cycle reference dates		Duration in months			
				Cycle	
Trough	Peak	Contraction (trough from previous peak)	Expansion (trough to peak)	Trough from previous trough	Peak from previous peak
December 1854	June 1857	—	30	—	—
December 1858	October 1860	18	22	48	40
June 1861	April 1865	8	***46***	30	***54***
December 1867	June 1869	***32***	18	***78***	50
December 1870	October 1873	18	34	36	52
March 1879	March 1882	65	36	99	101
May 1885	March 1887	38	22	74	60
April 1888	July 1890	13	27	35	40
May 1891	January 1893	10	20	37	30
June 1894	December 1895	17	18	37	35
June 1897	June 1899	18	24	36	42
December 1900	September 1902	18	21	42	39
August 1904	May 1907	23	33	44	56
June 1908	January 1910	13	19	46	32
January 1912	January 1913	24	12	43	36
December 1914	August 1918	23	***44***	35	***67***
March 1919	January 1920	***7***	10	***51***	17
July 1921	May 1923	18	22	28	40
July 1924	October 1926	14	27	36	41
November 1927	August 1929	13	21	40	34
March 1933	May 1937	43	50	64	93
June 1938	February 1945	13	***80***	63	***93***
October 1945	November 1948	***8***	37	***88***	45
October 1949	July 1953	11	***45***	48	***56***
May 1954	August 1957	***10***	39	***55***	49
April 1958	April 1960	8	24	47	32
February 1961	December 1969	10	***106***	34	***116***
November 1970	November 1973	***11***	36	***117***	47
March 1975	January 1980	16	58	52	74
July 1980	July 1981	6	12	64	18
November 1982	July 1990	16	92	28	108
March 1991		8	—	100	—
Average, all cycles:					
1854–1991 (31 cycles)		18	35	53	[1]53
1854–1919 (16 cycles)		22	27	48	[2]49
1919–1945 (6 cycles)		18	35	53	53
1945–1991 (9 cycles)		11	50	61	61
Average, peacetime cycles:					
1854–1991 (26 cycles)		19	29	48	[3]48
1954–1919 (14 cycles)		22	24	46	[4]47
1919–1945 (5 cycles)		20	26	46	45
1945–1991 (7 cycles)		11	43	53	53

[1] 30 cycles.
[2] 15 cycles.
[3] 25 cycles.
[4] 13 cycles.

Table 1

NOTE: Figures printed in bold italic are the wartime expansions (Civil War, World Wars I and II, Korean war and Vietnam war), the postwar contractors, and the full cycles that induce the wartime expansions.

SOURCE: National Bureau of Economic Research, Inc. 1050 Massachusetts Avenue. Cambridge MA 02133.

lem. He felt that as *entrepreneurs* come up with new ways of doing things, this disturbs the equilibrium and creates fluctuations. Schumpeter distinguishes between *inventions* (which may gather dust for years) and *innovations*, which are commercial applications of previous inventions. Inventions occur randomly through time. Innovations tend to be bunched, thereby creating cycles of economic activity.

Many business cycle theorists give a prominent role to the monetary system and interest rates. Early in the twentieth century, a Swedish economist, Knut Wicksell (1851–1926), argued that if the "natural" rate of interest rose above the "bank" rate of interest, the level of economic activity would begin to increase. In contemporary terms, the natural rate of interest is what businesses expect to earn on real investment. The bank rate is the return on financial assets in general and commercial bank loans in particular. The boom begins when, for whatever reason, the cost of borrowing falls significantly below expected returns on investment. This difference between the rate of return on real and financial assets generates a demand for bank loans by investors seeking to exploit the opportunity for profit. The economy booms.

At some point the bank rate will start to rise and/or the real rate will start to fall. When the expected rate of return on investment falls below the rate at which funds can be borrowed, the process will begin to reverse itself—and the recession is on. As bank loans are paid off (or defaulted on), bank credit is reduced, and the economy slows accordingly.

In recent years, business cycles theory has centered on the argument about the source of cyclical instability. The question of the root causes of ups and downs in the level of economic activity received a lot of attention in the 1980s and 1990s.

Figure 1 shows how the parties to the debate are divided up. First, there is the question of whether the private sector of the economy is inherently stable or unstable—which is to say, do the observed fluctuations originate in the government or private sector? On one side are what might be called *classical* economists, who are convinced that the economy is inherently stable. They contend that, historically, government policy has destabilized it in a perverse fashion. On the other side are what might be called *Keynesians*, named after the famous British economist John Maynard Keynes (1883–1946). Keynesians think that psychological shifts in consumers' purchasing and savings preferences and in businesses' confidence are a substantial source of instability.

There is a whole body of literature on *political business cycles.* As a contemporary economist, William D. Nordhaus, noted in 1989, "The theory of the political business cycle, which analyzes the interaction of political and economic systems, arose from the obvious facts of life that voters care about the economy while politicians care about power" (p. 1). The idea is that politicians in power will tend to follow policies to promote short-term prosperity around election time and allow recessions to occur at other times. The evidence that the state of the economy influences voting patterns is strong, as is the apparent desire of incumbent politicians to influence the economy; but it is difficult to make a case that the overwhelming determinant of the level and timing of business fluctuations is politically determined. At some points in recent history, politically determined policies were apparently a determining factor and at other times not.

With respect to the impact of governmental policies, there is a dispute as to the relative importance of monetary policy (controlling the money supply) and fiscal policy (government expenditures and taxes). Those who believe that monetary policies have had a generally destabilizing effect on the economy are known as *monetarists.* Most economists accept the fact that fiscal policy, especially in wartime, has been a source of cyclical instability.

As noted above, it is the so-called Keynesian economists who think that the private sector is inherently unstable. While noting the historical instability of investment in tangible assets, they have also emphasized shifts in liquidity preference (demand for money) as an independent

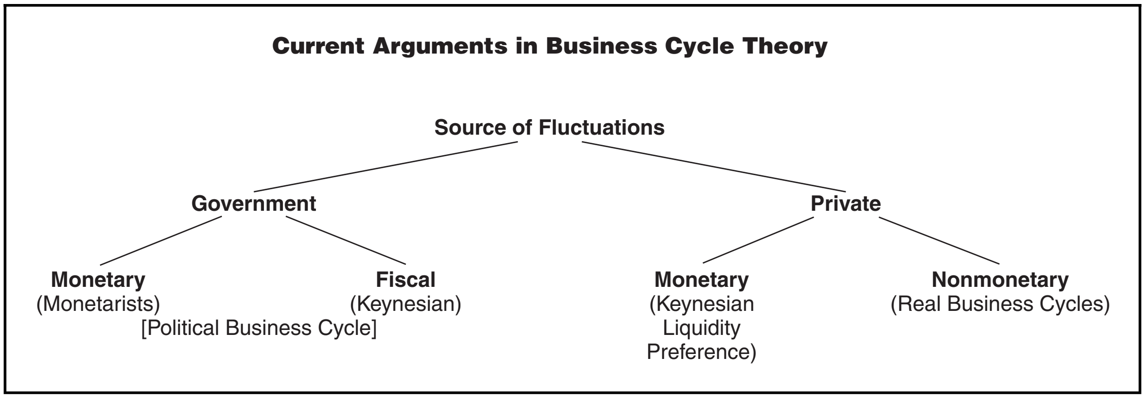

Figure 1

source of instability. As a counter to the standard Keynesian position, there has in recent years arisen a school of thought emphasizing *real business cycles*. This school contends that nonmonetary variables in the private sector are a major source of cyclical instability. They contend that the observed sympathetic movements between monetary variables and the level of economic activity result from a flow of causation from the latter to the former. The changes in real factors *cause* the monetary factors to change, not vice versa. In this way they are somewhat like Wicksell, discussed earlier.

(SEE ALSO: *Economic Cycles*)

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DAVID A. BOWERS

BUSINESS PROFESSIONALS OF AMERICA

Business Professionals of America (BPA) is a national vocational student organization for individuals preparing for careers in business and/or office occupations. With nineteen state associations and 45,000 members in middle, secondary, and post-secondary schools throughout North America, BPA strives to contribute to the preparation of a world-class work force by advancing leadership, citizenship, and academic and technological skills. Using a co-curricular focus, BPA integrates local programs and services into a business classroom curriculum and focuses on real-world teaching and learning strategies. Additionally, BPA develops professionalism in students and teachers through unique programs and services (Business Professionals of America, 1993).

Historically, the need for a student organization serving individuals in vocational office programs was recognized shortly after the passage of the Vocational Education Act of 1963. The articles of incorporation for the Office Education Association, the original name of BPA, were officially filed in 1966. The name was changed to Business Professionals of America on July 1, 1988 (Business Professionals of America, 1996).

Business Professionals of America offers its student, teacher, and alumni members a variety of programs and services. The National Leadership Conference annually hosts national officer elections and competitive events that allow students to demonstrate workplace skills obtained through the business classroom curriculum and Industry Certification and Behavioral Skills Assessment ("Workplace Skills Assessment Program," 1998). Awards programs also recognize successes of members and chapters.

Various written materials and the official quarterly journal, *Communique*, provide members with services, updates, and promotional opportunities. Additionally, scholarship programs are sought at universities to encourage participation in business education at the post-secondary level. More information is available from Business Professionals of America, 5454 Cleveland Ave., Columbus, Ohio 43231-4021, or http://www.bpa.org/.

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JEWEL EVANS HAIRSTON

BUSINESS TO BUSINESS MARKETING

(SEE: *Industrial Marketing*)

C

CABBAGE PATCH DOLLS

(SEE: *Fads*)

CAPITAL

(SEE: *Factors of Production*)

CAPITAL BUDGETING

(SEE: *Budgets and Budgeting*)

CAPITAL INVESTMENTS

Companies make capital investments to earn a return. This is like individuals wanting to "make" money when they invest in stocks and bonds. The amount of money "made" or "lost" is measured as the investment's rate of return. When making an investment, the expected rate of return is determined by the amount, timing, and riskiness of the funds expected from the investment.

RATE OF RETURN

Amount. An investment's rate of return is expressed as a percentage. For example, if a company invests $1,000 and expects to get back $1,100 one year from today, it expects to earn 10 percent (= (1,100 − 1,000)/1,000). If the company expects $1,200 (instead of $1,100), it expects to earn 20 percent. So a rate of return depends first on the *amount* of money expected back from the investment.

Timing. Just as getting more money produces a higher rate of return, getting the money sooner also produces a higher rate of return. If a company earns 10% in six months that's a higher rate of return than 10% earned in one year. So an investment's rate of return also depends on *when* the company expects to get the money back.

Risk. For most capital investments, the amount of money and/or the time at which the company expects to get it back are uncertain. What are the chances it will get exactly what it expects? What are the chances it will get more or less? What are the chances it will get a lot more or a lot less—or even lose all the money invested and get nothing back? The risk of the investment depends on these chances, and, in turn, how the investment's rate of return is calculated depends on this risk. So the third important dimension of an investment's rate of return is the *risk* connected with the amount of money a company expects to get back from the investment.

Time value of money. When a company evaluates a capital investment, the amount of money expected back from the investment is adjusted for its timing and risk. For example, suppose a company expects to get $100 one year from today. If it had that $100 now, it could invest the money—for example, earn interest from a bank—and have more than $100 next year. If the money earned 5 percent, the company would have $105 next year. If we "reverse" this process, the $100 the company expects to get next year is worth less than $100 today. At 5 percent interest, next year's $100 is worth only $95.24 (= $100/1.05) today. (This is because if the company had $95.24 now and earned 5 percent on the money, it would have $100 next year.) Similarly, if there is risk connected with the expected money—the company expects $100, but could get more or less—its value today is less than $95.24. And the riskier it is, the lower its value today.

Typically, in order to make "fair" comparisons, the value of all the amounts of money expected back from capital investments are converted into what are called *present values.* The rate of return used to calculate the present value for a capital investment is called the cost of capital. The cost of capital is the minimum rate of return the company must earn to be willing to make the investment. It is the rate of return the company could earn if, rather than making the capital investment, it invested the money in an alternative, but comparable, investment. The cost of capital exactly reflects the riskiness of the money expected back from the capital investment. The mathematical methods used to calculate present values are called the *time value of money* and are explained in more detail in the books in the bibliography.

Net present value (NPV). A capital investment's *net present value* (NPV) is the amount of value the company expects the investment to create. The NPV equals the sum of the present values of all of the money expected back from the investment minus the investment's cost.

MAKING CAPITAL INVESTMENTS

The capital investment process includes the following:

1. Generating ideas for capital investments
2. Classifying capital investments
3. Evaluating and choosing proposed capital investments

Generating Ideas The first—and most important—part of the capital investment process is generating new ideas. Ideas for capital investments can originate anywhere in a company. Often plant managers are responsible for identifying potential projects that will enable their plants to operate on a different scale or on a more efficient basis. For instance, a plant manager might suggest adding 10,000 square feet of production space to a plant or replacing a piece of equipment with a newer, more efficient machine. Ideas for better types of equipment that can help the company operate more efficiently may come from individuals on the plant floor. After screening out undesirable ideas, managers send the ones that appear to be attractive to the divisional level, with supporting documentation.

Division management not only reviews such proposals but also adds ideas of its own. For example, division management may propose the introduction of a new product line. Alternatively, management may want to combine two plants and eliminate the less efficient one. Such ideas are less likely to come from the plant managers!

This bottom-up process results in ideas percolating upward through the organization. At each level, ideas submitted by lower-level managers are screened, and attractive ones are forwarded to the next level. In addition, managers at successively higher levels, who are in a position to take a broader view of the company's business, add ideas that may not be visible—or desirable—to lower-level managers.

At the same time, there is also a top-down process at work in most companies. Strategic planners will generate ideas regarding new businesses the company should enter, other companies it might acquire, and ways to modify its existing businesses to achieve greater profitability. Strategic planning is a critical element in the capital investment process. The processes complement one another; the top-down process generates ideas of a broader, more strategic nature, whereas the bottom-up process generates ideas of a more project-specific nature.

In addition, many companies have a research and development (R&D) group, either within a production division or as a separate department. An R&D group often provides new ideas for products that can be sent on to a marketing research department.

Classifying Capital Investments Analysis costs money. Therefore, certain types of investments receive only cursory checks before approval, whereas others are subjected to extensive analysis. Generally, less costly and more routine investments are subjected to less extensive evaluation. As a result, companies typically categorize investments and analyze them at the level judged appropriate to their category. Potential investments in each category may have a lot in common and are able to be analyzed similarly. A useful set of investment classifications is:

Maintenance projects

Cost-saving/revenue-enhancement projects

Capacity expansions in current businesses

New products and new businesses

Projects required by government regulation or company policy

Maintenance expenditures: At the most basic level, a company must make certain investments to continue to be a healthy, profitable business. Replacing worn-out or damaged equipment is necessary to continue in business. Therefore, the major questions concerning such investments are "Should we continue in this business?" and if so, "Should we continue to use the same production process?" Since the answers to these questions are so frequently "yes," an elaborate decision-making process is not needed, and typically such decisions are approved with only routine review.

Cost savings/revenue enhancement: Projects in this class include improvements in production technology to realize cost savings and marketing campaigns to achieve revenue enhancement. The central issue is increasing the difference between revenue and cost; the result must be sufficient to justify the investment.

Capacity expansion in current businesses: Deciding to expand the current business is inherently more difficult than approving maintenance or cost-saving proposals. Firms have to consider the economics of expanding or adding new facilities. They must also prepare demand forecasts, keeping in mind competitors' likely strategies. Marketing consultants may help, but this class of projects naturally has more uncertain return projections than do maintenance or replacement projects.

New products and new businesses: Projects in this category, which include R&D activities, are among the most difficult to evaluate. Their newness and long lead times make it very difficult to forecast product demand accurately. In many cases, the project may be of special interest because it would give the company an option to break into a new market. For example, a company that has a proprietary technology might spend additional R&D funds trying to develop new products based on this technology. If successful, these new products could pave the way for future profitable investment opportunities. Access to such opportunities represents valuable options for the company.

Meeting regulatory and policy requirements: Government regulations and/or company policies concerning such things as pollution control and health or safety factors are viewed as costs. Often, the critical issue in such projects is meeting the standards in the most efficient manner—at the minimum cost.

Evaluating Proposals The typical stages for the development and approval of a capital investment proposal are the following:

1. Approve funds for research that may result in a product *idea*.
2. Approve funds for market research that may result in a product *proposal*.
3. Approve funds for product development that may result in a usable *product*.
4. Approve funds for plant and/or equipment for the *production* and sale of the new product.

Each stage involves an investment decision at one or more levels of the company. At each stage, the company reestimates the value expected to be created—the NPV—of going ahead. With this kind of sequential appropriation of funds, an automatic progress review is enforced, enabling early cancellation of unsuccessful projects. At each stage there are options to abandon, postpone, change, or continue.

Proposed expenditures that are larger than certain company-set limits generally require a written proposal from the initiator. Typically, such limits are higher in smaller privately owned companies, which tend to have relatively informal organizational structures. Most companies use standard forms, and these are often supplemented by written memoranda for larger, more complex projects. Also, there may be consulting or other studies prepared by outside experts; for example, economic forecasts from economic consultants.

For a successful company, a maintenance project might require only limited supporting information. In contrast, a new product would require extensive information gathering and analysis. At the same time, within a category, managers at each level usually have upper limits on their authority regarding both expenditures on individual assets and the total expenditure for a budgeting period. In this way, larger projects require the approval of higher authority.

For example, at the lowest level, a department head may have the authority to approve $50,000 in total equipment purchases for the year. However, that same person might have to obtain specific approval from higher authority to spend more than $10,000 for any single piece of equipment. A plant manager might have authorization limits of $500,000 per year and $100,000 per piece of equipment, for example.

A system of authorization, such as illustrated in the preceding paragraph, requires more extensive review and a greater number of inputs to approve larger expenditures. The hierarchical review structure reflects the obvious fact that misjudging a larger project is potentially more costly than misjudging a smaller one.

CAPITAL INVESTMENT IN OTHER COMPANIES

Sometimes companies make capital investments in other companies. In concept, these are just like any other capital investment. They range from the simple—such as buying stock in another company in a "passive" investment—to acquiring (purchasing) another company outright or merging with another company. With an acquisition or merger, the details connected with such things as taxes, "corporate cultures," distribution of responsibilities, and logistics, among others, can be exceedingly complex.

Companies give many different reasons for acquisition or merger. In most cases, they want to achieve operating efficiencies and/or economies of scale. For example, in a merger the companies may be able to save money marketing, producing, and delivering their products by combining their operations and eliminating duplication. Combining may also allow greater efficiency in coordinating activities across the companies' units.

A company may be able to expand more cheaply and more quickly through an acquisition or merger. There are also other possible reasons, such as realizing tax benefits and capturing surplus cash. The essence of all the possible reasons is a belief that the merger or acquisition is a good capital investment. Therefore, the analytical tools and basic decision rules are the same for mergers and acquisitions as they are for other capital investments. However, particular care must be taken in applying these tools because of the enormous size and complexity of the investment.

Beyond the basic investment considerations, there can also be important legal considerations connected with a merger or acquisition. These include aspects such as compliance with federal antitrust law, state anti-takeover statutes, financial securities laws, and the charters of the corporations involved.

(SEE ALSO: *Finance*; *Financial Institutions*)

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DOUGLAS R. EMERY
JOHN D. FINNERTY

CAPITALISM

(SEE: *Economic Systems*)

CAPITAL MARKETS

ROLE OF CAPITAL MARKETS

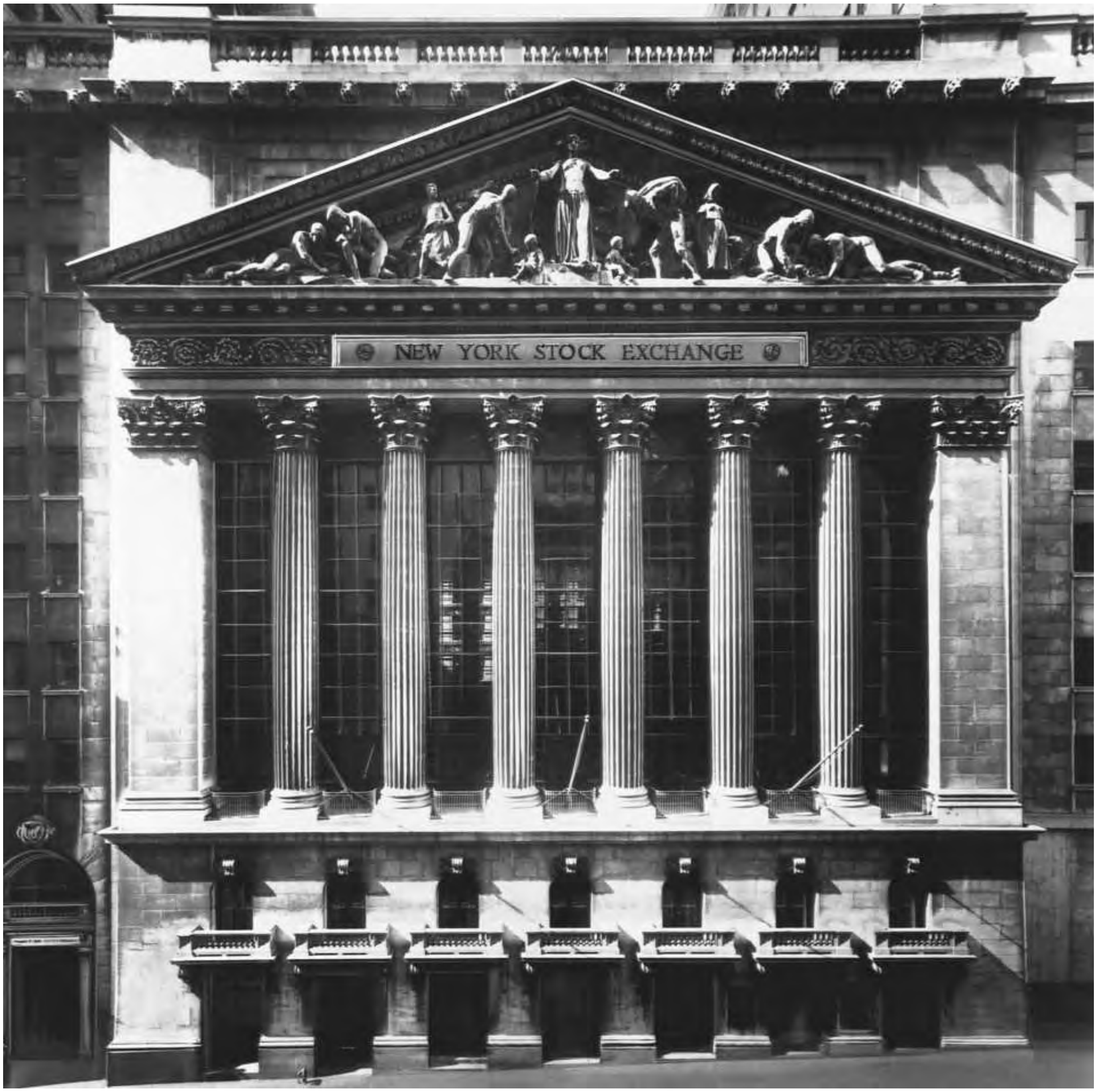
The capital market provides financing to meet the denomination, liquidity, maturity, risk (with respect to credit, interest rate, and market), and other characteristics desired by those who have a surplus of funds and those who have a deficit of funds. The capital market as a whole consists of overnight to long-term funding. The short to medium end of the maturity spectrum is called the money market proper, and the long end is identified as the capital market. The financial instruments range from money market instruments to thirty-year or longer bonds in credit markets, equity instruments, insurance instruments, foreign-exchange instruments, hybrid instruments, and derivative instruments. There has been an explosion of innovation in the creation and development of instruments in the money and capital markets since about 1960 in both debt and equity instruments.

Some of the important (by volume) money market instruments are Treasury bills, federal agency securities, federal funds, negotiable certificates of deposits, commercial paper, bankers' acceptances, repurchase agreements, eurocurrency deposits, eurocurrency loans, futures instruments and options instruments. Similarly, some of the key capital market instruments are U.S. securities; U.S. agency securities; corporate bonds; state and local government bonds; mortgage instruments; financial guarantees; securitized instruments; broker-dealer loans; foreign, international, and global bonds; and eurobonds.

THE CAPITAL MARKET IN THE UNITED STATES

The capital market in the United States is highly developed, marked by sophisticated technology, specialized financing institutions and functions, wide-ranging geographic locations, and continuous innovation in financial products and services to meet the needs of financial investors and those seeking to acquire finances. There are both direct and indirect markets. Corporations, for example, engage in direct finance when they invest in one another's paper directly without the services of brokers and other specialized intermediaries, similar to the proverbial entrepreneur getting finance from an uncle. Most of the financing in the United States, however, is done indirectly through financial intermediaries who substitute their credit for the credit of the borrower (user) of funds. The total amount of credit raised annually in the United States is around $2,200 billion, of which debt instruments account for $2,000 billion and equity instruments (net) for $200 billion.

Money and capital market instruments are traded directly among participants, in the over-the-counter (OTC) markets and in organized exchanges. Many of the exchanges specialize in the type of securities traded, thus giving focus and depth to that instrument or market. The major U.S. exchanges are the New York Stock Exchange (NYSE), Philadelphia Stock Exchange, Pacific Stock Exchange, Boston Stock Exchange, Cincinnati Stock Exchange, Midwest Stock Exchange, Chicago Board of Trade (CBT), Chicago Mercantile Exchange (CME), international money market (IMM), National Association of Securities Dealers Automated Quotations System (American Exchange) (NASDAQ-AMEX), and Globex. The regional exchanges—such as Boston, Cincinnati, Midwest, Pacific, and Philadelphia—



Façade of the New York Stock Exchange in 1928.

each list a small number of regional companies to facilitate their raising of capital in the market. The national/international markets are NYSE, NASDAQ-AMEX, CBT, and CME.

The NYSE, organized by twenty-four brokers in 1792, is the oldest and the largest exchange in the U.S. capital market. It states its mission as follows: "To add value to the capital-raising and asset management process by providing the highest-quality and most cost-effective self-regulated marketplace for the trading of financial instruments, promote confidence in and understanding of that process, and serve as a forum for discussion of relevant national and international policy issues." According to the NYSE, it is "the largest equities marketplace in the world and is home to 3,025 companies worth more than $16 trillion in global market capitalization. As of year-end 1999, the NYSE had 280.9 billion shares listed and available for trading worth approximately $12.3 trillion. Over two-thirds of the roster of NYSE companies have listed here within the last 12 years. These companies include a cross-section of leading U.S. companies, midsize and small capitalization companies. Non-U.S. issuers play an increasingly important role on the NYSE. As of July 1999, 382 non-U.S. companies were listed here—more than triple the number 5 years ago" (www.NYSE.com).

Organized in 1971, NASDAQ was the world's first electronic stock market. According to its mission statement, NASDAQ-AMEX'S purpose is "to facilitate capital formation in the public and private sector by developing, operating and regulating the most liquid, efficient and fair securities market for the ultimate benefit and protection of the investor." Its vision is "to build the world's first truly global securities market . . . a worldwide market of markets built on a worldwide network of networks . . . linking pools of liquidity and connecting investors from all over the world . . . assuring the best possible price for securities at the lowest possible cost." Stocks of over 5000 companies are traded on the NASDAQ-AMEX (www.Nasdaq.com).

INITIAL PUBLIC OFFERINGS AND ROLE OF VENTURE CAPITAL IN THE CAPITAL MARKETS

Stock markets provide high-growth, innovative companies with a means of raising large amounts of long-term capital by selling company shares to outside investors. It is said that the company is "floated" on the stock market through an initial public offering (IPO). An IPO offers many companies the best way of financing their continued growth and for most venture capitalists is the preferred exit route (best way of profiting from venture capital investment) for their investments. However, an IPO involves for the entrepreneur some loss of control over the company, proportional to the amount of equity that is sold to outside investors. The entry standards imposed for a full listing on traditional stock markets may be too rigorous for young, technology-based companies. Recently, however, a number of initiatives have been taken by traditional stock markets as well as by new market operators to create new stock markets for high-growth, innovative companies. These offer all the benefits of a public equity market, such as an increased public profile and access to new capital and investors, with simplified entry requirements.

Efficient and liquid risk capital stock markets play a large role as a source of financing for high-growth companies and are necessary for the development of venture capital by offering an exit route for investors. In the United States, the NASDAQ market has been developing for more than twenty-five years and has become the market of choice for raising capital to finance fast-growing enterprises. At the turn of the twenty-first century, the 5,500 companies quoted on it employed approximately 9 million people.

Venture capital, which consists of funds raised on the capital market by specialized operators, is one of the most relevant sources of financing for innovative companies. Venture capitalists buy shares or convertible bonds in a company. They do not invest in order to receive an immediate dividend, but rather to allow the company to expand and ultimately increase the value of their investment. Hence, they are interested in innovative small companies with very rapid growth rates. Some venture capitalists specialize in certain business sectors (e.g., biotechnology, information technology). Others may only invest at certain stages in the development of a project or company.

In the United States, the amount offered in the IPO market has been growing exponentially, from $20.7 billion in 1998 to $47 billion in 1999. The fourth quarter of 1999 alone accounted for $22.3 billion.

FINANCIAL INNOVATION AND THE MARKETS IN DERIVATIVE INSTRUMENTS

Financial innovation was one of the most influential trends in international financial markets in the 1980s and 1990s. A large number of new financial products and instruments were created as the traditional barriers between financial institutions were increasingly eroded. Banks, for example, are increasingly competing with markets for what was once considered to be traditional intermediated credits. Markets are becoming more global, and competition between financial institutions has intensified. This increase in financial innovation has taken place in an environment of steady deregulation coupled with significant advances in information and communication technologies. Securitization, perhaps the most important trend in international financial markets in the 1980s and early 1990s, continues to redefine the operations of banks and has important regulatory implications. Both bank and nonbank financial institutions are relying more on income from off-balance-sheet activities. A greater share of credit now flows through capital-market channels, which are characterized by less supervision in comparison to banks. Deregulation, improved technology, growing competition, and volatile exchange and interest rates are the main stimulus for financial innovation. Innovation can improve the efficiency of international financial markets by offering a broader and more flexible range of instruments for borrowing. It also provides hedging instruments that can help banks, borrowers, and investors to manage the risks associated with volatile exchange and interest rate.

The derivatives market took a major step forward with the formation of the Chicago Board of Trade (CBOT) in 1848. It developed standardized agreements as to the quality, quantity, delivery time, and location, and called futures contracts for trading of grains in 1865. The development of financial futures resulted from a changing world economy following World War II. Futures contracts provide for efficient forward pricing and risk-management.

In the early 1970s, approximately 13 million futures contracts were traded in the United States—most of which were agricultural. By the mid 1980s, the number of contracts being traded exploded to over 230 million, with only a quarter related to agricultural products. Today, there are futures contracts for interest rates, stock indexes, manufactured and processed products, non-storable commodities, precious metals, as well as foreign currencies. Furthermore, proposals for new contracts continue to grow.

The Chicago Mercantile Exchange (CME) is another major futures exchange in the U.S. The Merc's diverse product line consists of futures and options on futures in agricultural commodities, foreign currencies, interest rates and stock indexes. In the mid-1960s, it introduced a futures contract on a non-storable commodity—live cattle. In 1972 it launched a contract in foreign currency futures.

The U.S. futures industry operates under an extensive regulatory umbrella. Federal legislation governing the industry has existed since 1924. The Commodity Futures Trading Commission (CFTC), established under the 1974 amendments to the Commodity Exchange Act (CEA), has far-reaching authority over a wide variety of commodity industry activities.

The technology of creating, disseminating, and trading instruments (securities) has increased the efficiency of allocating financing in larger quantities at lower cost of transactions, as well as lower cost of funds because of increased supplies from increased market participation by surplus and deficit units.

ROLE OF THE SECURITIES AND EXCHANGE COMMISSION

The Securities and Exchange Commission (SEC) was organized under the Securities Act of 1934 to create fair market conditions in the securities markets by setting standards for and requirements of information from the issuer of the security to the general public. This process creates competitive and fair pricing and trading of securities, and it prevents abuse and fraud by issuers, brokers, and dealers. Issuers are required to file detailed information with the SEC on all publicly traded securities, which becomes available to the public on an equal basis. Privately traded securities and investments by wealthy individuals are exempt from registration, based on the assumptions that these investors understand the risks involved in a given security and that they are able to tolerate the consequences of those risks if they materialize.

ROLE OF THE FEDERAL RESERVE SYSTEM IN THE CAPITAL MARKET

The Federal Reserve plays a key role in the functioning of the capital market in the U.S. economy and, by extension, in the world economy. It manages the overall liquidity and credit conditions in the U.S. financial system. The Fed maintains a noninflationary level of liquidity in the economy, on an ongoing basis, in order to foster conditions for maximum sustainable growth of the economy. It does so by regulating the money supply through the banking system and its interaction with the public. The Fed pays similar attention to availability of credit; in that regard it is authorized to set the margin rate on stock purchases, thus exercising a direct role in the use of credit in equity market transactions. The Fed is also the commercial and investment banker to the federal government; in this capacity, it conducts the Treasury's operations in the U.S. Treasury securities bond market through the securities dealers recognized by it and so authorized to be dealers in U.S. Treasury bills, notes, and bonds.

ROLE OF THE U.S. TREASURY IN THE CAPITAL MARKET

The U.S. Treasury is the biggest player in the U.S. credit markets. Because the market in U.S. government securities is the largest, most active, and most liquid market, it creates a base for conditions in the U.S. credit markets. The Treasury operations bridge the timing of the cash inflows and outflows of the government. They are also used to finance the budget deficit, which became routine for three decades up to 1999, and beginning in 2000 to begin to retire the accumulated debt out of the government budget surplus.

REGULATORY REQUIREMENTS ON THE CAPITAL MARKET

Regulation plays an important role in a fair and orderly functioning of the capital market. Parts of the market are more heavily regulated than other parts. Commercial banking, for example, is one of the most regulated parts of the financial services industries. This heavy regulation is based on the fact that large bank failures, due to either fraud or mismanagement, can destabilize banking markets and lead to loss of faith in the banking system—and therefore in the currency and money (as the liability of commercial banks). The Gramm-Leach-Bliler (Financial Modernization) Act of 1999 has reduced or eliminated the need for many of the regulations on commercial banks and their activities and affiliations with investment banks and insurance companies by allowing competition for the same or similar products offered by the three.

THE KEY CAPITAL MARKETS OUTSIDE THE UNITED STATES

The increasing integration of the world economy and the growth of other economies have led to the emergence of several key financial centers, the prime examples of which are London, Tokyo, Frankfurt, Zurich, Paris, Hong Kong, and Singapore. As of 2000, the bourses in Paris, Brussels, and Amsterdam had announced their planned merger, as had the London Stock Exchange and Frankfurt Stock Exchange.

The Euromarket has grown steadily since about 1960 with the emergence and growth of the Eurocurrency (initially Eurodollar) market and followed by the Euronote, Eurobond, and Euroequity markets. The euro, introduced as the currency of the European Monetary Union on January 1, 1999, consists of the currencies of eleven countries—Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. It will begin to circulate in 2002 and will eliminate the need for a significant part of the Euromarket market, as the eleven currencies will be replaced by one European currency. The Euromarket will continue to shrink as further European countries join the European Union and adopt its currency. The Eurocurrency market will, however, continue to provide a mechanism for international and global financing in the euro, the dollar, the yen, and other currencies in international trade and finance. The euro area capital market, the U.S. capital market, and the Asian capital market will be the three key capital markets in the twenty-first century.

(SEE ALSO: *Finance*; *Financial Institutions*)

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SURENDRA K. KAUSHIK
MASSIMO SANTICCHIA

CAREERS IN ACCOUNTING

Accounting positions range from bookkeeping clerks who maintain financial data in computer and paper files to chief financial officers who are responsible for providing leadership in the design and operations of a total accounting information system and its output of financial statements.

OVERVIEW OF ACCOUNTING AS AN OCCUPATION FIELD

The U.S. Department of Labor identifies accounting essentially at two levels. At the "executive, administrative, and managerial" occupational level, accountants and auditors are included. Under "bookkeeping, accounting, and auditing clerks," positions are available to those with some training and interest in working with financial records.

Persons employed in accounting are generally expected to have strong computer, analytical, interpersonal, and communications skills in addition to sound knowledge in accounting related to the level of the position. Career opportunities are available for individuals with varying levels of formal education.

In general, the rate of growth of employment in accounting is expected to be the average of that for all occupations through 2008, as projected by the U.S. Department of Labor. The impact of computer technology will continue to change the nature of demand for employees in accounting, but growth in business activity and the turnover of personnel assure appealing opportunities for those individuals who are technically prepared and gain relevant on-the-job experience.

Accounting is a field that is appealing to individuals who enjoy working with figures and who appreciate the need for impeccable accuracy and careful adherence to policies and schedules. Increasingly, those who work in accounting must be computer-savvy. Thus, individuals who are challenged by the continuing need to learn new software, and new ways of work find the field of interest. Those individuals who choose to become certified must continue to be learners, because all certifications have a continuing professional education requirement to maintain certification. Even accountants who are not certified enroll in a range of in-company and other types of programs to upgrade their skills and knowledges.

Accountants must be individuals of high integrity so that those who read financial information prepared or audited by accountants have confidence in the credibility of such information.

Accountants who are certified are expected to adhere to professional codes of ethics that impose rules and regulations to encourage behavior in relation to their work that maintains the credibility of financial reporting, both within the organization and outside the organization.

CAREERS FOR CERTIFIED ACCOUNTANTS

Professional accounting positions that require at least an undergraduate college degree and certification are certified public accountant (CPA), certified management accountant (CMA), certified internal auditor (CIA), and the certified government financial manager(CGFM).

Certified Public Accountant. The most common path for the aspiring CPA is to begin employment in a public accounting firm as a staff accountant. Most states in the United States require experience in auditing for certification. While public accounting firms hire recent graduates of college programs for beginning positions, such firms expect new employees to have taken the examination or be planning to sit for it. While many CPAs leave public accounting to enter other positions in all types of organizations, some remain in public accounting. The promotional opportunities in public accounting for CPAs are related to level of responsibility. Successful staff accountants become seniors; seniors become managers; a limited number of managers become partners. In many public accounting firms, there are more levels of professional staff than indicated in the preceding sentence. In addition to accounting and auditing, public accounting firms provide other services, such as tax advisement and management consulting. Some CPAs choose to move to other services after they gain experience in accounting and auditing. Others decide to establish their own firms; in 1998, for example, 10 percent of accountants were self-employed. Many choose to work in other types of positions after gaining certification and experience. Many accept positions in corporations, not-for-profit entities, and government agencies, where promotional opportunities include both accounting and nonaccounting responsibilities. Some become chief executive officers in major corporations.

Accountants in Organizations. The range of positions for accountants in organizations is extensive. Accountants are employed in corporate reporting, in controller's offices, and in budget and strategic planning departments. Certification is provided for management accountants through the Institute of Management Accountants. To be certified as a certified management accountant, a candidate must successfully complete a comprehensive examination that includes accounting and related topics relevant to the broad responsibilities assumed by management accountants. There is a requirement for work experience in some aspect of management accounting before a candidate is certified. CMAs have many promotional opportunities in organizations. They are identified for leadership positions, in much the same way as CPAs, at executive levels of their own and other organizations.

Internal Auditors. Many accountants choose to work as internal auditors. The Institute of Internal Auditors provides a certification program for candidates who seek to be certified internal auditors. Certification requires experience as an internal auditor. In many organizations, especially large ones, there is a separate department of internal audit that provides valuable oversight of the total organization. Internal auditors who are certified are expected to adhere to the professional standards as they perform their responsibilities. CIAs have promotional opportunities in internal auditing through moving into managerial positions within the department or moving to operational units where they assume supervisory and executive responsibilities.

Government Accountants. The most common certification for government accountants is that provided by the Association of Government Accountants. An examination and relevant experience are required. The designation achieved by a successful candidate is certified government financial manager. Government accountants are employed throughout the public sector, at federal, state, and local levels.

CAREERS FOR ACCOUNTANTS WITHOUT CERTIFICATION

There are more accountants in the United States who are uncertified than there are those who are certified. Of the slightly more than 1 million workers classified as accountants and auditors in the United States in 1998, fewer than half were certified. Individuals who have studied accounting at the community college, business college, or university level are employed for beginning accounting positions. Through on-the-job training and experience, many of these individuals move into higher-level positions.

Many individuals who study in accounting programs in universities choose not to be certified. Others study some accounting as an elective program and then enter a beginning accounting position as a staff accountant, for example.

Many promotional opportunities are available to accountants. Technical skills and managerial skills are both important if an individual aspires to higher-level positions. Employees who are knowledgeable about accounting and continue to learn as new accounting rules and interpretations are introduced by professional bodies are invaluable to employers. However, such knowledge must be accompanied by strong organizational and interpersonal skills if promotional opportunities are to be realized.

CHANGING REQUIREMENTS FOR ACCOUNTANTS AND AUDITORS

Knowledge of accounting and auditing continues to be critical to handling job responsibilities. However, such knowledge alone is not sufficient. Accountants are expected to have advanced competencies in handling a variety of accounting and auditing software and in designing accounting information systems. Furthermore, accountants and auditors are expected to strategically analyze, interpret, and assess the information from the systems they develop and implement. For example, the need for a broader, yet deeper, education has resulted in many states requiring a 150-hour college program for those who aspire to be CPAs. It is expected that all states will have such a requirement by 2008.

CAREERS IN ACCOUNTING THAT DO NOT REQUIRE A COLLEGE DEGREE

As noted before, there are positions in accounting that are identified by the U.S. Labor Department as requiring less than a college degree. A variety of bookkeeping, accounting, and auditing clerks are needed in all types of organizations; in 1998, there were 2.1 million such clerks. As reported by the U.S. Department of Labor Statistics, approximately a fourth of these workers were in wholesale and retail trade. The outlook for employment (to 2008) is that virtually all job openings will be related to replacement of individuals who have left positions. There is high turnover in this category of workers as workers move to other types of positions, including ones that represent promotions, or leave the labor force.

Most positions require a high school diploma and exist in virtually every industry in the United States. Such workers are expected to know basic computer software programs. Most U.S. comprehensive and vocational high schools offer courses in accounting and in computer software applications. Also, proprietary business colleges as well as junior and community colleges have programs that prepare students with the basic knowledge and skills needed in many beginning accounting positions. Many employers provide training on the job for the specific applications that new employees need to understand and use. Many employers provide training when there are software or system changes in the accounting information system.

The key task of accounting-related clerks is to maintain financial records. Such workers compute, classify, process, and verify numerical data. In large as well as mid-size businesses, for example, there are departments that handle accounts payable, accounts receivable, or cash. For such departments, companies seek employees who have a basic understanding of accounting principles, possess an organized style of work, and can handle communications with vendors (in accounts payable), customers (in accounts receivable), or personnel in human resources (benefits, pensions). Ability to work under pressure and meet deadlines is also important in some positions. Entry-level workers are generally responsible for handling the details of transactions and for preparing schedules that show the results of processing transactions.

Promotional opportunities are available in many organizations. Individuals who continue their education on a part-time basis and who display maturity and wisdom in their associations with co-workers are considered good candidates for supervisory positions. Responsible, dependable managers often began as clerks but were willing to continue to learn not only all aspects of their jobs but also the total work of the organization in relation to the accounting function.

CAREERS IN ACCOUNTING RELATED TO DOCTORAL DEGREES

University programs that lead to doctoral degrees in accounting provide graduates who find employment in college teaching and in technical positions in public accounting firms, professional standard-setting organizations, and other organizations in which high-level expertise in such specializations as accounting theory, accounting systems design, or accounting policy are in demand.

Opportunities for accountants with doctorates reflect the need for accountants to have leading-edge vision in a rapidly changing global business environment. Advanced studies leading to a doctorate will provide individuals with theoretical understanding who can devise new principles to assure the relevance of financial information that is reported to shareholders and others. Advanced studies will also provide individuals who can design the effective and efficient accounting information systems needed in business and government.

SPECIALIZATIONS WITHIN THE FIELD OF ACCOUNTING

Bodies such as the American Institute of Certified Public Accountants (AICPA) provide specialized credentials in such fields as personal financial planning and information technology for individuals who are CPAs. As of mid-2000, the AICPA began discussion of some type of international business professional designation that would complement the CPA credential. It is the belief of the leadership of the AICPA that holders of a global credential would have national and international recognition and credibility as business professionals who can function in the global marketplace. This effort is relevant because a new international accounting standard-setting structure is scheduled for implementation as of January 1, 2001.

Other initiatives in the United States relate to environmental accounting, forensic accounting, international accounting, and fraud accounting. Organizations with missions related to a specialization are active in establishing standards to guide practitioners who choose to participate in the field.

RELATED FIELDS

Accounting is often referred to as "the language of business." That language has wide application. Many occupations are open to those who have both a background in accounting and analytical skills. Among occupations in which accounting training is perceived to be valuable are budget officers, lending officials in banks, securities advisers, financial analysts, and FBI investigative agents.

(SEE ALSO: *Accounting*; *Assurance Services*; *Auditing*)

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BERNARD H. NEWMAN
MARY ELLEN OLIVERIO

CAREERS IN ECONOMICS

Economists study how society uses, regulates, and distributes its natural and human-made resources such as land, labor, raw materials, and machinery to produce goods and services (*Horizons*, 2000). In simpler terms, they study how effectively society meets its human and material needs. Economists also study how economic systems address three basic questions: What shall we produce?; How shall we produce it?; For whom shall we produce it? They then compile, process, and interpret the answers to these questions ("Economists," 1997). Economists may analyze the relationship between supply and demand and develop theories and models to help predict these future relationships. They help provide a logical, ordered way of looking at various problems. They attempt to explain social concerns such as unemployment, inflation, economic growth, business cycles, tax policy, or farm prices. Most economists apply their skills to solve problems in specific areas, such as transportation, labor, heath, finance, marketing, corporate planning, energy, or agriculture. Business firms, banks, insurance companies, labor unions, governmental agencies, and others seek advice from economists to use in their decision making (*Horizons*, 2000).

THREE GENERAL TYPES OF ECONOMISTS

Theoretical economists, employing mathematical models, develop theories to examine major economic phenomena, such as the causes of business cycles or inflation or the effects of unemployment, energy prices, or tax laws. Most economists, however, concern themselves with the practical application of economic policy to such areas as finance, labor, agriculture, health, and transportation (Harkavy, 1990). Although there are widely ranging careers open to economists, there are three main career paths: business, government, and academia. Each type of economist applies the economic approach to decision-making in a different setting.

Business economists work in such areas as manufacturing, mining, transportation, communications, banking, insurance, retailing, private industry, securities and investment firms, management consulting firms, and economic and market research firms, as well as trade associations and consulting organizations (*Careers*, 2000). Many private firms, both large and small, recruit undergraduate economics majors for jobs. These jobs are general-purpose ones for which employers seek bright, highly-motivated students who can learn a specific business through on-the-job training. To become a professional business economist requires graduate training. Business economists perform such tasks as forecasting the business environment, interpreting the impact of public/governmental policy on the firm, and collecting and processing data. They also supply information to management that affects decisions on the marketing and pricing of company products, as well as providing long- and short-term economic forecasts ("Economics," 1997). For example, a business firm's managers might ask its marketing analysts to

Alan Greenspan, chairman of the Federal Reserve Board.

Career Opportunities
For Which An Economics Background is Well Suited

- Economist
- Business Manager
- Property Manager
- Labor Relations Specialist
- Market Research Analyst
- Securities Broker
- Urban/Regional Planner
- Public Administrator
- Government Economist
- Industrial Traffic Manager
- Technical Writer
- International Trade Specialist
- Farm and Land Appraiser
- Food Store Manager
- Marketing Advisor
- Professional Farm Manager
- Sales Representative
- Statistician
- Journalist (especially business reporting)
- Actuary
- Researcher
- Agricultural Economist
- Tax Economist
- Tax Examiner/Collector/Revenue Agent
- Political Scientist
- Stockbroker
- Commodities Trader/Broker
- Financial Analyst
- Financial Investment Analyst
- Population Studies Analyst
- Bank Administrator
- Business Administrator
- Investor Relations Manager
- Chamber of Commerce Analyst
- Transportation Planner
- Commodity Analyst
- Data Analyst
- Cost Analyst
- Credit Analyst
- Rate Analyst
- Bank Research Analyst
- Compensation/Benefits Coordinator
- Financial Researcher
- Investment Banking Analyst
- Compensation Analyst
- Cost Estimator
- Demographer
- Public Administrator
- Regional Planner
- Underwriter
- Management Consultant

Table 1

provide specific information on which to base marketing and pricing policies. Using econometric modeling techniques, the analysts develop projections of market reactions to various price levels throughout the industry; and on the basis of these projections, the mangers can make informed pricing decisions. Informed, rational decision making on economic matters is what economics is all about.

Government Economists work for federal, state, and local governments in a wide variety of positions involving analysis and policy making. The federal government is a major source of employment for economists with an undergraduate degree; information about job openings in various agencies is available from the Federal Employment Information Center. A bachelor's degree in economics is a good qualification for an entry-level position; a person can advance to higher positions by obtaining a graduate degree or by promotion from within. There are jobs for labor, international, development, and population economists, as well as micro- and macroeconomists (*Careers*, 1995). Economists who work for government or private research agencies assess economic trends in order to formulate policy in such areas as agriculture, forestry, business, finance, labor, transportation, urban economics, or international trade and development (*Horizons*, 2000). Working for Congress is a relatively new area for economists. Legislation and the issues facing Congress are becoming more complex and economic in nature, and as a result, members of Congress are turning to economists for advice on these issues.

Academics is another major area in which economists are found. Economics professors teach basic macro- and microeconomics courses (the "big picture" versus individual companies/persons) as well as courses on advanced topics, such as economic history and labor economics. They also do research, write papers and books, and give lectures, contributing their knowledge to the advancement of the discipline ("Econo-

Additional Career Opportunities Available with Certain Skills, Interests, or Further Education

- Business Credit Manager
- Loan Administrator
- Consumer Credit Manager
- Inventory Control Specialist
- Farm Manager
- Purchasing Agent/Buyer
- Lawyer
- Accountant, Public Practice
- Market Interviewer
- System Analyst
- Hospital Administrator
- Consumer Credit Manager
- Underwriter
- Foreign Service Officer
- Cooperative Extension Agent
- Job Analyst
- Personnel Manager
- Marketing/Sales Manager
- Editor
- Demographer
- Consultant
- Real Estate Investor
- Entrepreneur/Businessperson
- Foreign Correspondent
- Soil Conservation Specialist
- Financial Planner Investment Analyst
- Time Management Specialist
- Survey Designer
- Market Research Statistician
- Media Buyer
- Bank Examiner
- Energy Researcher
- Environmental Researcher
- Lobbying Researcher
- Real Estate Development Researcher
- Political Campaign Organizer
- Historical Researcher
- Institutional Researcher
- FBI/CIA Agent
- General Accountant
- Economics Professor

Table 2

mists," 1997). In order to teach at a four-year college, it is essential to have a Ph.D. in economics. Faculty members usually divide their time among teaching, research, and administrative responsibilities. Many academic economists also have the opportunity to consult either for business or government.

RELATED USES FOR AN ECONOMICS DEGREE

Economics is widely recognized as a solid background for many jobs and professions in business, government, and the law. Economics majors have a wide range of choices and a great deal of flexibility when deciding on a profession (Tables 1, 2, 3).

Related Occupations

- Insurance Agent/Broker
- Financial Aid Director
- Retail Store Manager
- Legal Assistant
- Real Estate Agent
- Legal Assistant
- Collection Agent
- Public Relations Specialist
- Claim Adjuster/Examiner
- Computer Programmer
- Systems Analyst
- Construction Estimator
- Investment Counselor
- Health Policy Planner
- Affirmative Action Representative

Table 3

An undergraduate major in economics can be an ideal preparation for work on a Master of Business Administration degree, and many graduate business schools encourage students to take at least some economics courses. Studying economics is also excellent preparation for becoming a lawyer; many believe that economics is one of the best backgrounds for success in law school because of its emphasis on a logical approach to problems, logical reasoning, and analytical skills. Publishing companies and trade associations also employ economists. Newspapers provide economics majors with opportunities to write about economic and business events. The demand for economics teachers in secondary schools is growing as economics becomes an increasingly important and popular course (*Careers*, 1995).

WORK CONDITIONS

Economists generally work in offices or classrooms. The average work week for government economists is forty hours, but the schedules of academic and business economists are less predictable. Regular travel may be necessary to collect data or attend conferences or meetings. International economists may spend as much as 30 percent of their time traveling and 40 percent of their time on the telephone or the Internet researching current trends in foreign economic systems (for this subgroup, language skills are important) (*Economist*, 2000).

Economists in nonteaching positions often work alone writing reports, preparing statistical charts, and using computers, but they may also be part of a research team. Faculty economists have flexible work schedules, dividing their time among teaching, research, consulting, and administrative duties (*Horizons*, 2000). High levels of satisfaction are found throughout this field, which encourages discussion, detailed examination, and lively disagreement.

DESIRABLE PERSONAL QUALITIES

The field of economics rewards creative, curious, analytical, and logical thinkers. Helpful qualities for an economist include the following:

- The ability to work accurately with details
- The ability to work well independently as well as with others
- The ability to be objective and systematic in one's work
- Patience and persistence (since economists and marketing research analysts must spend long hours on independent study and problem solving)
- Effective communication skills
- Intellectual curiosity
- The ability to collect, organize, interpret, and analyze data
- Leadership ability
- The ability to present findings clearly, both orally and in writing
- The ability to make decisions based on experience and using data
- Enjoyment of the research process

Especially for advancement purposes, it is helpful to continue pursuing education and to take graduate-level courses. It is also important to be able to work successfully under the pressure of deadlines and tight schedules and to be able to bear the responsibility of knowing that the information provided will affect the future policies of current employers (*Horizons*, 2000).

EDUCATION AND TRAINING

People who are interested in this field should be able to work accurately and precisely, because economics entails careful analysis of data. Good communications skills are also necessary. One should also take as many mathematics and computer science courses as possible in high school ("Economics," 1997).

A college major in economics is the basic preparation for a career in economics. Students should also study political science, psychology, sociology, finance, business law, international relations, statistics, regression analysis, and econometrics. Those who are comfortable with the written and spoken word have a significantly higher rate of advancement and overall job satisfaction than those who are not (*Economist*, 2000).

Although most professional economists hold a master's degree or a doctorate, a bachelor's degree often suffices for an entry-level position in business or government, perhaps in an economics-related area such as sales or marketing, beginning research, or administrative and management training ("Economics," 1997). The primary responsibilities in entry-level positions are the collection, adaptation, and preparation of data. In the federal government, applicants for entry-level economist positions must have a bachelor's degree with a minimum of twenty-one semester hours of economics and three hours of statistics, accounting, or calculus (*Horizons*, 2000). However, additional courses and/or superior academic performance are likely to be required. The importance of quantitative analysis makes it highly desirable for those planning a career in economics to take courses in mathematics, statistics, sampling theory and survey design, and computer science (Harkavy, 1990).

Postgraduate degrees in economics, with concentration in areas such as economic theory, econometrics, comparative economic systems, economic planning, labor economics, and international economics, are generally required for advancement in government or private industry

(Harkavy, 1990). Business economists with a graduate degree and experience may advance to management or executive positions in banks, industry, or other organizations, where they determine business and administrative policy (*Horizons*, 2000). A master's degree is usually the minimum requirement for a job as an instructor in junior and community colleges. For a faculty position in most colleges and universities, however, a Ph.D. is normally required. A Ph.D. plus extensive publications in academic journals are required for a professorship, tenure, and promotion. Economists in education may advance to be department heads or to administrative or research positions ("Economists and Marketing," 2000).

Overall, good mathematical and analytical skills are essential; persistence, objectivity, and creativity in problem solving are important; and computer skills and excellent communication skills are invaluable. No special licensing or certification is required for economists (Harkavy, 1990).

LOCATION OF JOBS

Generally economists who are not in academia work in large cities, where there is the highest concentration of major financial and government power; New York City and Washington, DC, are main centers of employment, along with Chicago and Los Angeles. Academic positions are spread throughout the country. American economists are also employed in foreign countries by international companies and organizations and by U.S. government agencies ("Economists," 1997).

EARNINGS AND PROSPECTIVE JOB OUTLOOK

Economists are the highest-paid social scientists. The highest-paid economists in business are in securities and investment, insurance, and retail and wholesale trade. The lowest-paid economists work in education, nonprofit research institutions, and real estate (Harkavy, 1990).

Job opportunities for economists should be best in manufacturing, financial services, advertising, and consulting firms. The complexity of modern national and international markets will continue to spur a demand for those skilled in quantitative analysis. In addition, lawyers, accountants, engineers, and urban and regional planners, among others, will continue to need economic analysis. The majority of openings will come about as the result of replacement needs for those retiring or leaving the profession for some other reason (Harkavy, 1990).

Demand for qualified marketing research analysts should be strong because of the increasingly competitive economy. Marketing research provides organizations with valuable feedback from purchasers that enables companies to evaluate consumer satisfaction and plan more effectively for the future. As companies seek to expand their market and consumers become better informed, the need for marketing professionals will increase ("Economists and Marketing," 2000).

Economists with a bachelor's degree will face strong competition in securing jobs in business or industry; some may find positions as management or sales trainees or as research or administrative assistants. Those with master's degrees and a strong background in marketing and finance will have the best prospects in business, banking, advertising, and management consulting (Harkavy, 1990). Those holding doctoral degrees in economics and marketing are likely to face strong competition for teaching positions in colleges and universities. However, opportunities should be good in other areas, such as industry and consulting firms.

CONCLUSION

Economics is the only social science for which a Nobel Prize is awarded—an indication of its importance. Economic concepts have been applied in the natural sciences; both the theory of natural selection and the study of ecology, for example, have drawn extensively on economic concepts. Economics is both a theoretical and an applied discipline. It analyzes the way an economy can be changed and improved through learning how the various parts of society affect each other and studying the relationships between government, business, and the individual (Basta, 1991). Economic concepts are so powerful and versatile that they have been applied to attempts to understand nearly every aspect of human activity. Economics provides important insights in areas from government fiscal and monetary policy, to business, to law and property rights, to poverty and health issues, to environmental and natural resource issues, to the choice of marriage partners.

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WENDY RINHOLEN

CAREERS IN FINANCE

In exploring careers in finance, one quickly begins to realize that there are a variety of jobs, with several types of organizations, requiring varying levels of education and training. Unfortunately, the word *finance* reveals few details about what one actually does as work in a finance career. The *Career Guide to Industries* (edition 2000-2001), produced by the Bureau of Labor Statistics, organizes finance careers according to three broad categories: banking, insurance, and securities and commodities. Careers in the banking industry focus on providing loans, credit, and payment services to individual and large institutional customers. Insurance industry jobs focus on providing clients with protection against financial losses and hardships due to such things as fire. Finally, securities and commodities careers are typically what most people think of when considering a career in finance. These jobs focus on advising and assisting individual and institutional investors with purchasing and selling stocks, bonds, and commodities.

BANKING CAREERS

The majority of jobs in the banking industry are clerical and administrative support positions. Bank tellers make up the bulk of the clerical positions in banking institutions. Tellers work directly with customers, assisting them with basic banking services such as depositing funds and cashing checks. New accounts clerks, also called customer service representatives, assist customers with opening and closing bank accounts and with applying for loans or credit cards. As a result, bank tellers and new accounts clerks need to be knowledgeable about a wide range of banking services and be able educate customers about these services.

There are several other entry-level administrative positions in the banking industry. Bookkeeping, auditing, and accounting clerks are needed to help maintain and update financial records, process deposit slips and checks, and enter data. Credit or loan clerks are responsible for organizing the paperwork needed to complete the required records for approved loans or lines of credit. Banks also need secretaries, receptionists, and computer operators to assist with the many administrative support duties.

According to the *Career Guide to Industries*, 25 percent of the positions in the banking industry are comprised of executive, administrative, and managerial occupations. Examples of these occupations include loan officers, trust officers, and financial managers. Loan officers are responsible for determining whether or not a customer can pay back a loan and then approving or declining the customer's loan application. They also help to bring in new business by developing relationships with customers who will need bank loans in the future. Loan officers and counselors also tend to specialize in either commercial, consumer, or mortgage lending. Trust officers are responsible for managing the finances of customers or organizations that have been placed in trust with the bank. Very often they are called upon to be the executor of an individual's estate upon that person's death. Last, financial managers supervise operations at branch offices or departments to make sure customers receive quality service.

Education and training requirements for finance careers in banking vary according to the special skills required for success and the level of responsibility. Bank tellers and clerks typically need, at minimum, a high school education. Some basic skills and interests needed for success as a teller or clerk are math skills, interpersonal communication skills, and comfort in handling large amounts of money. Typically banks provide tellers and clerks with additional training on the organization's procedures and regulations. The American Institute of Banking, American Bankers Association, and the Institute of Financial Education all offer accredited courses for advanced training. Bank tellers and clerks take these educational courses to prepare for more responsibilities and to assist with career advancement. However, most banks have their own training programs.

Financial managers, loan officers, and trust officers usually have a college degree if not a more advanced professional or graduate degree. Most study business administration or earn a degree with a major in business administration. Any college degree plus a master of business administration or a law degree are excellent preparation for one of these financial management positions. Managers who also sell securities need to be licensed by the National Association of Securities Dealers.

Earnings in the bank industry reflect the amount of responsibility and education required of the position. As a result, the more responsibility and education a job requires, the higher the salary. As the amount of responsibility increases, so does salary, as can be seen in the salary ranges of commercial loan officers, trust officers, and top executives. Other factors that influence salary are experience, length of time with the bank, and location and size of the bank.

Employment in the banking industry is expected to grow at 3 percent, which is much lower than the growth rate of the overall economy, which is expected to increase 15 percent between 1998 and 2008. The downsizing and cost cutting that occurred in this industry in the early to mid-1990s is expected to decline. Most of the growth in the banking industry is expected to occur in small regional credit unions and banks. As banks become more automated and ATMs are able to provide more services, fewer bank tellers and clerks will be needed. Areas of growth can be found in customer service representatives for staffing call centers and trust officers to administer the estates of an aging population.

INSURANCE INDUSTRY CAREERS

The *Career Guide to Industries* states that more than 40 percent of the positions in the insurance industry are administrative support positions such as secretaries, bookkeepers, word processors, and clerks. These support positions often require skills and knowledge that are specific to the insurance industry. For example, because insurance policy clerks focus on processing insurance policy applications, changes to policies, and cancellations, they need to have a strong understanding of insurance policies. They often verify both the completeness of an application and the accuracy of the insurance company's records. Insurance claims examiners and investigators often investigate questionable claims or claims that exceed the amount the insurance company is willing to pay. Investigators and examiners spend most of their time checking claim applications for accuracy, obtaining information needed for decisions from experts, and consulting current policy about claims.

Executive, managerial, and administrative jobs make up about 30 percent of the positions in the insurance field. Three examples of job titles found at this level of employment in the insurance industry are risk manager, sales manager, and underwriter. Risk managers develop the policies the insurance company follows when making decisions regarding claims. These policies are developed by analyzing historical data about natural disasters, car accidents, and other situations that may result in physical or financial loss. Sales managers sell insurance products, assist clients with questions about policies, and supervise staff. They make up the majority of managers in local sales offices. Finally, underwriters review applications for insurance and the level of risk involved in agreeing to issue an insurance policy. Essentially, the underwriter determines whether to accept or reject the application and how much a client should pay in premiums.

A smaller percentage, about 15 percent, of salaried employees in the insurance industry is made up of salespeople, often called insurance brokers or insurance agents, who focus on selling insurance policies to businesses and individual customers. Insurance agents can sell insurance exclusively for one insurance company or insurance policies issued by several different insurance companies. Some of the typical types of insurance polices an agent or broker may sell include health, life, annuities, property, casualty, and disability. In addition to these services, some agents are now licensed to sell mutual funds, annuities, and securities.

An even smaller career field in the insurance industry is the area of actuary science. Although there may not be as many actuaries as there are salespeople in insurance, they are very important to the industry. Actuaries set rates paid by customers at a level where the premiums that are collected will generate enough money to cover the claims that are paid out. Yet the premiums can't be too expensive or customers will switch to other insurance companies. Actuaries accomplish this by studying the probability of an insured loss and the premium rates of other insurance companies.

Education requirements for jobs in the insurance industry vary, depending on the position and its responsibilities. Many of the entry-level clerical positions in the insurance industry require only a high school diploma. Higher-level executive, managerial, and sales positions require more education, with employers usually preferring to hire college graduates. Most managerial positions are filled by promoting people from within the organization. Such employees usually have a college education, some special training in the insurance industry, and experience with the company. Actuaries typically have a college degree in actuary science, math, or statistics. After completing college, actuaries must pass a series of exams over a period of five to ten years to become fully qualified. Overall, advancement opportunities are good in the insurance industry.

Earnings for insurance clerks and clerical staff are below those of insurance examiners, adjusters, and investigators. Higher yearly salaries are typical for higher-level general managers and top executives. Salaries for sales agents are difficult to pinpoint because many salespeople are paid a salary, plus commissions, plus bonuses for reaching sales goals. In addition, an agent's earnings will rapidly increase as he or she gains experience and develops a client base.

The employment rate for the insurance industry is projected to increase more slowly than the average for all industries combined. Job growth in the insurance field is expected to be limited by the downsizing of large insurance companies, computerization, and a trend that points toward direct-mail and telephone sales campaigns. One area of growth in this industry is that of financial services and products sales. Another growth area stems from the need to cover large liability awards resulting from lawsuits. Finally, the number of claims professionals will grow faster than any other position in the industry because of the need for better customer service and actual inspection of damaged property or consultation with doctors.

SECURITIES AND COMMODITIES CAREERS

There are large numbers of workers in this area of the finance industry. The national brokerage companies have extensive systems of branch offices throughout the country; as a result, these brokerage firms employ the majority of the workers in this industry. Headquarters for these firms are located in New York City, where most of the executives and support personnel work. Mutual fund management companies and regional brokerages also employ many people. Although it is very well known, the New York Stock Exchange actually employs a small number of people compared to the rest of the industry.

A great deal of attention is focused on tracking performance, transactions, and the value of investments. Brokerage clerks are responsible for the majority of the daily operations and for processing much of the paperwork that is generated. These positions are often considered entry-level jobs with the potential for promotion into securities sales and even into higher positions. For example, a sales assistant takes calls from clients, writes up the order, processes the paperwork, and keeps clients updated on their portfolio's performance. With experience and a license to buy and sell securities, brokerage clerks can be promoted into higher-level sales positions.

The largest number of people employed in the securities and commodities industry can be found in three occupations: securities, commodities, and financial services sales. These careers involve buying and selling shares of stocks, mutual funds, and other financial services. The majority of these workers are sales representatives who work directly with individual investors. They are known as brokers, account executives, or financial consultants. Securities and commodities brokers differ in the investments they buy and sell. Securities brokers typically buy and sell stocks, bonds, and mutual funds. Commodities brokers buy and sell futures contracts for metals, energy supplies such as oil, and agricultural products. In addition to buying and selling securities, brokers can advise and educate their clients on investments, saving for retirement, and tolerance for risk. Overall, brokers spend a great deal of time marketing their services and products in order to establish a strong customer following.

Financial planners go a step further in advising and educating their clients. They often provide advice on investments, investing for retirement, tax planning, and employee benefits. Their strategy tends to be more of a comprehensive approach to advising clients on financial matters when compared to brokers. These planners can also buy and sell stock, mutual funds, bonds, and annuities.

Investment bankers and financial analysts make recommendations about potential profits from investments in specific companies by reviewing the companies' financial records and evaluating market trends. They also play a very important role in determining the market value for stocks that are traded publicly or stocks being purchased when a company is merging with or acquiring another company. Financial analysts often specialize in a specific industry sector, such as technology stocks.

Another career in the securities and commodities area of the finance industry is that of portfolio manager. These finance professionals are responsible for investing large amounts of money. The portfolios they manage are often mutual funds, pension funds, trust funds, and funds for individuals who are investing very large amounts of money. Most importantly, portfolio managers must have a clear understanding of a mutual fund's or a client's investment goals in order to ensure that the investment decisions they make meet the financial goals and guidelines set by the mutual fund or client.

As a whole, the workers in this area of the finance industry are well educated and highly trained. Even entry-level brokerage clerk positions often require a college degree. Also, to sell securities professionals are required to pass an examination testing their knowledge of investments. The National Association of Securities Dealers (NASD) conducts this testing and licenses professionals to sell a variety of investment products. Most brokers and sales assistants obtain the Series 7 license from the NASD by passing the General Securities Registered Representative Exam. In addition to passing the exam, these professionals are required to take classes on regulatory issues and new investment products in order to keep their licenses. Currently, there is no special licensing requirement to become a financial planner. However, many financial planners earn a certified financial planning (CFP) or chartered financial consultant (ChFC) designation. The CFP is issued through the CFP Board of Standards and the ChFC is offered by the American College. A series of exams on investments, taxes, insurance, retirement, and estate planning must be passed in order to receive one of these designates. In addition, the CFP must follow the rules and regulations set forth by the CFP Board of Standards.

Most of the workers in the entry-level analyst and managerial positions have a college degree and studied finance, general business administration, economics, accounting, or marketing. In order to advance, many take part in management trainee programs where they briefly work and learn about different departments. To advance further and gain access to higher salaries and more prestigious positions, many people obtain a master's degree in business administration.

For many brokers and commodities dealers, income is based on a salary and on commissions from the sale or purchase of stocks, bonds, or futures contracts. When the economy is strong these commissions and bonuses are much higher than they are when the economy is in a slump. Another factor in determining earnings in this area of finance is the amount of assets the manager is responsible for managing.

Yearly earnings for entry-level brokerage clerks are at the start of the scale. Further up the scale are financial analysts and sales agents. At the next level are the financial managers. The highest-paid professionals in the securities and commodities industry are general managers and top executives. Many firms also offer their employees profit sharing and stock options. Plus, most salaried employees receive health benefits, paid vacation, and sick leave.

Job growth in this industry is being fueled by several factors. First, more than ever, people are investing in securities as a way to save money and plan for retirement, resulting in a large influx of money into the stock market. Second, although on-line trading is reducing the need for direct contact with brokers, there is still a need for investment advice. Finally, the increased demands of investing in a complex global market have created a need for skilled investment managers. According to the *Occupational Outlook Handbook*, these factors have contributed to an employment growth projection of 40 percent for this segment of finance careers, which is much greater than the 15 percent projected for all other industries combined.

(SEE ALSO: *Finance*)

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MARK D. WILSON

CAREERS IN INFORMATION PROCESSING

The demand for computer and information systems professionals exists and continues to grow. The U.S. Commerce Department's Office of Technology Policy (1982) reported that between 1996 and 2006, U.S. businesses and schools will require more than 1.3 million *new* information technology workers to fill jobs. In the twenty-first century, 70 percent of all jobs will require skills in computer and network use.

The U.S. Bureau of Labor Statistics (1998) reported that the fastest-growing computer career positions through the year 2006 will be computer engineer, systems analyst, computer repair technician, and programmer. There is also high demand for systems analysts, computer scientists, network administrators, and database managers.

Careers in computers and information processing, also called information technology (IT), require a unique combination of conceptual skills in creative problem solving and critical thinking, technical hands-on skills, and communications and interpersonal skills, as well as an understanding of business and industry needs.

Career opportunities in computer industries can be grouped into four areas:

- Companies that manufacture computer-related equipment (hardware)
- Companies that develop software
- Companies that hire information systems professionals to work with software and hardware products
- Companies and organizations that provide computer-related training and education

Many service companies exist to support each of these four areas—firms that sell computer supplies or provide consultation on analysis, design, programming, and networking projects.

CAREERS IN THE COMPUTER HARDWARE INDUSTRY

The computer equipment, or hardware, industry consists of manufacturers and distributors of computer systems and computer-related equipment such as monitors, printers, and communications equipment.

Computer equipment manufacturers are organizations with thousands of employees in many locations worldwide. IBM, for example, is one of the largest computer companies, with more than 200,000 employees and sales of more than $80 billion in 1998. Numerous start-up companies have taken advantage of rapid changes in equipment technology to create new products and new job opportunities in areas such as networking, multimedia, and fiber-optics.

In addition to the companies that make end-user equipment, thousands of companies build components such as motherboards, input and output devices, and power supplies. Job titles that involve the design and manufacture of computer equipment include computer engineer, software engineer, and technical writer. A computer engineer designs, builds, tests, and evaluates computer chips, circuit boards, computer systems, and peripheral devices. Computer engineers need a B.S. in electrical or computer engineering. They must be very detailed-oriented and good at problem solving.

Software engineers develop system software such as operating systems, utilities, and software drivers. The minimum education required is a B.S. in computer science. Important capabilities include good analytical skills, an ability to work with abstract concepts, and attention to detail.

Technical writers produce technical publications, such as reference manuals, procedure manuals, and product documentation. The minimum education requirement is a B.S. in engineering, science, or a related discipline. Technical writers need good writing skills as well as knowledge of the products, processes, and procedures.

CAREERS IN THE COMPUTER SOFTWARE INDUSTRY

Companies in the computer software industry develop, manufacture, and support a wide range of software products, such as operating systems and other systems software, productivity software, network software, software development tools, and Internet software and technologies. Some companies specialize in a particular type of software product, such as business productivity software, utility programs, or multimedia and graphic design tools. Other firms produce and sell multiple software products.

The software industry had sales in 1998 exceeding $200 billion. The largest software company, Microsoft, has more than 300 products and technologies, more than 20,000 employees, and sales of more than $11 billion in 1998.

Careers in the software industry involve designing and programming all kinds of software products, such as application software for businesses, productivity software, educational programs, entertainment software, and systems software. Careers in the computer software industry include programmer, software engineer, software analyst, and technical writer. A programmer designs, writes, and tests computer programs. Educational requirements are a B.S. in computer science or computer information systems. Programming requires logical thinking and close attention to detail; it calls for patience, persistence, exacting analysis skills, and the ability to meet deadlines. Ingenuity and imagination are important skills because programmers design solutions and test their work for potential failures. Increasingly, interpersonal skills are important for programmers working in teams and interacting directly with users. Systems programmers who work with the software that controls the computer's operation must have capabilities in technical analysis and abstract concepts.

Systems analysts and software analysts conduct requirements analysis, design software solutions, and oversee the software development process. The minimum education requirement is a B.S. in computer science. Software analysts must have good communication and interpersonal skills, a mastery of the design and development process, and good project management skills.

CAREERS AS INFORMATION SYSTEMS PROFESSIONALS

In many organizations, the information systems (IS) department includes information systems professionals, who set up and manage the computer equipment and software to ensure that it produces information for decision-making. Four basic groups of information systems careers are in operations, systems development, technical services, and end-user computing.

Operations Jobs in operations include computer operator, communications specialist, and local area network (LAN) engineer. A computer operator monitors computer system performance, runs jobs, performs backups, and restores files and systems. A high school diploma is required.

A communications specialist installs, monitors, and evaluates data and/or voice communications equipment and software and is responsible for connections to the Internet and other wide area networks (WANs). The minimum educational requirement is a B.S. in information systems or electrical engineering technology.

A LAN engineer installs and maintains local area networks. An example of a LAN engineer is a Windows NT systems engineer. Network engineers are expected to have the capabilities and experience to take responsibility for entire projects and address issues such as network design, network management, security, scalability, and performance. For network engineers, experience as a senior network engineer plus solid skills in NT troubleshooting, problem solving, teamwork, and communications are essential.

Systems Development Systems development careers include systems analyst, application programmer, Webmaster, Web designer/site builder, Internet specialist, and technical writer. Systems analysts assess user requirements and design information systems solutions. They must think logically, have good communication skills, and like working with ideas and people. They often deal with a number of tasks and projects simultaneously. Although computer scientists and systems analysts may work independently, they often work in teams on large projects. They must communicate effectively with computer personnel, such as programmers and managers, as well as with other staff who have a limited technical computer background but are subject-matter experts in a business functional area. A B.S. in management information systems is required.

Application programmers convert the system design into the appropriate computer language, such as C, Java, or Cobol. The minimum educational requirement is an A.A.S. in information systems. The application programmer's skills are similar to those of the systems programmer. A Webmaster maintains an organization's Web site and creates or helps users create Web pages. The minimum educational requirement is an A.A.S. in information systems. A Web designer/site builder's minimum educational requirement is a B.S. in computer science of information systems. The skill set for both jobs includes abilities in Web-site development languages such as C++, Java, and HTML. This job involves the automation of customer service and help desk functions, as well as ongoing maintenance and development. A strong understanding of the business is essential. Strong prioritizing and customer service skills are necessary. This career involves project work and consulting.

The Internet specialist's minimum education is a B.S. in information systems or electrical engineering technology. This position requires skills in senior-level networking, LANs and WANs, the Internet, security, e-commerce, Unix, Windows NT, and Novell applications. Effective communication skills are essential. This career requires an outgoing personality and the ability to work well with users.

Technical writers work with analysts, programmers, and users to create system documentation and user manuals. The minimum educational requirement is a B.S. in information systems.

Technical Services Three primary careers in technical services are database analyst, system programmer, and quality assurance specialist. Database analysts assist systems analysts and programmers in developing or modifying applications that use an organization's database. The minimum education is a B.S. in computer science or information systems.

A system programmer installs and maintains operating system software and provides technical support to the programmer's staff. The minimum educational requirement is a B.S. in computer science or information systems.

A quality assurance specialist reviews programs and documentation to ensure that they meet the organization's standards. The minimum educational requirement is a B.S. in computer science or information systems.

End-User Computing End-user computing positions include PC support specialists and help desk analysts. The PC support specialist installs and supports personal computer equipment and software. The minimum educational requirement is an A.A.S. in information systems. The help desk analyst provides user/customer telephone support for hardware, software, or telecommunications systems. The minimum educational requirement is an A.A.S. in information systems.

Executive Positions Executive positions in information services are senior-level positions in an organization, such as chief technology officer. The chief technology officer develops a strategic technology organizational plan and oversees the implementation of the plan and high-level IT policy issues. A chief technology officer must be able to provide creative solutions, have solid technology skills, and understand the business being supported. Excellent analytical skills and the ability to balance priorities while paying attention to the bottom line are crucial. A prerequisite for the position is a background as a technical strategist; both in-depth and broad-based knowledge and experience are important, as are excellent communications, interpersonal, and management skills.

CAREERS IN EDUCATION AND TRAINING

Extensive opportunities in computer-related education and training exist because of the increased sophistication and complexity of today's computer products and the rapid development and deployment of new products. Schools, colleges, universities, and private companies all need qualified instructors. The high demand for instructors, in fact, has led to a shortage of qualified instructors and trainers in universities and corporate environments.

CONTINUING EDUCATION

Rapid technological changes and the global marketplace continue to increase the need for ongoing continuing education to keep knowledge and skills current. Employers, hardware and software vendors, colleges and universities, and private training institutions offer continuing education opportunities. Additional training is provided by professional development seminars offered through professional organizations.

INDUSTRY CERTIFICATIONS

Industry certifications provide employers assurance of a standard level of competency, skill, or quality in a particular area. Many organizations offer technical certification programs for their products. Standard curricula, training programs, and examinations are used to determine if a person is qualified for certification. A certificate is proof of professional achievement, a level of competence accepted and valued by the industry. Certificates enhance employment portfolios and career opportunities. Many employers give preference in hiring to applicants with certification. In addition, certification can lead to promotions and help advance careers.

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Linda J. Austin
Debbie Hughes

CAREERS IN LAW FOR BUSINESS

A wide variety of choices are available for a career in law. However, work and determination are required to complete law school and pass a state bar examination.

To be admitted to law school, students must have completed a bachelor's degree, although generally without restriction concerning the choice of undergraduate major. Law students have bachelor's degrees in business, engineering, science, history, politics, and many other disciplines.

ENGAGING IN LAW PRACTICE

The individual states administer the licensing of lawyers. Requirements for attorneys to enter the law field vary from state to state. Generally, a prospective lawyer must pass a state bar examination following graduation from law school. In a very few states, a person is automatically admitted to practice upon graduation from law school. It is possible for a person to sit for bar examinations and become licensed to practice in more than one state.

The states also control discipline once lawyers are admitted to practice. Complaints from clients or others may be made to the state bar, which reviews them and imposes discipline, if necessary. Discipline may range from fines or suspensions up to disbarment. In many states, the state supreme court reviews disciplinary actions imposed upon lawyers.

AREAS OF LEGAL PRACTICE

Lawyers deal with business organizations, individuals, international business, labor relations, educational law, poverty law, legal research and writing, and other areas.

Legal practice with domestic business organizations In the United States, attorneys engage directly with business organizations in many fields in which they practice.

Publicly held corporations: Many areas of law involve publicly held corporations (stock available for purchase by any investor). For example, control and management have legal ramifications, as do capital procurement and maintenance. Attorneys are called upon to settle a wide range of disputes, such as those developing between stockholder and corporation.

Antitrust legislation: Antitrust laws prohibit price fixing, which could result when businesses gain monopoly power in their field. Major legislation in this realm includes the Sherman Act of the 1890s, the Clayton Act of 1914, and the Cellar-Kefauver Act of 1950. The Robinson-Patman Act prohibits manufacturers from discriminating against small retailers in favor of large chains. These acts are enforced by the Federal Trade Commission and the Antitrust Division of the Department of Justice.

Unfair trade practices: These laws involve various types of business competition, especially with reference to trademarks, price maintenance, and price discrimination.

Patents: Patents are issued by the Patent and Trademark Office of the U.S. government. They grant inventors exclusive rights to make, sell, and use inventions in the United States for a given period of time. Patents often require an attorney's counsel.

Copyrights: Copyrights provide protection for original works of literary, dramatic, musical, or artistic expression. The Copyright Office of the Library of Congress administers these laws.

Trademarks: Trademarks are used to distinguish one business firm's products from another. Their symbols may be a word or words, name, design, picture, or sound. Trademark rights have an indefinite life. A company may register its trademark with the U.S. Patent and Trademark Office in Arlington, Virginia, or with the trademark office in its state.

Accounting: Accounting statements provide financial details concerning the operation of a business or other form of organization. Balance sheets list assets (things that are owned), liabilities (debts), and net worth (assets minus liabilities). Income statements show net income for a period of time (income minus expenses). Business firms, particularly those with stockholders, must prepare honest and conservative financial statements. Very stringent laws have been passed dealing with accounting practices.

Negotiations: Attorneys orchestrate a variety of negotiations. including those involving injury claims, criminal charges, family disputes, and commercial disputes.

Business organizations: Business organizations become involved with the law of employment, agency, partnership, limited partnership, and other types of unincorporated associations.

Regulated industries: Price, supply, and services are a part of Regulation C control in various industries, such as transportation agencies and public utilities. Regulatory policy can involve interaction among legislatures, administrative agencies, and the courts. Advanced legal work may be required for business planning and counseling concerning corporate and tax issues. Clients often need representation before regulatory bodies and at administrative hearings.

Contracts: Attorneys become involved in the creation of promissory liability, the interpretation of words and conduct as well as the nature of obligations assumed by entering into contracts. They also solve problems relating to breach of contract, unfairness as a reason for avoiding contractual liability, and the rights of those not a party to the contract.

The Uniform Commercial Code: Articles 3, 4, and 5 concern negotiable instruments, bank collection systems, and letters of credit. Article 9 deals with secured transactions; Article 7, with documents of title.

Creditors' and debtors' rights: Attorneys deal with consumer credit regulation, including attachments, garnishments, assignments for the benefit of creditors, judgments, and bankruptcy.

Insurance law: This branch as law deals with property, life, and liability insurance; fire and automobile insurance forms; and the regulation of insurance companies' policies and practices.

Remedies: Remedies of quasi-contract, constructive trust, equitable lien, and reformation must be applied to redress enrichment secured by tort, part performance of contract, duress, or mistake.

Government contracts: Laws and regulations apply to contracts with governmental bodies and agencies.

Legal practice for individuals Individuals need a wide range of legal services in the area of business. Some services are provided for investors or owners in business situations; others, for persons finding themselves in difficulty.

Trust and estates: Legal consideration must be given to community property systems, federal gift and estate taxes on property transfers, estate planning not involving property, living wills, delegation of health care decision-making, and gifts to as well as guardianship of minor children. Related legal forms involve living trusts and gift strategies.

Family law: Family law can involve relationships of married couples, unmarried couples, or couples undergoing divorce. Additional family relationships that may involve lawyers include parent and child. unmarried parents, neglected children, foster care, and adoption.

Taxes: Attorneys can assist in tax planning for individuals. especially where issues arise between the taxpayer and the Internal Revenue Service or state taxing authorities. They also deal with taxation implications for corporate organization, reorganization, and liquidation. Some attorneys deal with international tax problems, such as jurisdictional rules, tax situations between industrialized countries and developing countries, and host country taxation of foreign persons.

Real estate transactions: In this field, lawyers deal with options, binder contracts, and rights and duties between vendor and vendee among other things. Lawyers also practice in basic land contract and mortgage law as well as real estate recording systems. They work with both land-use controls and water-rights laws. They may also deal with environmental law and institutions.

Legal practice for international business International trade in the world is becoming more prevalent and increasingly legally complex. This increases openings for interested attorneys.

International legal practice may involve issues of recognition and nonrecognition of governments and nations, interpretation of treaties and other international agreements, the effect of peace and war, and international claims.

Lawyers may advise on the risks, assumptions, and benefits of doing business in a foreign country. Questions may arise concerning international commercial transactions and investments, the impact of U.S. securities and antitrust laws, and trade laws of the United States and other countries.

Labor relations law State and federal laws deal with employee representation, collective bargaining, and employer-union practices. These laws, the National Labor Relations Act, and related federal and state labor laws often make legal counsel necessary.

Attorneys provide counsel in collective bargaining and with the negotiation and arbitration processes.

Statutes such as these involving fair employment practices, workers' compensation, fair labor standards, unemployment compensation, and Social Security protect workers against insecurity, discrimination, economic exploitation, and physical damage. Their purpose is to guard against unequal opportunity linked to race, sex, religion, age, physical disability, and other factors.

Legal questions linked to public policy arise from representation questions, limitations on the right to strike, grievance arbitration, impasse procedures, and the scope of bargaining.

Educational law practice Legal issues arise from educational financing, integration and segregation, punishment methods applied to children, and alternatives to public school education.

Poverty law Although often unable to pay, the poor frequently require legal services. Some indigents make contact with public-interest law firms or offices that provide legal services for the poor. In this area, lawyers deal with issues such as welfare rights, health, education, public assistance, or housing.

Legal research and writing Some lawyers engage in legal research and writing. This work involves library and computerized research, brief and memorandum writing, organization of legal material, and prediction of rules of law. Much of this activity takes place in law schools or at the appellate court level.

Other areas of law practice There are a number of additional areas of law practice. These include legal problems related to technology and society, bioethics, science, psychiatry, and attempts to achieve progress in developing countries.

U.S. COURT SYSTEM

The court system also offers career opportunities. An understanding of our court system is relevant to a career discussion. The courts in the United States fall within two classifications: the federal court system and the state court systems.

Federal court system The federal court system comprises the Supreme Court, circuit courts of appeal, and district courts. There are also specialized federal courts.

The U.S. Supreme Court is the final court of appeal for both civil and criminal law. It was created by Section 1, Article III of the U.S. Constitution. Title 28 of the U.S. Code establishes its jurisdiction. The Court's organization is specified by legislation, although the rules governing case presentations are formulated by the Court itself.

Judicial review is an important power given to the U.S. Supreme Court. This refers to (1) declaring invalid laws that violate the U.S. Constitution, (2) asserting the supremacy of federal laws or treaties if they differ from state and local laws, and (3) serving as the final authority on the interpretation of the U.S. Constitution.

The U.S. Supreme Court includes a chief justice and eight associate justices. Appointed by the president with the approval of the Senate, they serve for life or until they retire, resign, or are impeached.

The U.S. Supreme Court has original jurisdiction in some cases, particularly where a state is a party or diplomatic personnel are involved. The remaining cases come from lower courts. Requests for review number approximately 4,500 annually; less than 200 cases are selected for decision by the U.S. Supreme Court.

Some appeals to the U.S. Supreme Court come from any of the twelve federal courts of appeal or the ninety-four federal district courts. These cases involve the U.S. Constitution, federal laws or cases in which the U.S. government is a party, disputes between residents of different states ("diversity" jurisdiction), or matters assigned by federal legislation.

Appeals also come from specialized federal courts. The Court of Military Appeals reviews courts-martial cases appealed from military courts. These cases concern offenses committed by members of the armed forces and are sometimes brought before the U.S. Supreme Court.

The U.S. Court of Claims hears cases dealing with claims against the federal government. Its decisions may also be appealed to the U.S. Supreme Court. In addition, the U.S. Supreme Court may rule on cases involving decisions of U.S. Custom offices, such as import duties.

State court systems Each state has its own court system. These courts are created by state statute or constitution to enforce state civil and criminal laws. Most of the states have trial courts, intermediate courts of appeal, and a supreme court.

Most states have local trial courts—municipal, county, district, and small-claims courts. Millions of civil and criminal cases are tried at this level. Other state courts may include police courts, magistrate's courts, justices of the peace, and probate or surrogate courts that handle wills and inheritances. There are also traffic courts, juvenile courts, and domestic relations courts.

State appeals courts (sometimes called "error-correcting" courts) review trial court cases to determine if errors caused an incorrect decision. Their decisions may be appealed to the federal courts, including the U.S. Supreme Court in certain instances.

Supreme courts in each state, like the U.S. Supreme Court at the federal level, interpret their state constitutions, statutes enacted by their state legislatures, and the body of state common law.

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CRAIG A. BESTWICK
G. W. MAXWELL

CAREERS IN MANAGEMENT

Management is a very exciting and rewarding career. A career in management offers status, interesting work, and the satisfaction of working closely with other people. People are considered the most important resource in organizations. If they perform effectively, the organizations will succeed. Managers work closely with people, ranging from top managers to clerical workers, to ensure that organizations achieve their objectives.

A management career also offers the opportunity to make the world a better place. Managers help organizations succeed. When organizations are successful, there is better utilization of resources, less stress among employees, less chaos in society, and a better quality of life for all. Effective managers play an important role in shaping the world in which we live. Certo (1997) emphasized this point when he stated that our society would not be as developed as it is today without effective managers to guide its organizations.

WHAT DO MANAGERS DO?

Management is a people job. The manager coordinates the work of other people to ensure that the unit is run efficiently and profitably. A manager may have direct responsibility for a group of people in one department or a team of people from several different departments. For some managers, it could mean supervising one person.

Managers provide overall direction and leadership for the organization. The manager sets clear objectives for the team and makes sure they know what the focus is, assigns duties to team members, and encourages them to perform those duties. The manager also evaluates the team's actual performance against organizational objectives and decides on promotions and salary increases where appropriate. When team members are not performing satisfactorily, the manger makes the changes necessary to ensure that they reach the company's objectives. Managers use their people skills and business skills, such as marketing and cost controls, to achieve the company's objectives while at the same time making sure to stay within budget.

The manager's job is varied. Managers are involved with planned and unplanned activities. These activities include scheduled and unscheduled meetings, inspection tours, report writing, new product launches, disagreements among employees, customer grievances, and changes in business trends. According to Miller and associates (1996), a manager should be able to shift continually from person to person and from one subject or problem to another. A manager who is also the business owner makes all the daily decisions involved in the business.

Managers make things happen in organizations. They decide what will be done, who will do it, when will it be done, and what resources will be used. They hire and train new employees, and they coordinate their departments' activities with other departments. Managers are the heart of organizations, the force that unites everything in the organization to ensure optimum efficiency and profitability.

TYPES OF MANAGEMENT CAREERS

In large organizations, managers work in a variety of areas, including operations, human resources, finance, and marketing:

- Operations managers see that the company's products and/or services meet quality standards and satisfy the needs of customers and clients. They plan production schedules to ensure the most efficient use of plant, manpower, and materials. The operations manager is responsible for production control, inventory control, quality control, plant layout, and site selection. New graduates will start as management trainees. After successfully completing the program they will be promoted to production supervisor, then to plant manager. The top management position is vice president for operations.
- Human resources managers provide the organization with competent and productive employees. The duties of the human resources manager include human resource planning, recruiting and selecting employees, training and development, designing compensation and benefits systems, and formulating performance appraisal systems. In small firms one person may be responsible for all the human resource activities, while in large firms separate departments deal with each function.
- Financial managers deal with the financial resources of the organizations. They are responsible for such activities as accounting, cash management, and investments. They also keep up-to-date records for the use of funds, prepare financial reports, and gather information to assess the financial status of the organization.
- Marketing managers are responsible for getting customers and clients to buy the organization's products or services. They develop the business marketing strategy, set prices, and work closely with advertising and publicity personnel to see that products are promoted adequately.

Apart from the career opportunities in the specialized areas of management discussed above, management careers are also available in government agencies, hospitals, not-for-profit agencies, museums, educational institutions, and even political organizations. Good managers are also needed in foreign and multinational companies. All organizations exist for certain purposes and need good managers to guide their operations to achieve the best possible results. Regardless of the type of organization, managers are obviously one of its most important resources.

There are many specific management positions. Their titles and duties are described below.

Management trainees work under the supervision of an experienced manager while learning. They receive formal training in a variety of management areas. The management trainee position is designed to prepare trainees for work as administrators or managers. Their duties include providing customer service, preparing work schedules, and assisting with coordination of support services.

Labor relations managers have an interest in labor law and are good communicators. They negotiate collective bargaining agreements and develop grievance procedures to handle complaints. When problems arise between management and labor, they interpret and administer the labor contract and resolve the disputes according to the terms of the contract. They also work closely with the human resources director on issues such as wages, benefits, pensions, and work practices.

Administrative services managers coordinate and direct supportive services of larger businesses and government agencies. They are responsible for services such as clerical support, records management, payroll, conference planning, information processing, and materials distribution and scheduling. However, recent corporate restructuring has resulted in many organizations outsourcing their administrative services. This means that the demand for administrative services managers will greatly increase in companies providing management consulting, management services, and facilities support services.

Food service managers have very similar duties to restaurant managers, catering managers, and fast-food restaurant managers. In fact, the food service manager works in a variety of facilities, including fast-food restaurants, hospitals, and school cafeterias. Food service managers coordinate all aspects of the food and beverage activities for the organization. They set the standard for quality food service, hire and assign employees, and plan menus. They also perform some clerical duties, such as payroll and inventory.

Building managers, also called real estate managers, administer rental properties—such as apartment buildings and office buildings—for the owners. As the agents of the owners, they market vacant space, negotiate leases, set and collect rents, and arrange for security and maintenance of the properties. They also handle all the bookkeeping and accounting records and provide periodic reports to the owners.

Fitness center managers are physically fit and interested in exercise science. Companies, government agencies, and cruise ships with fitness facilities are looking for managers who can develop programs that satisfy customers' health and fitness needs. The fitness center manger conducts research to identify customer needs, develops and manages programs for the center and its clients, and monitors health and safety requirements. In small centers, the manager is also responsible for delivering fitness training and maintaining center equipment.

City managers, also called town managers, are responsible for the day-to-day operations of various departments of city government. A main responsibility of city managers is to prepare budgets for the city council's approval. The city manager must also provide reports to the council members on ongoing and completed projects.

Health services managers work in clinics, hospitals, and health maintenance organizations (HMOs). They make most of the business or operational decisions in the health care facility. The health services manager establishes billing procedures, handles budgets, supervises staff, and interacts with the public. Health services managers start as management trainees or assistant administrators.

Hotel and motel managers are responsible for the full range of activities in a lodging establishment. These include guest registration and checkout, housekeeping, accounting, maintenance and security, and food service. The manager is also responsible for coordinating activities, such as meetings and other special events. In large hotels, assistant managers are responsible for the operations of various departments. Hotel managers begin as department heads and, after gaining experience, are promoted to manager.

Retail managers supervise employees and deal with customer complaints. In addition, they are responsible for managing the store inventory. They keep up-to-date records of merchandise, make pricing decisions, and decide on advertising and promotions. The retail manager works long hours and may be employed in a wide variety of stores, including department stores, discount stores, or specialty stores. Retail managers often begin as assistant managers responsible for a department in a large store. They are then promoted to merchandising manager or to store manager.

Sales managers exist in almost every firm and perform one of the most important functions in the organization. They find customers for the company's products and/or services and therefore provide revenues for the company. They recruit, hire, train, and supervise the company's sales force. Sales managers begin as sales representatives. Being a successful sales representative leads to promotion to senior sales representative or sales supervisor, then to a sales manager.

Procurement managers, sometimes called purchasing agents or industrial buyers, buy the supplies and materials needed by a company. They must be knowledgeable about the various vendors and their offerings. They must acquire the best possible deals for their company in terms of price, quality, delivery, and payment schedules. Managers in large companies sometimes specialize in specific types of purchases.

EDUCATIONAL REQUIREMENTS

Educational requirements for a career in management vary. However, most employers require a college degree in either the liberal arts, social sciences, or business administration. A master's degree in business administration (MBA) is also a common requirement. For students interested in getting into management trainee programs in major corporations, an MBA gives the best opportunity for these top programs. An MBA or the master's degree in health services administration is generally required for a career in health service management.

Apart from major corporations, many other organizations have management trainee programs that college graduates can enter. Such programs are advertised at college fairs or through college job placement services. These programs include classroom instruction and might last one week or as long as one year. Training for a department store manager, for example, might include working as a salesperson in several departments, in order to learn about the store's business, before being promoted to assistant manager.

In small organizations, depending on the type of industry, experience may be the only requirement needed to obtain a position as manager. When an opening in management occurs, the assistant manager is often promoted to the position, based on past performance. In large organizations a more formal process exists. The management position to be filled is advertised with very specific requirements concerning education and experience.

Persons interested in a career in management should have good communication skills and be able to work well with a variety of people, ranging from other managers, supervisors, and professionals, to clerks and blue-collar workers. They should be analytical, flexible, and decisive. They should also be able to coordinate several activities simultaneously and be able to solve problems quickly. Ability to work under pressure and cope with deadlines is also important.

Recruiters look for self-starters who can use their initiative, recognize what needs to be done, like responsibility, and have high ethical standards. Self-starters and team players are the types of people corporations are looking for.

CAREER OPPORTUNITIES IN MANAGEMENT

According to the U.S. Bureau of Labor Statistics (1996), the number of managerial jobs is expected to increase by 17 percent by 2005. The greatest increase in management positions is projected to be in health services, management consulting, marketing, advertising, and public relations fields. Opportunities for management careers in financial services, restaurant and food service, and real estate industries will also grow at a faster than average rate through 2005. Educational institutions, industrial production, and administrative services are expected to grow about as fast as the average for all occupations through 2005.

The outlook for management careers is good, despite the headlines about downsizing and corporate restructuring. As the economy continues to grow, many businesses are expanding, and this creates additional opportunities for management jobs. Also, as the economy becomes more global, an increasing number of American firms are expanding overseas, and an equally large number of foreign companies are doing business in the United States. This means that despite the layoffs of some middle-level managers, there continues to be a worldwide need for good managers.

Women and minority managers. The future is bright for women and minorities interested in management. Title VII of the Civil Rights Act 1964 bans discrimination in employment on the basis of race, color, religion, sex, or national origin. Many companies, because of affirmative action rules, are actively seeking out women and minorities to fill management positions.

As a result, women are well represented at the lower levels of management; however, the number of top executive positions remains low. Only about 10 percent of the top jobs in the 500 largest U.S. companies are held by women. However, companies are taking steps to attract and promote women executives.

Minority groups remain underrepresented at all levels of management. A Rutgers University study (cited in Certo, 1997) found that in 400 *Fortune* 1000 companies, less than 9 percent of all managers were members of a minority group (p. 16). Since more and more new entrants into the labor market are members of various minority groups, it is becoming essential for business to recruit talented minority managers.

There are numerous opportunities for management careers available in all types of organizations, especially small and medium-sized companies. Every organization is looking for competent managers who can increase employee performance and help the company to be successful. Mosley and associates (1996) put it best when they said: "Managers in organizations of all sizes, in all industries, and at all levels have an impact on performance . . . they make the difference between success and failure for their companies" (p. 7).

SOURCES OF ADDITIONAL INFORMATION

American Hotel and Motel Association
1201 New York Avenue, NW
Washington, DC 20005-3931

American Management Association
135 West 50th Street
New York, NY 10020

Administrative Management Society
4622 Silver Road
Trevose, PA 19047

National Management Association
2210 Arbor Boulevard
Dayton, OH 45439

Women in Management
30 North Michigan Avenue
Chicago, IL 60602

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THADDEUS MCEWEN

CAREERS IN MARKETING

Is a career in marketing for you? To be successful in a marketing career, an individual must have good communication, critical thinking, and people skills. In addition to these skills, a majority of individuals employed in marketing-related occupations possess excellent time-management skills, the ability to work with a wide variety of people, and a capacity for self-motivation. These individuals must be able to establish timelines, goals, and objectives—and adhere to them.

According to the U.S. Bureau of Labor Statistics, the number of individuals who earn a living in marketing-related careers—advertising, sales, or public relations—is projected to increase rapidly between the turn of the century and the year 2005 (Levine and Salmon, 1999). Currently, almost a third of all Americans are employed in marketing-related positions, and marketing principles are being applied to more and more business and nonbusiness organizations—service firms, nonprofit institutions, political candidates, and so forth (http://www.bls.gov/opub/rtaw/rtawhome.htm). Therefore, a high demand for individuals with marketing training is emerging as a critical criterion for employment in the early years of the twenty-first century. Two major explanations have been offered for the continuously increasing demand for marketing skills—(1) deregulation of major industries (banking, telecommunications, and transportation) and (2) increased foreign competition.

Considering the increased role of marketing in the U.S. economy, members of the twenty-first-century work force need to be familiar with the major marketing-related occupations. According to Kotler (1994) and Khlupin and Shibiko (1998), the major marketing occupations are: (1) advertising, (2) brand and product management, (3) industrial marketing, (4) international marketing, (5) marketing research, (6) new-product planning, (7) physical distribution/distribution management, (8) public relations, (9) retail marketing, and (10) sales and sales promotion marketing. A discussion of each of these major marketing occupations follows.

Advertising. Advertising is a vital business activity that requires planning skills, fact-gathering ability, creativity, artistic talent, and written and verbal communication skills. Individuals who are employed in advertising typically perform the following tasks: (1) search for factual information, (2) read avidly, (3) borrow ideas, (4) talk to customers, (5) develop print layouts, package designs, storyboards, corporate logotypes, trademarks, and symbols, (6) specify style and size of typography, and (7) arrange advertisement details for reproduction. Thus, advertising involves all components of marketing—product, price, promotion, and place. Because all the above tasks require working with people who are clients or potential clients, an individual must be personable, diplomatic, and sincere. Further, he or she needs to be self-motivated and able to present information about a product to varying audiences.

Brand and product management (BPM). Individuals involved in BPM are planners, directors, and controllers of the positioning of consumer packaged goods for sale in a dramatically and quickly changing marketplace. BPM marketers use research as well as packaging, manufacturing, and forecasting to position products for sale to the most appropriate audience. Individuals employed in this aspect of marketing must have the leadership capability to move a product from obscurity to a national awareness in a relatively short period of time. Usually BPM marketers' job-related responsibilities increase with the growth and development of a particular product. Thus, successful BPM marketers operate in a high-pressure, fast-paced, and constantly changing environment, since a major component of BPM marketing focuses on the financial position of the product under development. In addition, BPM marketers must be results-oriented and creative; possess strong interpersonal, communication, and analytical skills; have entrepreneurial leanings; and exhibit high levels of diplomacy, perseverance, and drive.

Industrial marketing. Industrial marketing involves the planning, sale, and service of products used for commercial or business purposes. In addition to having excellent oral and written communication skills, industrial marketers must be self-reliant individuals with the ability to understand customer requirements as well as the knowledge to propose the purchase of a particular product that will satisfy customers' needs and wants. In essence, industrial marketers are consultants who assist clients in ascertaining the appropriate product for their particular needs. Whether employed in sales, service, product design, or marketing research positions, industrial marketers must develop and maintain ongoing business relationships with suppliers of goods and services as well as with clients. Therefore, the selling relationship is a process of maintaining and building a continuous business relationship. As in any marketing-related career, industrial marketers must have excellent people skills as well as good oral and written communication skills. In addition, a successful industrial marketer should have a broad educational background with an emphasis in technology in order to be able to link that technology to human needs and wants.

International marketing. With the increasing role of foreign industry in the United States as well as increasing U.S. interests abroad, individuals with relevant foreign language skills, as well as an understanding of selected foreign cultures, are needed to assist with the day-to-day operations of business. In order to be able to conduct business effectively and efficiently and to implement marketing strategies abroad, international marketers need to understand the social, economic, and political climates of foreign countries. Marketing personnel interested in this area may be required to travel and/or relocate to a foreign country to oversee company operations and to create a presence in that country's economy. In addition to the language requirement, potential international marketers need appropriate communication skills as well as diplomatic skills in order to work with foreign leaders and function in foreign economic systems.

Marketing research. Marketing researchers are asked to ascertain the reason(s) that a particular product is or is not being purchased by consumers. Based on the interpretation of data collected in marketing research, market researchers make recommendations for enhancing or eliminating existing products as well as developing new products. In addition, promotional activities are based on data collected by marketing researchers. Individuals employed in marketing research occupations must understand statistics, data/information-processing analysis, psychology, consumer behavior, and communication. Marketing researchers interact with other marketing occupations to define problems within a particular product line as well as to identify the appropriate processes to be used to analyze and resolve those problems. A critical component of this position is the ability to present solutions to business problems in a manner that is easily understood by colleagues and constituents. Specifically, marketing researchers provide information concerning consumers, marketing environment, and competition to relevant internal and external publics. Therefore, strong analytical, methodological, and communication skills are a must for success in this arena.

New-product planning. New-product planning involves the creation and development of new products for an organization. Because individuals who enter this arena typically have been successful in other areas of marketing, they tend to have an excellent knowledge of and background in marketing, to be familiar with the processes for conducting marketing research, to be capable of generating sales forecasts, and to have a background in technology. A new-product-planning marketer conceptualizes, researches, and evaluates new ideas. During the evaluation process, the new-product-planning marketer considers both the feasibility of the production of the product and the product's potential profitability. These individuals must also possess the ability to motivate, coordinate, and direct others. New-product planning is applicable to the marketing of consumer products, consumer services, hospital and medical services, and public service programs, to name only a few areas. Because new-product development is constantly changing, a person who enters this field should have a high degree of tolerance for uncertainty and the unknown, yet nonetheless be able to develop a definite "agenda" and a "report card" to inform superiors about success with new products.

Physical distribution/distribution management. Physical distribution is one of the largest arenas of marketing and has been defined as the analysis, planning, and control of activities concerned with the procurement and distribution of goods. Activities involved with the physical distribution process include transporting, warehousing, forecasting, processing orders, inventorying, production planning, selecting sites, and servicing customers. Individuals employed in this marketing area are concerned with the processes or methods needed to deliver the product from the manufacturer to the wholesalers to the retailers to, ultimately, the consumer. The physical distribution process is an extensive and diverse area that involves the physical transportation of products and the various activities associated with purchasing, selling, and channel-management functions. Individuals who enter physical distribution marketing need interpersonal leadership ability in order to deal with diverse and challenging internal and external publics as well as excellent analytical and communication skills.

Public relations. Public relations marketers either assist in the management of the images of products or individuals or anticipate and handle public problems or complaints. Thus individuals employed in the public relations aspect of marketing create an image or message for or about an individual or an organization as well as maintaining that image with the media. This image or message needs to be communicated effectively, efficiently, and persuasively to the intended audience. To be successful in public relations, an individual needs to be people-oriented and to have excellent oral and written communication skills as well as a background in journalism.

Retail marketing. Individuals in retailing occupations deal directly with consumers or customers. Retail marketing also involves the management of sales personnel, selection and ordering of merchandise, and promotion of selected merchandise, as well as inventory control, store security, and product accounting. Typical jobs are as buyers, sales managers, department managers, and store managers. To be successful in retail marketing, individuals must be self-motivated and possess excellent people skills. A rapidly growing component in retail marketing is direct-response marketing (DRM). DRM attempts to deliver the product from the manufacturer to the consumer by the use of direct mail, print and broadcast media, telephone marketing, catalogues, in-home presentations, door-to-door marketing, electronic ordering and funds transfer, and video text. Attributes needed for success in the area of DRM include creativity, initiative, perseverance, and quantitative competence. In essence, retail marketers use their professional knowledge and competence to improve company profits by informing various publics of appropriate assortments of goods and service in locations that are easily accessible.

Sales and sales promotion marketing. Sales and sales promotion marketers (SSPMs) need a thorough understanding of their company's products. SSPMs must not only sell a product but also develop and maintain effective relationships with customers. The main goal of SSPMs is to inform customers about and provide them with appropriate products in an expeditious manner. Such individuals focus on providing information to potential clients/customers by interacting with them directly and personally. Beyond this, they close sales and maintain existing accounts to ensure client/customer satisfaction and loyalty. To be successful, an individual must know the product, the customer(s), and the market(s). Further, a good understanding of people and appropriate people skills are a must in order to deal with diverse and challenging internal and external publics. Because the process of selling involves persuasive two-way communication between a seller and a client, individuals in this area of marketing must be people-oriented as well as knowledgeable about the product and the manner in which the product can be used to satisfy buyers' needs and wants.

CONCLUSION

In the twenty-first century, the role of marketing in the U.S. economy will change as consumers react to ever-changing technology and as businesses respond to an ever-changing marketplace. Because of changing technology and the changing marketplace, the roles and functions of conventional marketing as it is known today will be constantly rethought and redefined. In addition, the four Ps of marketing—product, price, place, and promotion—will also be redefined and restructured. With the dynamic changes facing the marketing environment, the demand for marketing-oriented personnel will continue to increase, making marketing-related careers an exciting occupational choice for the twenty-first century.

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RANDY L. JOYNER

CAREERS OVERVIEW

The concept of careers ranges from descriptions of jobs, occupations, or vocations to the pattern of work and work-related activities that develop through a lifetime. *Career* is defined in the *Merriam-Webster Collegiate Dictionary* (1999) as "a field for or pursuit of consecutive progressive achievement especially in public, professional, or business life."

The perception of a career has various connotations. A "career" could be a "job." A job, again as defined in the *Merriam-Webster Collegiate Dictionary* (1999), is "a regular remunerative position; something that has to be done: task." A job might be washing dishes or typing reports. In other works, a job is a task.

An occupation, yet again as defined in the *Merriam-Webster Collegiate Dictionary* (1999), is "an activity in which one engages; the principal business of one's life: vocation." An occupation may mean practicing law, teaching school, and so forth. In other words, an occupation is a vocation.

Careers are the patterns of work and work-related activities that develop through a lifetime. Having several careers during a lifetime is not uncommon. One may train to become a business teacher—a satisfying occupation (vocation) for years. After that, one may leave teaching and train to become a financial planner (a second vocation).

Also, having more than one job within a career is common. A business teacher might begin teaching middle school general business subjects (a first job), then progress to teaching secondary-level business subjects (another job). While teaching secondary business subjects, the same person might supervise the publication of the school's yearbook (still within the career field of education).

CHOOSING A CAREER

To be successful in a vocation, it is first necessary to obtain knowledge about choosing a career and then to acquire the education needed to grow in that career and in the job(s) pursued within that career.

The Myers-Briggs Personality Test, available at employment offices, at school career/college centers, or on the Internet, could be a first step in choosing a career. Based on the work of Karl Jung, the test was developed by Katherine Briggs and her daughter Isabel Briggs Myers, to determine whether someone was primarily extroverted or introverted, sensing or intuitive, thinking or feeling, judging or perceiving. Combining these traits, they formed sixteen distinct personality types, known as the Myers-Briggs Personality Types. Understanding your own and other people's personality types can help in finding the "perfect" job and make it easier to manage personal and professional relationships.

Along with the Myers-Briggs Personality Test, a person should consider the following when choosing a career:

1. Skills you currently possess and need to acquire
2. Education you have and will need
3. Salary you will accept

4. Working conditions in which you would be comfortable
5. Working schedule you prefer (day or night shift, part-time, or full-time work, etc.)

Anyone searching for a position—whether this is a first job or the next step up the career ladder—needs to go through the following steps.

Know which jobs are for you. The information from the Myers-Briggs Personality Test will give an idea of your abilities and interests. However, this is not the sole source of information for determining the "perfect" job(s). School or public libraries, job counselors, and employment agencies all have information and testing facilities to assist in finding the "perfect" job.

Prepare a flawless resume. Sales representatives know that when calling on a potential customer, displaying their product in the most favorable way enhances the prospect of a sale. The same principles apply when searching for a job. You are selling yourself based largely on your resume—your education, experience, abilities, and talents that apply to their company or organization.

There are two primary resume formats. One is the traditional hard-copy format. The second is the "scanner ready format" meaning that the resume is ready to be posted on the Internet, distributed via e-mail, or submitted to employers with scannable databases. Because a computer software program will probably read your resume initially, you must be sure to include a keyword paragraph in the resume. Keywords are critical words matching you up with the required job qualifications. For instance, if you were applying for a job as a programmer, the keyword paragraph might look like this:

Keywords: Programmer, Unix, C, C+ +, Cobol, Java, Systems Engineer, and Solaris

The keywords are critical if an employer has resume-tracking software. Make sure they fit the positions for which you are applying. It is also important that your experience and background match the job you want.

Your resume and cover letter are the first documents that the potential employer or resume-tracking system sees or scans. Even if the company has resume-tracking software, when your resume pops up from a search, a human resources professional will read it. You must create that all-important excellent first impression.

Search for jobs. Acquire knowledge about various career choices. The following is a list of the most popular careers for the twenty-first century (*Occupational Outlook Handbook, 2000*). (*The 21st Century*, 1999): (1) air transportation-related occupations, (2) engineering and engineering technicians, (3) architects and surveyors, (4) computer, mathematical, and operations research, (5) scientists and science technicians, (6) legal, (7) social scientists, (8) social and recreation workers, (9) teachers and instructors, counselors, and library occupations, (10) health diagnosticians, (11) health assessment and treating, (12) health technologists and technicians, (13) communications-related, (14) visual arts and design, (15) performing arts.

Determine what education is needed. Research the qualifications necessary. Use the Internet to begin gathering facts on a particular career. Firm-specific data can be found in books such as *Hoover's Handbook of American Business*, *Dunn's Regional Business Directory*, and other business directories available on-line or in library reference sections. Judy Kaplan Baron, a nationally certified career counselor in San Diego, recommends reading about your target occupation in resources such as the *Occupational Outlook Handbook* published by the U.S. Department of Labor.

Baron believes that it does not occur to most people to use friends, co-workers, and neighbors as referral sources: "You may have what you need as a referral living right next door."

Research the company and/or industry. The task of business research has gotten easier, since the Internet contains information on almost every business. Use search engines to gather information on public and private companies or use information gleaned from your local library.

Prepare for an interview Knowledge is power, especially in an interview. The more you know about the company and what is going to occur in an interview, the more likely you are to be an intelligent candidate. If you familiarize yourself with the interview procedure, you can talk confidently to a potential employer. Rather than worrying about the upcoming interview, spend your time rehearsing and preparing for the interview.

Be aware of implicit rules during the interview. Never ask for a job and respect the interview's time limits. When time is up, offer to end the meeting. Maintain the conversation only if urged by the interviewer to do so.

Close the interview by asking the interviewer to suggest other people with whom you might talk. Then ask if you may mention the interviewer's name when you contact those recommended.

Within twenty-four hours of the interview, send a thank-you note. John Klube, site manager for the Army Career and Alumni Program at Fort Carson, Colorado (1998), also recommends additional follow-up, stating that never hearing from a candidate again makes interviewers feel used. He recommends contacting interviewers again four or five weeks after the initial interview to thank them again and to let them know how any referrals worked out.

Figure the Level of Your Salary. Check with employment agencies, read the want ads in local papers, and talk with others to find out what your salary should be. There are Internet sites, such as salary.com or homefair.com, that will calculate and compare the cost of living in cities worldwide. You choose the origin and destination sites. For example, if you currently live in Denver, Colorado, and want to move to Boston, Massachusetts, input that information. The on-line calculator would tell you that if you make $100,000 in Denver, you would need to make $154,621 in Boston.

SEARCH STRATEGIES

The Myers-Briggs Personality Test, discussed earlier, is useful in helping determine your interests and capabilities. The figures published by Bernard Haldane Associates (Vincent, 1998), a nationwide career search firm, show that nearly 70 percent of all jobs are acquired by those who mix personal initiative with a compelling search strategy: building professional contacts and making themselves known to employers. A job seeker does this through brief, data-gathering dialogues with corporate managers and referrals by those managers to other knowledgeable sources; candidates can gather real-world tips for career success and gain valuable professional contacts.

Roles of colleges and universities. Most of the careers listed earlier require education beyond high school. The length and type of education varies from technical training to a doctoral degree.

Advances in technology have changed the traditional role of the college and university. The Internet, computer-assisted training (enhanced by video technology and courseware authoring tools), interactive CD-ROMs, and distance learning can provide education beyond high school. Training for a career involves competencies consistent with the demands of business and industry. Computer skills, subject-matter skills, and the soft skills of human relations and workplace ethics are central to the curriculum.

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JUDITH CHIRI

CELLER-KEFAUVER ANTI-MERGER ACT OF 1980

(SEE: *Antitrust Legislation*)

CENTRALIZATION AND DECENTRALIZATION

(SEE: *Organizational Structure*)

CERTIFIED INTERNAL AUDITOR

A certified internal auditor (CIA) is an individual who has met the requirements for certification as established by the Institute of Internal Auditors (IIA). Requirements relate to education, experience, and successful completion of an examination. Achieving the credential as a certified internal auditor is tangible evidence of meeting professional qualifications established by the IIA.

The IIA, established in 1941 at a meeting in New York City, now has a worldwide membership of more than 70,000 in more than 100 counties. The CIA examination was first administered in 1974.

THE EXAMINATION

The CIA examination is offered twice a year, once in May and once in November. The exam has four parts:

Part I: Internal audit process

- Auditing
- Professionalism
- Fraud

Part II: Internal audit skills

- Problem solving and evaluating audit evidence
- Data gathering, documentation, and reporting
- Sampling and mathematics

Part III: Management control and technology

- Management control
- Operations management
- Information technology

Part IV: Audit environment

- Financial accounting
- Finance
- Managerial accounting
- Regulatory environment

Each part of the exam consists of 80 multiple-choice questions. To complete the examination successfully, a candidate must be familiar with the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing* and the institute's *Code of Ethics*. It is not necessary to be a member of the IIA in order to take the examination. However, a one-year free membership is offered to any nonmember who passes the CIA examination.

The Board of Regents, which administers the CIA exam, recognizes the accomplishments of other professional certifications. Therefore, individuals who already have a certification are eligible to receive credit for part of the exam. Part IV of the exam was designed to offer a Professional Recognition Credit. Candidates who wish to apply for the Professional Recognition Credit need to submit a registration form with a copy of the certificate or letter from the sponsoring organization noting that the person has completed the exam requirements. The sponsoring organization may be contacted to verify the information supplied by the candidate.

For example, in the United States an individual who is a certified public accountant, certified management accountant, certified information systems auditor, or certified bank auditor is eligible to receive Professional Recognition Credit for Part IV of the CIA examination. In Australia, Canada, and the United Kingdom, the chartered accountant designation would receive Professional Recognition Credit by the Board of Regents.

The exam is nondisclosed. Individuals taking the exam sign a statement indicating that they will not disclose questions and answers subsequent to taking the exam. The IIA considers disclosure of the exam questions by a person who took the examination to be a violation of the code of ethics.

The passing score for the exam is 75 percent. In 1996 there were 4646 candidates; the average pass rate by exam part is 45 percent. (*Careers in Accounting* 1997).

EXPERIENCE REQUIREMENT

In order to become a CIA, there is an experience requirement of twenty-four months of internal auditing or its equivalent. Representative equivalent experience can include quality assurance, internal control assessment, or external auditing. A master's degree can be substituted for one year of experience. The Board of Regents determines the acceptability of equivalent work experience.

More information is available from the Institute of Internal Auditors at 249 Maitland Ave., Altamonte Springs, Florida 32701-4201; (407)830-7600; or http://www.theiia.org.

(SEE ALSO: *Institute for Internal Auditors*)

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CHARLES H. CALHOUN

CERTIFIED MANAGEMENT ACCOUNTANT (CMA) CERTIFIED IN FINANCIAL MANAGEMENT (CFM)

The certified management accountant (CMA) and the certified in financial management (CFM) programs are designed to recognize the unique qualifications and expertise of those professionals engaged in management accounting and financial management. These certifications provide distinction in today's economic climate and afford the opportunity to certify expertise in the business areas that are critical to the decision-making process. The CMA and CFM certifications, introduced by the Institute of Management Accountants (IMA) in 1972 and 1996, respectively, have global recognition and have received the endorsement of approximately 200 corporate and academic organizations.

The CMA and CFM Programs have four objectives:

- To establish management accounting and financial management as recognized professions by identifying the role of the professional, the underlying body of knowledge, and a course of study by which such knowledge is acquired
- To encourage higher educational standards in the management accounting and financial management fields
- To establish an objective measure of an individual's knowledge and competence in the fields of management accounting and financial management
- To encourage continued professional development

The content of the certification examinations represents the knowledge, skills, and abilities required by business professionals in the fields of management accounting and financial management. The content is validated periodically by a practice analysis conducted by the IMA. The content, covered in four examination parts for each program, encompasses:

- Economics, finance, and management
- Financial accounting and reporting (CMA) or corporate financial management (CFM)
- Management reporting, analysis, and behavioral issues
- Decision analysis and information systems

The Financial Accounting and Reporting Exam is waived, upon request, for individuals who have passed the U.S. CPA Exam; this is not the case, however, for the Corporate Financial Management Exam.

Candidates for certification must meet the following criteria to become a CMA or CFM:

- Education: Candidates must hold a baccalaureate degree, in any area, from an accredited college or university. Students attending accredited U.S. universities may take the examinations but must satisfy the education requirement prior to certification. Degrees from institutions outside the United States must be evaluated by an independent agency. The education requirement may also be satisfied by holding a CPA license to practice or other comparable professional qualification.
- Employment: Candidates must complete two continuous years of professional experience in management accounting and/or financial management. Qualifying experience consists of positions requiring judgments regularly made employing the principles of management accounting and financial management. This experience may be completed prior to or within seven years of passing the examination.
- Character references: The names of two character references must be submitted at the time of application.
- Ethics: Candidates for certification must agree to comply with the Standards of Ethical Conduct for Practitioners of Management Accounting and Financial Management.
- Membership: Candidates for certification must be a member of the IMA because the certification programs are a privilege of membership.

The CMA and CFM programs have been designed to meet the evolving needs of business and are focused on the dynamic roles that management accountants and financial managers play in business, public, and government accounting. Certified professionals are more frequently identified for promotion and have greater earning potential than those professionals who are not certified. To gather more information or to join the CMA/CFM programs, visit the IMA Web site at www.imanet.org or call (800)638-4427 for a certification information booklet.

Priscilla Payne

CERTIFIED PUBLIC ACCOUNTANT (CPA)

The designation certified public accountant (CPA) is conferred by a state or jurisdiction to individuals to practice as a licensed certified public accountant. The licensing of CPAs protects the public from incompetent individuals performing substandard accounting work. In the United States, there are fifty-four states or jurisdictions with laws and regulations on the requirements and obligations of licensed CPAs. In 1896, New York State passed the first accountancy law to test the qualifications of public accountants. This led to the issuance of a state license to practice as a certified public accountant and the emergence of accounting as a profession with licensing requirements, professional standards, and a code of professional ethics. Other states followed this lead, and eventually all of the fifty-four states and jurisdictions enacted public accounting legislation. The Boards of Accountancy of each jurisdiction are responsible for licensing candidates and for compliance with the state accountancy laws.

The Boards of Accountancy make licensure decisions based on three factors: (1) the fulfillment of an educational requirement, (2) passing a Uniform CPA Examination and, (3) having a number of years of work experience. The educational and experience requirements vary among the fifty-four jurisdictions. All require at least a bachelor's degree; however, a majority of the jurisdictions require one hundred and fifty semester hours of coursework before a candidate can take the CPA exam, which is typically a bachelor's degree, plus thirty hours of advanced study. The years of experience required vary among the jurisdictions from no experience to two or three years, depending on educational background. As an example, in Texas candidates planning to take the examination need to have one hundred and fifty semester hours of coursework and at least one year of public accountancy experience. In Florida candidates, since 1983, must complete at least one hundred and fifty hours of coursework, but need no experience.

All the jurisdictions in the United States require CPA candidates to pass a Uniform CPA

Examination that is prepared by the American Institute of Certified Public Accountants (AICPA) and graded by its Advisory Grading Service. The objective of the examination is to provide reasonable assurance to Boards of Accountancy that candidates passing the examination possess the level of technical knowledge, skills, and abilities necessary to protect the public interest. The current Uniform CPA Examination is a two-day paper and pencil linear examination with questions in a predetermined sequence to be answered manually on paper answer sheets. The examination is offered semi-annually in May and November on a Wednesday and Thursday. The current examination covers four sections: (1) Auditing; (2) Financial Accounting and Reporting; (3) Accounting and Reporting—Taxation, Managerial, and Governmental and Not-for-Profit Organizations; and (4) Business Law and Professional Responsibilities. Since May 1996, the examination has been nondisclosed, meaning that candidates are no longer allowed to retain or receive their question booklets after the examination or to reveal questions on the examination in any manner. The Board of Examiners of the AICPA maintains overall responsibility of exam preparation and issuance of grades to the state boards. The examination is continually reviewed to maintain its currency and to reflect current practice. Future examinations will be computer-based examinations, which would permit the examination to be given more frequently and to test an expanded range of knowledge and skills that closely reflect current practice.

Additional information on the Uniform CPA Examination is available from the AICPA Examinations Team, Harborside Financial Center, 201 Plaza Three, Jersey City, New Jersey 07311-3881; http://www.aicpa.org. Information on state requirements may be obtained by contacting the state board or the National Association of State Boards of Accountancy, the organization that coordinates the activities of the fifty-four boards of accountancy, located at 150 Fourth Avenue North, Suite 700, Nashville, Tennessee 37219-2417; http://www.nasba.org.

(SEE ALSO: *American Institute of Certified Public Accountants*; *National Association of Boards of Accountancy*; *State Societies of Certified Public Accountants*; *Uniform Certified Public Accounting Examination*)

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ANTHONY T. KRZYSTOFIK

CHAIN DISCOUNTS

(SEE: *Pricing*)

CHAIN OF COMMAND

(SEE: *Organizational Structure*)

CHANGE PROCESS

Companies that are able to compete successfully in today's rapidly changing business environment—characterized by globalization of the economy, exploding information technology, downsizing, restructuring, and new employer-employee relationships—must be ready to make significant changes in the way they operate. Changes can be realized in a number of areas; they can, for example, be observed in attitude or behavior. Many major organizational changes, however, are technological ones. Sometimes these changes are not intended to change behavior, but they almost always do in some respect. Another type of change is replacement of personnel; when top management is impatient with the pace of productivity, they often replace key individuals. Changes also occur in organizational structure, formal roles and jobs, control systems, work processes, and other elements of the organization's internal environment.

The motivation for change typically stems from the fact that something isn't working—for example, continued negative feedback from customers, reduced profitability, threats of acquisition, or other market pressures. For most organizations, a crisis is the catalyst for change. While a crisis may be sufficient to initiate a change, it takes much more to successfully integrate the change into the work processes. Managers must have more than an extensive knowledge of the marketplace, how to compete in it, and what internal structures must be in place to make the company successful.

Every change effort should be accompanied by an action plan. Once a compelling reason to change has been identified, it is necessary to create a picture of what the change will require, how the organization will effect it, and what the organization will look like when the change has been implemented. Although each action plan for change will be unique, all plans should follow a basic structure: (1) identification of a course of action and allocation of resources to achieve the organization's change goals; (2) designation of the authority, responsibility, and relationships that will drive the change efforts; (3) determination of who will lead the change effort and the specific roles and responsibilities of these individuals; (4) a description of the procedures and processes that will expedite implementation of the change; (5) identification of the training that will be required to enable people to incorporate the change into their work processes; and (6) identification of the equipment, tools, or machinery that will affect the way work is accomplished.

Many organizational changes are initiated and implemented through the authority of top levels of management. The problems are defined and solutions are developed by top-level managers based on information that is gathered by others with help from a limited number of people. Once a decision is made, the changes are often communicated to people in the organization through memo, speech, policy statement, or verbal command. Since only a few people, usually at the top, are involved in making the decisions, the change is usually introduced very rapidly. However, this strategy has proved to be largely ineffective in dealing with organizational change processes, particularly for successful integration. A common misconception about carrying out a change is that it must be directed from the top. The foundation of successful change management lies in involving the people who will be affected by the change.

Sharing responsibility for change is a process whereby those at the top and those at lower levels are jointly involved in identifying problems and/or developing solutions. Virtually continual interaction takes place between top and bottom levels. The shared responsibility or participative approach can be addressed in several ways: (1) Top management defines the problem and uses staff groups or consultants to gather information and develop solutions. These identified solutions are then communicated to lower-level groups in order to obtain reactions. The feedback from the lower levels is then used to modify the solution, and the communication process starts again. The assumption underlying this approach is that although involving others in the definition of the problem or its solution may be impractical, the solution can be improved and commitment obtained by involving lower levels. (2) Top management defines the problem but seeks involvement from lower levels by appointing task forces to develop solutions. The task forces provide recommendations to top management, where the final decision is made. These task forces are composed of people who will be affected by the change and have some level of expertise in the areas that will be affected by the proposed change. The assumption here is that those who have the expertise to solve the problems are those groups that are closer to the situation. Also, the group's commitment to the change may be made deeper by this involvement. (3) Task forces composed of people from all levels are formed to collect information about problems in the organization and to develop solutions. The underlying assumptions in this approach are that people at the top, middle, and lower levels are needed to develop quality solutions and that commitment must build at about the same rate at all levels. These approaches emphasizing shared responsibility usually take longer to implement but result in more commitment from all levels of the organization and more successful integration of the change into the work processes.

Understanding the factors that drive change, and how people react to change, is critical to the successful implementation of change. It is part of human nature to resist change; people prefer the security of familiar surroundings and often don't react well to changes in their work or social environment. Resistance to change often takes some typical forms. One typical reaction is denial, which individuals use to protect themselves. If the change never really occurs, it won't need to be dealt with. Another common reaction is passive resistance—individuals agree on the surface with the need for change but are quietly unsupportive of it. Still others may respond with active resistance by openly disagreeing with the proposed change, lobbying against it, and encouraging others to do the same.

Many managers assume that if people think the change is a good idea, they will not resist it. Why would the work force resist changes if the changes will fix what they wanted fixed? People may want change—but not necessarily the changes that have been identified in the plan. Workers may have their own ideas about what should change; and frequently the changes they think "fix" the problem involve someone else's changing, not them. In addition workers may think the ways to make things better is simply to adjust and manipulate their work processes, not to implement the drastic changes identified in the proposed plan. Alternatively, workers may not think that is wrong with the current way of working. Often the process of changing looks too hard, looks like it will take too much energy, and seems confusing. A strictly structured change process often ignores the ingrained human resistance to change. When that happens, people who are affected by the change end up expending most of their time and energy figuring out how to stop the change or altering the change until it looks like something they can live with. If the desired change is not very desirable to the work force, managers need to find out why. Insufficient information about the driving force behind the change and the benefits expected from it is likely to cause distress among those affected by the change. People tend to act in their own perceived self-interest. Managers often think of change initiatives in broader terms; the work force tends to think of it differently, in more narrow terms of how the change will affect their work. Sometimes managers forget or overlook this reaction to change. Effective strategies for organizational change involve an understanding of the human beings in the work force.

Cultivating a sense of involvement and ownership in all individuals affected by the proposed change is critical. The more involved people feel in shaping their future, the less likely they are to criticize the outcome. An essential factor in managing effective change is communication—no amount is too much. Managers should identify the groups/individuals affected by the proposed change in order to determine the best communication methods to use. Newsletters, focus groups, bulletin boards, intranet pages, and lunchtime seminars are all effective ways of communicating to the work force. Managers need to be aware of how information flows through the organization and which communication methods will be most effective.

Also crucial to successful integration of change in an organization is the level of support from its leaders. Top levels of management must believe that the proposed course of action is the right one for the future of the organization. At all phases of the change process, top-management representatives must strongly support the change processes and communicate that support to the work force. During the planning phase, top-management representatives should explain the business reasons for the changes and the costs of not changing, tell employees what they can expect to happen and when, and enlist the support of other senior managers and stakeholders in the process. During the design phase, top-management representatives should listen and respond to feedback from the organization and provide updates on the progress of the change. During the implementation phase, top-management representatives should continue to listen to resistance and respond to feedback, stay involved in the process, ensure that adequate resources and training are available, measure performance toward expected results, and reward role models.

Effective and efficient methods of communication, education/training, and rewards/reinforcements should be built into the implementation plan. Appropriate training should be incorporated into the change plan to ensure that the work force can be productive with the new work processes and systems. However, communication and training may not be the only required elements to help ensure effective change implementation. As the work force envisions the change, managers may need to ensure that rewards are in place for changing—in other words, identification of "what's in it for me?" Recognition is needed to reinforce changes in an organization. Tangible and intangible rewards for changed behavior, new attitudes, and enhanced skills can be effective both in building support and advancing the changes.

Companies and people have no choice: They must change to survive. They do have a choice, however, in how they change. Understanding the forces that effect change, the process for change, and how to manage that process is critical to an organization's survival in today's turbulent world.

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CHERYL L. NOLL

CHANNELS OF DISTRIBUTION

The word *channel* might bring to mind a waterway such as the English Channel, where ships move people and cargo. Or it might bring to mind a passageway such as the Chunnel, the railroad tunnel under the English Channel. Either image implies the presence of paths or tracks through which goods, services, or ideas flow. This imagery offers a good starting point for understanding channels of distribution.

The term *marketing channel* was first used to describe trade channels that connected producers of goods with users of goods. Any movement of products or services requires an exchange. Whenever something tangible (such as a computer) or intangible (such as data) is transferred between individuals or organizations, an exchange has occurred. Therefore, marketing channels make exchanges possible. How do they facilitate exchanges? Perhaps the key part of any distribution channel is the intermediary. Channel *intermediaries* are individuals or organizations who create value or utility in exchange relationships. Intermediaries generate form, place, time, and/or ownership values between producers and users of goods or services.

Marketing channels were traditionally viewed as a bridge between producers and users. However, this traditional view fails to fully explain the intricate network of relationships that underlie marketing flows—the exchanges of goods, services, and information. To illustrate, consider a prescription drug purchase. To get authorization to purchase the drug, one must visit a physician to obtain a prescription. Then, one might acquire the drug from one of several retail sources, including grocery store chains (such as Kroger's), mass discounters (such as Wal-Mart), neighborhood pharmacies, and even virtual pharmacies (such as Drugstore.com).

Each of these prescription drug outlets is a marketing channel. Pharmaceutical manufacturers, distributors, and their suppliers are all equally important links in these channels of distribution for pharmaceuticals. Sophisticated computer systems track each pill, capsule, and tablet from its point-of-production at a pharmaceutical manufacturer all the way to its point-of-sale in retail outlets worldwide.

To appreciate the complexity of marketing channels, exchange should be recognized as a dynamic process. Exchange relationships themselves continually evolve as new markets and technologies redefine the global marketplace. Consider, for example, that the World Wide Web's arrival created a new distribution channel now accounting for over $1.3 trillion in electronic exchanges. It may come as a surprise that the fastest-growing segment of electronic commerce involves not business-to-consumer, (called *B2C* in today's Web language) but business-to-business (*B2B*) channels.

Whether these exchange processes occur between manufacturers and their suppliers, retailers and consumers, or in some other buyer-seller relationship, marketing channels offer an important way to build competitive advantages in today's global marketplace. This is so for two major reasons:

- *Distribution strategy lies at the core of all successful market entry and expansion strategies.* The globalization of manufacturing and marketing requires the development of exchange relationships to govern the movement of goods and services. As you sip your preferred coffee blend at your neighborhood Starbucks, consider that consumers in China, Lebanon, and Singapore may be sipping that same blend. Then consider how the finest coffee beans from Costa Rica or Colombia get to thousands of neighborhood coffee shops, airports, and grocery stores around the world.
- *New technologies are creating real-time (parallel) information exchange and reducing cycle times and inventories.* Take as an example Dell Computer, which produces on-command, customized computers to satisfy individual customer preferences. At the same time, Dell is able to align its need for material inputs (such as chips) with customer demand for its computers. Dell uses *just-in-time* production capabilities. Internet-based organizations now compete vigorously with traditional suppliers, manufacturers, wholesalers, and retailers. Bricks-and-mortars (organizations having a physical location) and clicks-and-mortars (organizations having a virtual presence) are in a virtual face-off.

DEFINING MARKETING CHANNELS

The Greek philosopher Heraclitus wrote, "Nothing endures but change." Marketing channels are enduring but flexible systems. They have been compared to ecological systems. Thinking about distribution channels in this manner points out the unique, ecological-like connections that exist among the participants within any marketing channel. All marketing channels are connected systems of individuals and organizations that are sufficiently agile to adapt to changing marketplaces.

This concept of a *connected system* suggests that channel exchange relationships are developed to build lasting bridges between buyers and sellers. Each party then can create value for itself through the exchange process it shares with its fellow channel member. So, a channel of distribution involves an arrangement of exchange relationships that create value for buyers and sellers through the acquisition (procurement), consumption (usage), or elimination (disposal) of goods and services.

EVOLUTION OF CHANNELS

Marketing channels always emerge from the demands of a marketplace. However, markets and their needs are always changing. It's true, then, that marketing channels operate in a state of continuous evolution and transformation. Channels of distribution must constantly adapt in response to changes in the global marketplace. Remember: *Nothing endures but change.*

At the beginning of the nineteenth century, most goods were still produced on farms. The point-of-production had to be close to the point-of-consumption. But soon afterward, the Industrial Revolution prompted a major shift in the American populace from rural communities to emerging cities. These urban centers produced markets that needed larger and more diverse bundles of goods and services. At the same time, burgeoning industrialization required a larger assortment of production resources, ranging from raw materials to machinery parts. The transportation, assembly, and reshipment of these goods emerged as a critical part of production.

During the 1940s, the U.S. gross national product (GNP) grew at an extraordinary rate. After World War II ended, inventories of goods began to stockpile as market demand leveled off. The costs of dormant inventories—goods not immediately convertible into cash—rose exponentially. Advancements in production and distribution methods now focused on cost-containment, inventory control and asset management. Marketers soon shifted from a *production* to a *sales* orientation. Attitudes like "a good product will sell itself" or "we can sell whatever we make" receded. Marketers confronted the need to expand sales and advertising expenditures to convince individual customers to buy their *specific brands*. The classic *four Ps* classification of marketing mix variables—product, price, promotion and place—emerged as a marketing principle. Distribution issues were relegated to the *place* domain.

This new *selling* orientation inspired the development of new intermediaries as manufacturers sought new ways to expand market coverage to an increasingly mobile population. The selling orientation required that more intimate access be established to a now more diversified marketplace. In response, wholesale and retail intermediaries evolved to reach consumers living in rural areas, newly emerging suburbs and densely populated urban centers.

Pioneering retailers such as John Wanamaker in Philadelphia and Marshall Field in Chicago quickly sprouted as goliaths in this brave new retail world. Small retailers came of age, as well, offering specialized operations tailored to meet the needs of a changing marketplace. Retailers and their channels evolved in lockstep with the movements and needs of the consumer marketplace. As always, marketing channels were evolving in response to changing marketplace needs.

The impact of two remarkable innovations taken for granted today—the car and the interstate highway system—cannot be ignored. These transforming innovations simultaneously stimulated and satisfied Americans' desire for mobility. Manufacturers suddenly began selling their wares in previously inaccessible locations. Millions of Americans fled from the cities to the suburbs in the 1950s and 1960s. Retailers quickly followed. Yet another channel phenonenom emerged, this one involving groups of stores situated together at one site. The suburban shopping center was born. Its child, the mall, soon followed.

In 1951, the earth moved. That was the year marketers first embraced the marketing concept. The *marketing concept* decrees that customers should be the focal point of all decisions about marketing mix variables. It was accepted that organizations should only make what they could market instead of trying to market whatever they could make. This new perspective had a phenomenal impact on channels of distribution. Suppliers, manufacturers, wholesalers, and retailers were all *forced* to adopt a business orientation initiated by the needs and expectations of each channel member's *customer*.

The marketing concept quickly reinforced the importance of obtaining and then applying customer information when planning production, distribution, and selling strategies. A sensitivity to customer needs became firmly embedded as a guiding principle by which emerging market requirements would be satisfied. The marketing concept remained the cornerstone of marketing channel strategy for some thirty years. It even engendered the popular 1990s business philosophy known as total quality management. Small wonder, then, that in today's Japan the English word *customer* has become synonymous with the Japanese phrase *honored guest*.

The customer focus espoused within the marketing concept has a broad, intuitive appeal. Yet the marketing concept implicitly suggests that information should flow unidirectionally from customers to intermediaries, and from intermediaries to manufacturers. This unnecessarily restrictive and reactive approach to satisfying customers' needs has been supplanted by the relationship marketing concept. As modern communication and information management technologies emerged, channel members found they could now establish and maintain interactive dialogues with customers. Ideas and information now were exchanged—bidirectionally—in real time between buyers and sellers. Channel members learned that success comes from anticipating one's customer's needs before they do. The earth had moved, again, as the relationship marketing philosophy was widely adopted.

How important is a customer dialogue? Sophisticated database and interactive technologies enable channel members to quickly identify changes in customers' preferences. This, in turn, allows manufacturers to modify product designs nimbly. Relationship marketing allows manufacturers to mass-customize offerings and to reduce fixed costs associated with production and distribution. Retailers and wholesalers make better-informed merchandising decisions. This is yet another lesson in the costs of carrying unwanted products. Relationship marketing yields greater customer satisfaction with the products and services they acquire and consume. And why not? The customer's voice was heard when the offering was being produced and distributed.

Relationship marketing is driven by two principles having particular relevance to marketing channel strategy:

- Long-term, ongoing relationships between channel members are cost-effective. (Attracting new customers costs more than ten times more than retaining existing customers.)
- The interactive dialogue between providers and users of goods and services is based on mutual trust. (The absence of trust imperils all relationships. Its presence preserves them.)

THE ROLE OF INTERMEDIARIES

This progression from a production to a relationship orientation allowed many new channel intermediaries to emerge because they created new customer values. Intermediaries provide many utilities to customers. The provision of contactual efficiency, routinization, assortment or customer confidence all create value in channels of distribution.

One of the most basic values provided by intermediaries is the optimization of the number of exchange relationships needed to complete transactions. Contactual efficiency describes an aspiration shared among channel members to move toward the point where the quantity and quality of exchange relationships is optimized. Without channel intermediaries, each buyer would have to interact directly with each seller. This would be extremely inefficient. Imagine its impact on the total costs of each exchange.

When only two parties participate in an exchange, the relationship is a simple dyad. Exchange processes become far more complicated as the number of channel members increases. The number of exchange relationships that can potentially develop within any channel equals:

$$\frac{3^n - 2^{n+1} + 1}{2}$$

where n is the number of organizations in a channel. When n is 2, only one relationship is possible. When n doubles to 4, up to 25 relationships can unfold. Increase n to 6, and the number of potential relationships leaps to 301. The number of relationships unfolding within a channel quickly becomes too large to efficiently manage when each channel member deals with all other members. Channel intermediaries are thus necessary to facilitate *contactual efficiency*. But as the number of intermediaries approaches the number of organizations in the channel, the law of diminishing returns kicks in. At that point, additional intermediaries add little new value within the channel.

McKesson Drug Company, the nation's largest drug wholesaler, acts as an intermediary between drug manufacturers and retail pharmacies. About 600 million transactions would be necessary to satisfy the needs of the nation's 50,000 pharmacies if these pharmacies had to order on a monthly basis from each of the 1000 U.S. pharmaceutical drug manufacturers. When our example is extended to the unreasonable possibility of daily orders from these pharmacies, the number of transactions required rises to more than 13 billion. The number of transactions is nearly impossible to consummate. However, introducing 250 wholesale distributors into the pharmaceutical channel reduces the number of annual transactions to about 26 million. This is contactual efficiency.

The costs associated with generating purchase orders, handling invoices, and maintaining inventory are considerable. Imagine the amount of order processing that would be necessary to complete millions upon millions of pharmaceutical transactions. McKesson offers a computer-networked ordering system for pharmacies that provides fast, reliable, and cost-effective order processing. The system processes each order within one hour and routes the order to the closest distribution system. Retailers are relieved of many of the administrative costs associated with routine orders. Not coincidentally, the system makes it more likely that McKesson will get their business as a result of the savings.

Routinization refers to the means by which transaction processes are standardized to improve the flow of goods and services through marketing channels. Routinization has several advantages for all channel participants. To begin with, as transaction processes become routine, the expectations of exchange partners become institutionalized. The need to negotiate on a transaction-by-transaction basis disappears. Routinization permits channel partners to concentrate more attention on their *own* core businesses. Routinization clearly allows channel participants to strengthen their relationships.

Organizations strive to ensure that all market offerings they produce are eventually converted into goods and services consumed by members of their target market. The process by which this market conversion occurs is called sorting. In marketing channels, *assortment* is often described as the *smoothing function.* The smoothing function relates to how raw materials are converted to increasingly more refined forms until the goods are acceptable for use by final consumers. The next time you purchase a soda, consider the role intermediaries played in converting the original syrup to a conveniently consumed form. Coca-Cola ships syrup and other materials to bottlers throughout the world. Independent bottlers carbonate and add purified water to the syrup. The product is then packaged and distributed to retailers. And we buy it. That's assortment. That's what channels of distribution do. Two principal tasks are associated with the sorting function:

- *Categorizing.* At some point in every channel, large amounts of heterogeneous supplies have to be converted into smaller homogeneous categories. Returning to pharmaceutical channels, the number of drugs available through retail outlets is huge. More than 10,000 legal drugs exist. In performing the categorization task, intermediaries first arrange this vast product portfolio into manageable therapeutic categories. The items within these categories are then categorized further to satisfy the specific needs of individual consumers.
- *Breaking bulk.* Producers want to produce in bulk quantities. Thus, it is necessary for intermediaries to break homogeneous lots into smaller units. Over 60 percent of the typical retail pharmacy's capital is tied to the purchase and resale of inventory. The opportunity to acquire smaller lots means smaller capital outflows are necessary at a single time. Consequently, pharmaceutical distributors continuously break bulk to satisfy retailers' lot-size requirements.

The role intermediaries play in building customer confidence is their most overlooked function. Several types of risks are associated with exchanges in channels of distribution, including need uncertainty, market uncertainty, and transaction uncertainty. Intermediaries create value by reducing these risks.

Need uncertainty refers to the doubts that sellers have regarding whether they actually understand their customers' needs. Usually neither sellers nor buyers understand exactly what is required to reach optimal levels of productivity. Since intermediaries act like bridges linking sellers to buyers, they are much closer to both producers and users than producers and users are to each other. Since they understand buyers' and sellers' needs, intermediaries are well positioned to reduce the uncertainty of each. They do this by adjusting *what is available* with *what is needed.*

Few organizations within any channel of distribution are able to accurately state and rank their needs. Instead, most channel members have needs they perceive only dimly, while still other firms and persons have needs of which they are not yet aware. In channels where there is a lot of need uncertainty, intermediaries generally evolve into specialists. The number of intermediaries then increases, while the roles they play become more complex and focused. The number of intermediaries declines as need uncertainty decreases.

Market uncertainty depends on the number of sources available for a product or service. Market uncertainty is difficult to manage because it often results from uncontrollable environment factors. One means by which organizations can reduce their market uncertainty is by broadening their view of what marketing channels can and perhaps should do for them. Channels must be part of the strategic decision framework.

Transaction uncertainty relates to imperfect channel flows between buyers and sellers. When considering product flows, one typically thinks of the delivery or distribution function. Intermediaries play a key role in ensuring that goods flow smoothly through the channel. The delivery of materials frequently must be timed to coincide precisely with the use of those goods in the production processes of other products or services. Problems arising at any point during these channel flows can lead to higher transaction uncertainty. Such difficulties could arise from legal, cultural, or technological sources. When transaction uncertainty is high, buyers attempt to secure multiple suppliers, although this option is not always available.

Uncertainty within marketing channels can often be minimized only through careful actions taken over a prolonged period of exchange. The frequency, timing, and quantities of deliveries typify the processes involved in matching channel functions to the need for efficient resource management within marketing channels. Channel members are often unaware of their precise delivery and handling requirement needs. By minimizing transaction uncertainty, channel intermediaries help clarify these processes. Naturally, as exchange processes become standardized, need, market, and transaction uncertainty is lessened. As exchange *relationships* develop, uncertainty decreases because exchange partners know one another better.

WHERE MISSIONS MEET THE MARKET

The functions performed by marketing intermediaries concurrently satisfy the needs of all channel members in several ways. The most basic way that market needs can be assessed and then satisfied centers on the role channel intermediaries can perform in helping channel members reach the goals mapped out in their strategic plans. Because they link manufacturers to their final customers, channel intermediaries are instrumental in aligning all organizations' missions with the market(s) they serve. Channel intermediaries foster relationship-building activities and are indispensable proponents of the relationship marketing concept in the marketing channel.

Channels of distribution are not all there is to marketing, but without them all the behaviors and activities known as marketing become impossible. Channels of distribution represent the final frontier within which most sustainable strategic marketing advantages can be achieved. Channels of distribution are the instruments through which organizational missions meet—come face to face with—the marketplace. Strategic success or failure will take place there.

LOU E. PELTON
DAVID STRUTTON

CHECKING ACCOUNTS

(SEE: *Financial Institutions*)

CHIEF FINANCIAL OFFICERS ACT AND FEDERAL FINANCIAL MANAGEMENT ACT

The Chief Financial Officer Act of 1990 (CFO Act) provided for tight financial control over agency operations and the central coordination of financial management functions to support an efficient administration of the executive branch. It centralizes organization of federal financial management, required long-term strategic planning to sustain modernization, and began the development of projects to produce audited financial statements for the federal government. As Title IV of the Government Management Reform Act of 1994, the Federal Financial Management Act of 1994 extended the scope of the CFO Act by requiring agency-wide financial statements and a consolidated government-wide financial statement.

RATIONALE FOR CFO ACT

By the late 1980s, it was apparent that the financial systems of the federal government were in a deplorable state. The savings and loan crisis had developed undetected, financial scandals had occurred in the Department of Housing and Urban Development, numerous high-risk programs had been identified, and seriously deficient systems of internal control were common.

Financial management systems were obsolete and inefficient. Management, program funding, and revenue-generating activities were impaired. Hundreds of separate accounting systems made monitoring, comparison, and auditing difficult. Enormous investments to upgrade financial systems were failing to achieve the benefits of integration because planning and coordination were lacking.

No one federal official or agency had statutory responsibility for coordination of federal financial management practices. Congress was concerned that management functions and innovations were being neglected as a result of the preoccupation of the Office of Management and Budget (OMB) with the budget.

In 1990 the CFO Act was adopted to improve the general and financial management practices of the federal government by establishing a structure for the central coordination of financial management. The act provided for the implementation of accounting systems and internal controls to produce reliable financial information and to deter waste, fraud, and abuse. Additionally, the act required extensive changes in reporting to improve the information available to administrators and to the Congress.

REQUIREMENTS OF THE CFO ACT AND ITS 1994 EXPANSION

The CFO Act changed federal financial management in three ways: It created a new organizational structure for financial management, it encouraged the development of new and compatible accounting systems, and it required new forms of reporting.

Three basic changes to organizational structure were introduced in the CFO Act to provide for central coordination of financial management. In addition, a coordinating council was created. First, to heighten management priorities and centralize primary accountability, the act provided for the statutory appointment by the president of a deputy director for management to report directly to the director of OMB. This individual, one of two deputy directors at OMB, is the chief financial officer of the United States with responsibility for general management and financial management policies. His or her responsibilities include guiding improvements in government-wide financial systems, monitoring the quality of financial management personnel, and working to ensure that the executive branch has a financial structure capable of producing quality financial information.

The second component of organizational reform was the creation within OMB of the Office of Federal Financial Management under the control of the deputy director for management. A controller, who functions primarily in the area of financial management, heads this office and serves as principal adviser to the deputy director for management.

The final component of organizational reform was the designation of CFOs and deputy CFOs for fourteen cabinet departments and eight major agencies of the executive branch. Accounting, budgeting, and financial activities were consolidated under agency CFOs who report directly to agency heads. These positions were created to foster organizational uniformity in management operations and to facilitate coordination of federal financial management. Additionally, the chief financial officers council was created to coordinate improvements in federal financial management among agencies.

Under the CFO Act, the deputy director of management has overall responsibility for the development of management systems, including systems to measure performance. Each agency CFO has specific responsibility to develop and maintain integrated financial management systems. These responsibilities include directing the design of agency financial management systems and enhancement projects as well as overseeing assets management systems that encompass cash management, debt collection, and inventory management and control.

In creating new financial management systems, the primary objective was to develop comprehensive financial management systems that would integrate agency accounting, financial information, and financial management systems. Priorities include the elimination of duplicate systems and establishment of strong internal controls. With respect to accounting systems, conformity with applicable accounting principles and standards were required. Integrated systems were needed to support the production of financial statements and to generate quality financial information for a variety of decision-making purposes.

To encourage the availability of sufficient resources to adequately support financial systems, the deputy director of management was required to review and monitor agency budgets for financial systems and to assess the adequacy of agency personnel. The Office of Federal Financial Management was funded under a separate and distinct line item. And agency CFOs were empowered with budget responsibility for financial management functions.

The Federal Financial Management Act provided for specific improvements in financial management. To reduce the cost of disbursements, it required the use of electronic transfers in making wage, salary, and retirement payments. To encourage debt collections, it provided that agencies could retain a percentage of delinquent debts collected. To promote internal markets and competition, it established four franchise funds on a pilot basis. To reduce duplication, it empowered the OMB director to consolidate and streamline management reporting processes.

The CFO Act altered reporting by instituting five-year strategic planning reports, the production of financial statements, and issuance of annual management reports. The director of OMB was required to develop and annually to revise government-wide plans with a five-year horizon for improving the government's financial management systems. The director's report is supported by agency reports that identify changes needed to achieve modern, integrated financial systems. Deliberate long-range planning is intended to curb the proliferation of unique systems and to provide for the common elements necessary for central reporting. The five-year plans to improve financial management include details about the type and form of information that is to be produced: kinds of projects proposed to integrate systems, equipment, and personnel needs, and the costs of implementation.

Under the CFO Act, all covered departments and agencies are required to prepare annual financial statements for trust funds, revolving funds, and commercial activities. A pilot project provided for the preparation of agency-wide statements in six agencies. A gradual pilot approach was adopted with respect to the production of agency-wide financial statements because federal accounting standards were inadequate. The Federal Accounting Standards Advisory Board (FASAB) was established one month before the CFO Act was passed.

The production of agency-wide financial statements and a consolidated government-wide financial statement for the executive branch was intended to strengthen accountability and to provide the information needed for effective management, including performance evaluation. For example, financial statements include information about the ways budgeted funds were spent, the proportion of taxes and other receivables collected, the condition of physical assets, and the extent of financial obligations associated with various commitments.

Under the CFO Act, the director of the OMB is required to submit an annual financial management report to Congress. This report analyzes the status of financial management in the executive branch; summarizes agency financial statements, audits, and audits reports; and reviews reports on internal accounting and administrative controls. Also, government corporations are required to file an annual management report in addition to financial statements, which have to include a statement about internal accounting and administrative controls. Management reports must include plans for correcting internal control weaknesses.

RESPONSIBILITIES OF AUDITORS

The Federal Financial Management Act required the production and audit of agency-wide financial statements covering all accounts and activities of the twenty-three CFO-covered agencies and a consolidated government-wide financial statement for the executive branch as a whole. Additionally, the Act provided that the director of OMB may require audited financial statements of components of agencies such as the Departments of the Army, Air Force, and Navy. All financial statements produced under the CFO and Federal Financial Management Acts must be audited in accordance with generally accepted government auditing standards.

The inspector general of an agency determines who performs the audit. In the absence of an inspector general, the agency head makes this determination. The inspector general, certified public accountant (CPA) firms, or other qualified parties may perform audits. Additionally, the comptroller general may conduct the audit at his or her discretion or at the request of Congress. The Federal Financial Management Act specifies that the comptroller general has responsibility for auditing the consolidated government-wide financial statements of the executive branch.

Special previsions apply to the auditing of government corporations. The CFO Act replaced a requirement that these corporations be audited at least once every three years by the comptroller general with a requirement of annual audits. The corporation was assigned responsibility for arranging the audit, and the comptroller general retained authority to review financial statement audits performed by others. Additional information about the acts is available at http://www.financenet.gov.

(SEE ALSO: *Government Accounting*)

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JEAN E. HARRIS

CIRCULAR FLOW

Circular flow describes how a market economy works. A market economy is one in which individuals influence directly what is produced, marketed, and consumed. Individuals do this by spending money on what they want. This then directs producers to produce goods and services that individuals will consume. The amount of goods and services that are made available is related to the laws of supply and demand.

A model that best depicts how goods and services flow in exchange for money is called the circular flow model, shown in Figure 1.

PARTICIPATION

The primary participants in the circular flow of goods and services are businesses and households. Households are made up of individuals who both spend money and are the recipients of money. Businesses do the same—they spend money and also receive money from households. It is important to note that the flow of goods and services is in one direction in Figure 1, while the flow of money expenditures is in the opposite direction. Both flows make a complete circle—hence, it is called the circular flow of goods and service.

MARKETS

There are two types of markets in the circular flow of goods and services. The *resource market* is where businesses purchase what they use to produce goods and services. Resources are in the form of labor, natural resources, capital, and entrepreneurship, all of which are supplied by households.

If, for example, a business wants to build a small plant to produce electronic equipment, it must have land on which to build the plant. In the process of building the plant, it uses human laborers who in turn use natural resources to construct the building. Capital to complete the building comes ultimately from households, usually by means of some type of financial institution that lends money to the entrepreneurs (who also come from households) to construct the electronics plant.

Product markets are where goods and services are sold. In the case of the plant that produces electronic equipment, the outlets for its products might be retail stores. Members of households purchase the equipment for their own use in the household. Pieces of electronic equipment are purchased by the households that also provided the resources that made it possible to build the product. The outside circle of the process shown in Figure 1 has been completed.

In the reverse direction is the flow of spending. Beginning with households, the individuals therein spend money for the purchase of goods and services that are provided by businesses. In our example, the purchase is of a finished piece of electronic equipment. The money that is spent on the equipment flows from households to the business, making it possible for the business to sustain operations.

To sustain operations, the business must pay workers and purchase resources. Money continues to flow through the business into the resource markets. Bear in mind that one of the vital resources for the operation of a business is human resources, which are supplied by households. Some of the money that passes through the business goes back into the households as pay for the use of the human resources. Once again, the circular flow is complete: Money that came from households through the purchase of electronic

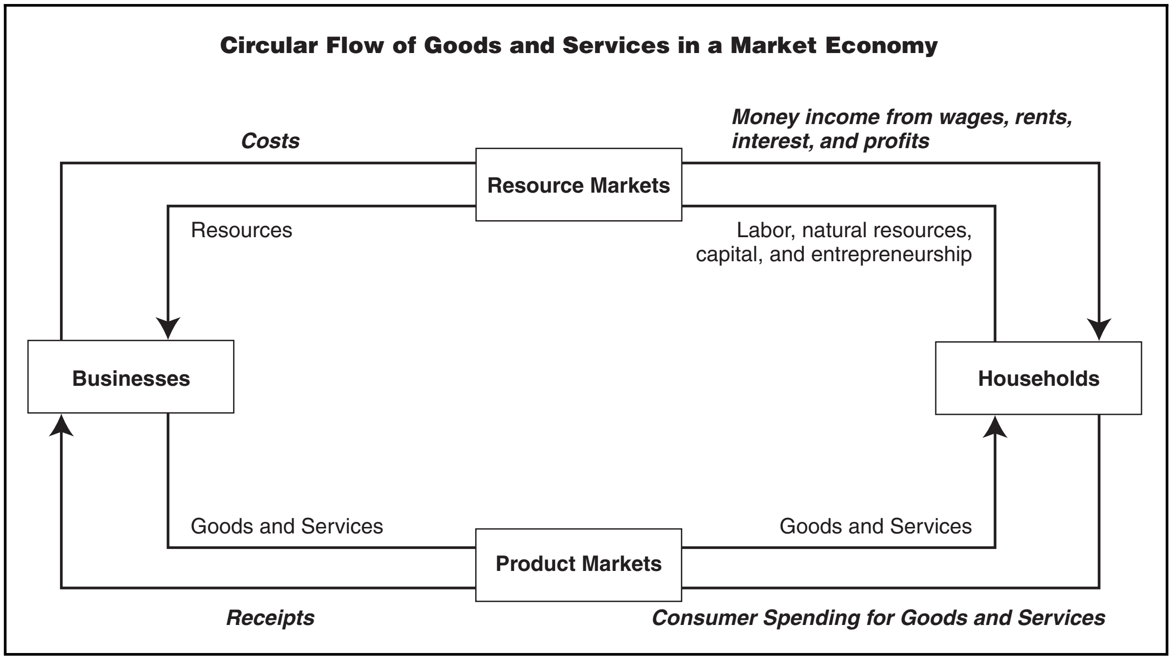
Circular Flow of Goods and Services in a Market Economy
Costs
Money income from wages, rents, interest, and profits
Resource Markets
Resources
Labor, natural resources, capital, and entrepreneurship
Businesses
Households
Goods and Services
Goods and Services
Product Markets
Receipts
Consumer Spending for Goods and Services

Figure 1

equipment passes back to households in the form of wages.

The money flow is more extensive than just wages, as shown in Figure 1. Households do not spend all their wages on goods and services. Some of the money goes into banks, financial investments, real estate, and numerous other places. From those resources, households expect to receive interest or rent as the resource is used. Banks and other financial institutions do not simply hold the money that is deposited by the households—instead, they use it to provide capital for building electronic plants and for numerous other reasons. The money flows back and forth through the circle.

The two flows of income and expenditures are equal. Expenditures on products are ultimately someone's household income. Income that flows into households is expended in some way, either for goods and services or to purchase stock in companies, CDs, land, or another type of investment.

LIMITATIONS

The circular flow model presented here is an accepted way to show the flow of goods and services in a market economy. In a mixed economy, the government plays an important role as well, but this is not shown in the circular flow model. Local, state, and federal governments also produce, or cause the production of, goods and services. Schools, highways, water-treatment plants, parks, and other facilities are examples of government spending. Governments take part of household incomes in the form of taxes, but they also inject money back into households in the form of wages. Some of that money goes back to the government in the form of taxes and still more goes into other places.

The government has considerable control over the economy, which in turn affects production, employment, and economic growth. If interest rates go up, households will purchase fewer goods and services. If interest rates go down, households will spend more. This spending adds to or takes away from businesses' operations and the amount of goods and services being produced.

Governments can influence the mix of goods and services offered to households. Good examples, although they might seem rather extreme, are when the government ordered the breakup of the Bell Telephone System and later of Microsoft Corporation because it was determined that they violated antitrust legislation and had become monopolies. This kind of breakup affects business operations and households.

The model that is shown in Figure 1 could also be influenced by pricing factors—that is, the laws of supply and demand. The model does not take into consideration changes in prices or how prices are determined. Nor does it take into consideration how businesses choose the products or services they produce and market.

Another limitation of the model as presented here is that not all the products and services offered by businesses go to the households that provide the resources. For example, some of the electronic equipment produced in the plant described earlier might be exported to another country. In that case, the goods and services leave the circular flow and the resources to pay for the goods and services come from outside the circle. It might be easier to simplify the explanation and include all households and all businesses in the world, but most economists would not agree with that simplification.

While readers should be aware of the influence that government, exporting and importing, and pricing and production has on businesses and households, it is not necessary to alter the circular flow model. It remains a viable illustration of what happens in a macroeconomic sense without microeconomic influences.

It is also considered by some to be a limitation when money leaves the circular flow to be invested in savings, stocks, bonds, and other financial investments. However, the discussion here assumes that the money that is invested does not really leave the circle, but rather is passed on as a resource to others. It is true that some money does leave the circle because banks and other financial institutions are required by law to maintain a certain amount of money on deposit. And because some individuals in households don't trust banks or other financial institutions, they use the "coffee can" approach to saving their money—they simply keep their savings at home.

SUMMARY

The circular flow of goods and services is a simplified illustration of basically two flows: the flow of incomes to households from businesses, and the flow of resources to businesses from households. This model excludes the more complex influences of microeconomic factors. In the macroeconomic perspective, resources flow from households to businesses, which change the resources into goods and services for consumption in the product markets. Households are rewarded for the resources they provide in the form of money. It is a circular process that flows in both directions.

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ROGER L. LUFT

CIVIL RIGHTS ACT

In 1964, the United States passed one of its strongest civil rights laws in history, the Civil Rights Act. The act bans discrimination because of a person's color, race, national origin, religion, or sex; it primarily protects the rights of African Americans and other minorities. Major features of the Civil Rights Act include the freedom to vote and use hotels, restaurants, theaters, parks, and all other public places. The law also encouraged the desegregation of public schools and authorized the withdrawal of federal funds from programs practicing discrimination. Other major

President Lyndon B. Johnson (center, seated) at the signing of the Civil Rights Act.

features included the prohibition of job discrimination and the creation of the Equal Employment Opportunities Commission.

The Civil Rights Act was an attempt to improve the quality of life for African Americans and other minority groups. Historical momentum for civil rights legislation grew in the mid-1940s due to the extensive black migration to northern cities. During this time, Congress became active in the pursuit of civil rights, with the judicial branch of the government at its heels. Shortly afterwards, the Supreme Court joined the civil rights forces and in doing so added to the historical pressure for the Civil Rights Act of 1964. One of the most important and influential Supreme Court decisions involving civil rights legislation was the 1954 ruling in *Brown* v. *Board of Education of Topeka, Kansas*, which desegregated American public schools and paved the way for the civil rights movement.

The specific source of the Civil Rights Act of 1964 was President John F. Kennedy. He began gaining support for it in a televised national address by urging Americans to take action to guarantee equal treatment for all. Kennedy then proposed an act dealing with voting rights, public accommodations, desegregation of public schools, and many more items on the civil rights agendas. On July 2, 1964, President Johnson signed the bill that Kennedy had fought for, which created a major piece of civil rights legislation. Although the Civil Rights Act did not resolve all problems of discrimination, it did open the door to further progress by lessening racial restrictions on the use of public facilities, providing more job opportunities, strengthening voting laws, and limiting federal funding of discriminatory programs.

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NIKOLE M. POGEMAN

CLASSICAL MANAGEMENT

(SEE: *Management*)

CLASSIC BRANDS

Classic brands are a part of modern society that have become so deeply ingrained into our everyday experiences that they have become unobtrusive. A classic brand can be defined as one that, through careful and thorough advertising, marketing, and product positioning, has become synonymous with the product category of which it is a part. Additionally, a classic brand may also be one for which there is no other recognizable competition within its product class. In this sense, a classic brand is one that has been raised above the commodity level, creating its own product classification in the consumer's mind. This is not to say that it is the only item of its type, but rather that the other competing products hold such a small market share that they are considered obscure, making the classic brand a "category killer" within its market segment.

EXAMPLES OF CLASSIC BRANDS

Based on the aforementioned definition of what constitutes a classic brand, there are many products and services that may be considered classic. Coca-Cola, (or Coke, as it is commonly referred to) is the undisputed leader in the soft-drink industry, so much so that a consumer in a restaurant who wants a cola drink is programmed to ask for a Coke, whether the establishment serves Coke, Pepsi, or any other brand. In the same sense, an adhesive bandage is better known as a Band-Aid, facial tissue is referred to as Kleenex, and Xerox has become a verb for the act of photocopying, as well as a noun used for what the photocopy machine produces.

Household products such as Arm & Hammer Baking Soda, Clorox Bleach, and Barbie dolls provide strong examples of classic brands that have no major market competition. Of course there are other baking sodas, bleaches, and dolls on the market, but even a savvy consumer would be hard-pressed to name them. This is true not only of tangible products but of services as well. Service providers such as H & R Block and AAA (The American Automobile Association) are classic brands whose names are synonymous with the markets that they represent.

VISUAL IMPACT OF CLASSIC BRANDS

Much of the initial recognition of a classic brand stems not from its performance but from its visual impact on the consumer's memory. Granted, the product must perform superbly to maintain its status; however, the initial impression is often the result of a memorable logo. Classic brands generally have logos or brandmarks that have changed little since the inception of their product. The Coke bottle shape, the Golden Arches of McDonald's, the yellow and red Arm and Hammer box—these are all brand identifiers that need no written words to explain what they represent. Consumers instantly recognize these symbols and associate them with the brands that they depict. In the twenty-first century, with Internet advertising becoming more and more prevalent, such simple images as these are a low-cost means of further perpetuating the brands' success.

HISTORY OF A CLASSIC BRAND

Taking a brand from common to classic is no small task and does not happen overnight. It involves strong commitment from many levels of the organization, along with a well-executed plan for remaining the leading player. A fine example of a classic brand through history is Coca-Cola, probably one of the best-known classics in the world.

Coca-Cola was created by Dr. John Smyth Pemberton, an Atlanta pharmacist, in 1886 as a beverage served at his soda fountain. He described it to his patrons as "delicious and refreshing," a line still used in Coke's advertising in the twenty-first century. In 1892, Dr. Pemberton joined forces with Asa G. Candler, an Atlanta businessman who understood the power of advertising, and registered the Coca-Cola trademark one year later. In order to create brand recognition, Candler created a wide range of promotional memorabilia for soda fountains—clocks, fans, and other novelties, all depicting the Coca-Cola trademark.

In 1915, Candler introduced the contour bottle, which itself was granted trademark protection in 1977—something not usually done for product packaging. The emergence of the contour bottle, along with bottling plants, allowed consumers to enjoy Coca-Cola in their own homes. World War II had a major impact in the building of the brand, since sixty-four of these bottling plants supplied the armed forces with more than five million bottles of Coke. It was also at this time that Coke became associated with the American spirit of a can-do attitude and became a global depiction of camaraderie and refreshment.

After the war, Coca-Cola capitalized on the technology of radio and television to continue to spread its brand imagery. Its longstanding slogans and ad campaigns, such as "It's the Real Thing," have permeated American life to the point that they are no longer just advertising; rather, they have become cultural icons. Coca-Cola's commitment to quality advertising continues in the modern day through its use of not one but five well-known creative agencies whose primary focus is to maintain Coke's classic status.

This rich history, however, is not perfect. In the early 1980s, Coca-Cola tampered with perfection and launched New Coke, a reformulated version of its product with a new taste and new packaging design. Within weeks, consumers were dissatisfied with the change, and Coke moved swiftly to repair the damage that had been done. It quickly produced "Classic Coke," which was the original formula that consumers had come to know and love. This proved very costly to Coke not only from the production and bottling side but also from the marketing side, where a corrective marketing plan had to be rapidly implemented. Of course, Coca-Cola rebounded with a resounding success, and it continues to be the market leader.

FORCES BEHIND CLASSIC BRANDS

The success stories of the countless other classic brands read much the same as Coca-Cola's. These classic brands all have one common thread throughout their history—successful utilization of the four Ps of marketing, which are product, placement, pricing, and promotion. It is the balance of these four significant factors that takes a brand from a name to a classic.

First and foremost is *product*. Brands must outperform their competition in order to become a classic. The best placement, pricing, and promotion will not raise a mediocre product to classic status, regardless of how many marketing dollars are pumped into it. Before becoming a classic brand, the product must taste better, go faster, work harder, or last longer than other products it competes against.

Second, a product must be properly *placed* in the market in order to overshadow the competition. Its target market must be carefully decided on and, in the case of most classic brands, be rather broad. Most classic brands appeal to a wide demographic range, rather than a small slice of consumers. People from all walks of life use most of the brands that have come to be considered classics. Band-Aids, Coke, Levi's, and Timex can be found in just about any home in America, regardless of income, geographic region, education, or age.

Next, *pricing* must be addressed. When looking at the cost of classic brands in comparison to their competition, the classic brands generally fall in the median price range of the product category. While higher in price than the store house brands and "generics," they are not usually at the costly end of the spectrum either. In part, this is because in order to be well received by the masses, the product must be neither overpriced nor undervalued. There are many quality wristwatches on the market, but Timex, one of the least expensive, has made a name for itself as a classic brand.

Lastly, a product must be adequately and appropriately *promoted* to become a classic brand. Timex, for example, has created memorable television commercials over the years by using the same premise over and over—"Timex takes a licking and keeps on ticking." The public has grown accustomed to seeing what the wristwatch can endure and remain functional. Such a promotional idea stems from a creative department committed to the success of the brand through consistent promotional processes. Promotion must also be constant. There must always be some kind of promotional vehicle in motion to keep the brand name in the forefront of the consumer's mind. Point-of-purchase displays, radio, television, print, and Internet advertising, corporate sponsorships, and contests are all used, often simultaneously, to maintain the public's awareness of the brand.

These four traditional guidelines of product marketing are crucially important for classic brands, for the competition is generally aimed directly at them. Pepsi, for example, spends millions of dollars a year targeting itself directly against Coke. Coca-Cola cannot afford to rest on its classic brand status—they must be constantly engaged in maintaining the perfect balance of product, placement, pricing, and promotion, or risk having its market share overtaken by the hungry competition.

Classic brands are not likely to change over the next several generations. They will not disappear overnight or be swept away by increasing technology. Companies fortunate enough to have classic brands in their product lineup protect their esteemed place vigilantly through careful marketing, innovative ideas, and respect for their place in history.

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KAREN J. PUGLISI

CLASSIC COKE

(SEE: *Classic Brands*)

CLAYTON ANTITRUST ACT OF 1914

(SEE: *Antitrust Legislation*)

CLIMATE IN ORGANIZATIONS

(SEE: *Organizational Behavior and Development*)

CLOSED MANAGEMENT SYSTEMS

(SEE: *Management*)

COGNITIVE DISSONANCE

(SEE: *Consumer Behavior*)

COLLECTIVE BARGAINING

Collective bargaining is "a process of negotiation between management and union representatives for the purpose of arriving at mutually acceptable wages and working conditions for employees" (Boone and Kurtz, 1999, pp. 424-425). Various methods may be used in the bargaining process, but the desired outcome is always mutual acceptance by labor and management of a collective bargaining agreement or contract.

THE BARGAINING PROCESS

The collective bargaining process begins when the majority of workers of an organization vote to be represented by a specific union. The National Labor Relations Board (see Labor Unions) then certifies the union. At this point, the management of the organization must recognize the union as the collective bargaining agent for all the employees of that organization. Once this part of the process is completed, collective bargaining can begin.

Bargaining always takes place between labor and management, but negotiations can include more than one group of workers and more than one employer. Single-plant, single-employer agreements are the most common. However, if an employer has more than one plant or work site, multiplant, single-employer agreements can be bargained. Several different union groups representing the workers of the same employer can use coalition bargaining. Industrywide bargaining involves one national union bargaining with several employers of a specific industry.

Many different negotiation styles can be used when union and labor representatives sit down at the bargaining table. The two basic modes of bargaining are traditional bargaining and partnership bargaining, though there are many variations of each style.

The traditional style of bargaining has been used since collective bargaining began between management and the early labor unions (see Labor Unions). It is an adversarial style of negotiating, pitting one side against the other with little or no understanding of, or education about, the other on the part of either party. Each side places its demands and proposals on the table, and the other side responds to them with counterproposals. The process is negative and involves a struggle of give-and-take on most issues. Even with its negative connotations, however, the traditional style of negotiating is still used effectively in bargaining many union contracts.

The partnership style of bargaining is the more modern approach to negotiations. It strives for mutual understanding and common education on the part of both labor and management, and it focuses on goals and concerns common to both parties. Because of its emphasis on each side's being aware of the issues concerning the other side, partnership-style bargaining is also known as interest-based bargaining. In this process, labor and management each list and explain their needs, and the ensuing discussion revolves around ways to meet those needs that will be not only acceptable but also beneficial to both parties. This style of bargaining is very positive and imparts a much more congenial atmosphere to the negotiating process. Many modern union-management contracts are bargained very successfully using the partnership style.

A blending of the traditional and partnership styles is widely used in labor-management negotiations. The combination approach is used for many reasons, including the fact that many union and management leaders are more familiar with the traditional style. However, with today's more participatory relationship between labor and management in the workplace, the partnership style is becoming more accepted and is being used more frequently. The negotiating process may also include both styles of bargaining because of the variety of issues being negotiated.

The partnership style may be used to negotiate certain issues, while the traditional style may be invoked when bargaining other terms.

COLLECTIVE BARGAINING ISSUES

Labor unions were formed to help workers achieve common goals in the areas of wages, hours, working conditions, and job security. These issues still are the focus of the collective bargaining process, though some new concepts have become the subjects of negotiations. Table 1 lists the issues most often negotiated in union contracts.

THE SETTLEMENT PROCESS

Union contracts are usually bargained to remain in effect for two to three years but may cover longer or shorter periods of time. The process of negotiating a union contract, however, may take an extended period of time. Once the management and union members of the negotiating team come to agreement on the terms of the contract, the union members must accept or reject the agreement by a majority vote. If the agreement is accepted, the contract is ratified and becomes a legally binding agreement remaining in effect for the specified period of time.

If the union membership rejects the terms of the agreement, the negotiating teams from labor and management return to the bargaining table and continue to negotiate. This cycle can be repeated several times. If no agreement can be reached between the two teams, negotiations are said to have ''broken down,'' and several options become available.

Mediation is usually the first alternative when negotiations are at a stalemate. The two parties agree voluntarily to have an impartial third party listen to the proposals of both sides. It is the mediator's job to get the two sides to agree to a settlement. Once the mediator understands where each side stands, he or she makes recommendations for settling their differences. The mediator merely makes suggestions, gives advice, and tries to get labor and management to compromise on a solution. Agreement is still voluntary at this point. The mediator has no power to force either of the parties to settle the contract, though often labor and management do come to agreement by using mediation.

If mediation fails to bring about a settlement, the next step can be arbitration, which can be either compulsory or voluntary. Compulsory arbitration is not often used in labor-management negotiations in the United States. Occasionally, however, the federal government requires union and management to submit to compulsory arbitration. In voluntary arbitration, both sides agree to use the arbitration process and agree that it will be binding. As in mediation, an impartial third party serves in the arbitration process. The arbitrator acts as a judge, listening to both sides and then making a decision on the terms of the settlement, which becomes legally binding on labor and management. Ninety percent of all union contracts use arbitration if the union and management can't come to agreement (Boone and Kurtz, 1999).

SOURCES OF POWER

If the collective bargaining process is not working as a way to settle the differences between labor and management, both sides have weapons they can use to bolster their positions. One of the most effective union tactics is the strike or walkout. While on strike, employees do not report to work and, of course, are not paid. Strikes usually shut down operations, thus pressuring management to give in to the union's demands. Some employees, even though allowed to belong to unions, are not allowed to strike. Federal employees fall into this category. The law also prohibits some state and municipal employees from striking.

During a strike, workers often picket at the entrance to their place of employment. This involves marching, carrying signs, and talking to the media about their demands. The right to picket is protected by the U.S. Constitution as long as it does not involve violence or intimidation. Problems sometimes arise during strikes and picketing when management hires replacement workers, called scabs or strikebreakers, who

Collective Bargaining Issues

Wages	Hours	Working Conditions	Job Security
Regular Compensation Overtime Compensation Incentives Insurance Pensions	Regular Work Hours Overtime Work Hours Vacations Holidays	Rest Periods Grievance Procedures Union Membership Dues Collection	Seniority Evaluation Promotion Layoffs Recalls

Table 1

need to cross the picket line in order to do the jobs of the striking workers.

The boycott is another union strategy to put pressure on management to give in to the union's demands. During a primary boycott, not only union members but also members of the general public are encouraged to refuse to conduct business with the firm in dispute with the union.

Though it is rarely done, management may use the lockout as a tactic to obtain its bargaining objectives. In this situation, management closes down the business, thus keeping union members from working. This puts pressure on the union to settle the contract so employees can get back to their jobs and receive their wages.

Management sometimes uses the injunction as a strategy to put pressure on the union to give in to its demands. An injunction is a court order prohibiting something from being done, such as picketing, or requiring something to be done, such as workers being ordered to return to work.

GRIEVANCE PROCEDURES

Once a collective bargaining agreement is settled and a union contract is signed, it is binding on both the union and management. However, disagreements with contract implementation can arise and violations of the contract terms can occur. In these cases, a grievance, or complaint, can be filed. The differences that must be resolved are usually handled through a step-by-step process that is outlined in the collective bargaining agreement. The grievance procedure begins with a complaint to the worker's immediate supervisor and, if unresolved at that level, moves upward, step by step, to higher levels of management. If no resolution is found at any of these levels, the two parties can agree to have the grievance submitted to an impartial outside arbitrator for a decision binding to the union and management.

Collective bargaining is a successful way for workers to reach their goals concerning acceptable wages, hours, and working conditions. It allows workers to bargain as a team to satisfy their needs. Collective bargaining also allows management to negotiate efficiently with workers by bargaining with them as a group instead of with each one individually. Though traditional bargaining can be negative and adversarial, it does produce collective bargaining agreements between labor and management. Partnership bargaining can lead to increased understanding and trust between labor and management. It is a positive, cooperative approach to collective bargaining that also culminates in contracts between labor and management.

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PAULA DEA LEE

COMMAND ECONOMIES

(SEE: *Economic Systems*)

COMMON MARKET

(SEE: *Trading Blocs*)

COMMUNICATION CHANNELS

In the basic communication process, a sender puts a message in words and transmits it to a receiver who interprets the message. The medium the sender chooses to transmit the message is called the communication channel.

Traditionally, it was thought that the words chosen and way they were interpreted were solely responsible for a successful message. However, beginning in the 1960s with Marshall McLuhan, many came to believe that the medium was the message. Today, with the help of media richness theory (Lengel and Daft 1998), most people realize that the appropriate choice of communication channel (medium) contributes significantly, along with the words, to the success of a message. Appropriate choice helps senders communicate clearly, saving them and their businesses time and money. Therefore, examining various communication channels to understand their appropriate use is important.

Media richness theory ranks communication channels along a continuum of richness, defining highly rich channels as those handling multiple inherent cues simultaneously, such as using feedback, nonverbal cues, and several senses. A face-to-face meeting, which employs feedback as well as audio and visual senses, is considered extremely rich. However, a newsletter or brochure is lean, involving only the visual sense and slow or no feedback. Several of these channels—brochures, letters, e-mail messages, video e-mail messages, telephone conversations, videoconferencing, and face-to-face meetings—will be reviewed, along with some guides for appropriate use.

BROCHURES

Writers usually create brochures to provide information on a product or service. While often used for persuasive purposes, they are usually presented as routine informational documents. Writers lay out the information carefully, often designing the visual layout as carefully as they compose the text of the content. This lean channel works effectively when one-way communication in a visual medium is needed. In choosing this channel, the sender is eliminating any extraneous information a richer source might include in order to keep the content of the message clear and focused.

LETTERS

Letters are primarily printed, formal business documents. They are best used today when one wants to convey important, nonroutine information, such as job offers or refusals, promotions, awards and honors, and other kinds of special announcements. Also, they are an appropriate channel for certain attempts at persuasion, such as soliciting contributions to a special cause, asking someone to speak to a group, or proposing the acceptance of an idea. Today print letters are still used as advertising tools; however, the most effective ones are those that are individually customized, making them a special message.

E-MAIL MESSAGES

E-mail messages are widely used in business as well as in personal life. While e-mail is a fast and efficient channel, it is considered lean because it allows for no eye contact and few nonverbal cues. Therefore, e-mail messages are primarily used in routine contexts. The notes writers send to family and friends are usually accounts of day-to-day activities, with more important, special messages communicated through richer channels. Business users, too, choose e-mail for conducting the rou-

Videoconferencing allows people in different locations to interact.

tine affairs of the business, leaving special or nonroutine messages for other channels.

VIDEO E-MAIL MESSAGES

A relatively new variant of e-mail is video e-mail. While much richer than text-based e-mail, video e-mail is still a one-way communication channel. The lack of interactivity makes it appropriate for messages that need richness but not real-time feedback. Even with today's improved compression technologies, video e-mail messages can be very large files. For example, a thirty-second video message might typically require around one megabyte—the upper limit of many e-mail systems. Personal use of this channel might be appropriate for such situations as showing a new haircut, introducing new friends, and even showing a new baby. On the other hand, business use of video e-mail is still evolving. Obviously, when one needs to show something—say a new package design—it would be a good choice. A short sales message might be appropriate in some contexts. At this time, the best use of this channel appears to be special messages.

TELEPHONE CONVERSATIONS

A somewhat richer channel is the telephone. It transmits sound rather than printed words and sound can enrich the message's words with emphasis and emotion. It also allows for immediate feedback, qualifying it as a richer channel one would use to get important, immediate responses. The choice of this channel to transmit a message is highly contextual. Some receivers view the telephone as invasive, relying on voice-mail systems to get messages. Others view the telephone as an important way of doing business. These receivers often carry cell phones or pagers so they can get important messages wherever they go. Knowing the importance of your message as well as the receiver's preferred way of doing business is critical to choosing—or not choosing—this channel.

VIDEOCONFERENCING

As a communication channel, videoconferencing is extremely rich. Its technology allows people in different locations to see and talk with one another interactively. Its users choose it for its convenience as well as its cost-effectiveness. It is available in most large companies as well as in business centers for use by smaller companies and individuals. For example, a company might want to have the vice president for sales in on its planning meeting for a new product launch without asking that person to travel to its site for a thirty-minute meeting. Or a company might want to screen job candidates and then bring in only the top candidates for on-site interviews. As a rule, this channel is best used when the communication needs are special, immediate, or otherwise expensive.

FACE-TO-FACE MEETINGS

Face-to-face meetings are ranked at the top of the richness scale because they allow complete use of all senses and continuous feedback. Companies find such meetings to be a good choice for nonroutine business, such as planning new products, analyzing markets and business strategy, negotiating issues, and solving or resolving problems. Additionally, the face-to-face meetings of teams often provide a synergistic effect that improves the outcome of their actions. The collaboration efforts face-to-face meetings evoke are often worth the time and expense of using this channel.

SUMMARY

While these channels are not the only ones available, they clearly show that the sender of a message has range of choices from lean to rich. To help ensure successful communication, the sender needs to select the channel appropriate for the context. Additionally, in choosing an appropriate channel, one needs to consider not only richness but also other factors such as training and accessibility. For example, while a fax is relatively easy to send, some people may not have easy access to receiving it, while others could easily have it forwarded to a pager or a wireless phone wherever they are.

Appropriate choice of communication channel leads to productivity increases and positive social effects. Understanding how the appropriate choice affects the success of a message helps senders decide which communication channel to use.

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MARIE E. FLATLEY

COMMUNICATIONS IN BUSINESS

Communication, stated simply, is conveying a message, through a channel, from one person to another; that is, connecting or sharing thoughts, opinions, and intelligence. Communication is a mechanism for all types of interaction and connectivity. It can instantaneously bring people together. It can link ideas and things. It can deliver news and facts. It can impart knowledge. Because communication can be expressed as words, letters, pictures, gestures, signals, colors, and so forth, it is credited with being the single element that has brought all corners of the world closer together. In business, communication is the critical backbone of an organization's ability to operate internally and externally as well as nationally and internationally.

COMMUNICATION BASICS

Communication, in its most basic definition, involves a sender (encoder) and a receiver (decoder). The sender encodes a message, deciding what content and relationship codes to use, and sends it via a communication channel (face to face, e-mail, telephone, etc.). The receiver (decoder) takes the message and, in the decoding process, attempts to understand its content and relationship meaning. After decoding, the receiver then may respond, via a communication channel, to the sender with a new message based on the receiver's perception of what the message imparted in terms of information and the relationship with the sender. To be most effective, the feedback loop (the receiver's decoded interpretation of the original message) should go forward; that is, the receiver should respond to the sender. This provides the sender with two vital pieces of information: (1) whether the original message was correctly understood as sent and (2) the new message. This allows for early correction of incorrectly decoded messages. The decoding, encoding, and feedback loop continue as the parties communicate.

In the decoding of a message, miscommunication and/or missed communication can occur. In the feedback loop, it is critical both that the sender provide the intended message, and that the receiver clarify how that message was perceived. The greater the number of people involved in the message exchange process and the greater their differences in values, beliefs, attitudes, and knowledge of the subject matter, the greater are the chances that the message will be decoded improperly and a communication breakdown will occur.

Communication is most successful when it is understood by all persons involved in the process. That is, good communication is free from social colloquialisms, intercultural mores, and gender-based styles. Because communication may be conveyed in many forms, it is frequently described in two general categories: verbal and nonverbal. Nonverbal communication includes body language, gestures, and signals. In general, successful communication depends on how well a sender conveys a message to a receiver relying on the six senses (seeing, hearing, speaking, smelling, touching, and tasting) and feedback.

COMMUNICATION RULES

There are several rules for successful communication. The following checklist provides a guide to creating successful communication:

- Make messages clear, correct, comprehensive, and concise.
- Include an action step with deadlines in messages that requires a response.
- Select correct channels of communication based on message content and relationship components.
- Structure the message so as not to overload the receiver with information.
- Develop sensitivity to the receiver's communication style and create the message accordingly.
- Be aware of how cultural patterns affect communication style and take this into consideration in sending and receiving messages.
- Be aware that people operating in a second language may still code/decode messages based on their first culture's communication patterns.
- Enhance listening skills as an aspect of effective use of the feedback loop.
- Recognize that all messages should be received with a positive attitude.

COMMUNICATION TRANSMISSION MODES

Technology-mediated communication has become the norm in today's worldwide business environment. Messages are communicated regularly via e-mail, fax, and phones. People still meet face to face, but they also use express mail and courier services, messaging and paging systems, caller identification and transfer/forwarding telephony (phone, telex, etc.) systems, and many other combinations of message transfer and delivery methods. Signaling, biometrics, scanning, imagery, and holography also have a place in business communication. Additionally, many professionals work in virtual groups using satellite uplink/downlinks, videoconferencing, and computer groupware. In using these technologies, it is important to recognize the limits of the channel of communication selected. For example, e-mail is efficient but does not convey the nuances of a message that can be gained from facial expressions or gestures. The use of multiple channels of communication may be critical if the content is quite complex; thus, a verbal message may not be sufficient. The importance of using the feedback loop becomes more critical as the content and/or relational aspects of the messages expand. Also, as more workgroups operate globally in a virtual medium, cultural patterns must be considered in the quest for clear and effective communication. The expansion of global business combined with advances in technology has created more cross-cultural opportunities. When working in a cross-cultural, multinational/multicultural environment, it is necessary to understand that culture influences people's behavior as well as their attitudes and beliefs. We encode/decode messages with perceptions learned from our cultural filters. In intercultural situations, the professional is careful to use the feedback loop to clarify understanding of the received message. Just because a message has been received rapidly or with use of high-level technology does not mean that the receiver has decoded it properly.

TYPES OF COMMUNICATION

Written communication usually takes the form of letters, memos, reports, manuscripts, personal correspondence, notes, forms, applications, resumes, legal and medical documents, and so on.

Spoken communication includes, among other things, presentations, verbal exchange (e.g., one-on-one, to a group), and voice messaging. Speaking distinctly, with appropriate speed, as well as paying attention to voice inflection, tone, resonation, pitch clarity, and volume are important to the way a spoken message is received. Frequently, the way a spoken message is delivered is as or more important than the content of the message (a good example is a joke that has perfect timing). More than 90 percent of what a message conveys may actually be based on a positive attitude and nonverbal elements.

Nonverbal communication includes body language (e.g., facial expression, eye contact, body stance or sitting position, distance between sender and receiver, gesturing), which can send signals to the receiver that are much stronger than the message itself. If a picture truly speaks louder than a thousand words, communication by means other than the spoken and written word—such as colors worn, signals or mannerisms reflecting personality or preferences, gesturing—can make a big difference in the message that is conveyed.

COMMUNICATION CHANNELS

Communication in a society, whether personal or business, is critical. Individuals or organizations depend on it to function. Most businesses need both internal and external communication to be productive. Internal communication is communication that is exchanged within an organization. Usually it is less formal than communication that goes to those outside the business. Informal communication may range from chats in the hallway and lunchroom, team and group meetings, casual conversations over the phone or e-mail, and memos and preliminary reports to teleconferencing, brainstorming idea sessions, department or division meetings, and draft documents. Informal communication also includes the grapevine, gossip, and the rumor mill; these communication channels rely on people passing on messages to co-workers, friends, and others. If accurate, they can be very effective.

External communication usually refers to messages that extend beyond the business organization. Because it reflects the organization's image, external communication is usually more formal. External communication is an extension of the organization and can be an important channel for marketing the company's image, mission, products, and/or services.

COMMUNICATION PARAMETERS

The selection or type of business communication takes many factors into consideration, including (1) the nature of the business (e.g., government, commerce, industry, private or public organization, manufacturing or marketing firm); (2) the mission and the philosophy of the organization (open verses limited or closed communication patterns); (3) the way the business is organized (e.g., small or large company, branch offices, subsidiaries); (4) the leadership styles of the organization's managers and supervisors the (democratic, authoritarian, dictatorial, pragmatic, etc.); (5) the number and types of personnel as well as the levels of employees (hierarchy or status of positions, managerial or laborers, supervisors or team leaders, etc.); (6) the proximity of work units (closeness of departments, divisions, or groups that depend on information from each other); and (7) the need for communication (who needs to know what, when, why, and how for informed decision making to take place).

COMMUNICATION SYSTEM

Every group (from an organization, to a family) has a communication system or network. Some are very effective and efficient while others are just the opposite. Even if communication appears to be (or is) nonexistent within an organization or group, the group has a communication system. That is, poor or nonexistent communication still conveys a message: no communication is taking place or there is a lack of exchange of information or messages within the group.

COMMUNICATION STYLES

Without realizing it, most people communicate with others (verbally as well as nonverbally) according to a dominant style. Essentially, people communicate in one of four basic styles: (1) directly or authoritatively (an in-charge person or one who is a driving force to get things done); (2) analytically or as a fact finder (a person who plans, researches, and analyzes the facts and weighs the alternatives carefully); (3) amiably or as a coach (a supportive team builder who gets people to work together toward a common goal); and (4) expressively or flamboyantly (a cheerleader with a positive attitude who has lots of ideas and motivates others toward taking action). Communication styles are developed over time and with practice. They may also reflect cultural norms. It is important to understand one's own communication style as well as those of others in order to maximize one's communication interactions.

BARRIERS TO COMMUNICATION

Effective communication relies in part on eliminating as many communication barriers as possible. Some of the ways to avoid common barriers to communication include the following:

- Stay focused on the topic.
- If timing is important, adhere to the deadline.
- Be willing to use communication strategy appropriate to the situation; listen, negotiate, compromise, modify, and learn from feedback.
- Avoid relying on the grapevine as a source of facts even though it may have been an accurate communication channel in the past.
- Be sincere, empathetic, and sensitive to others' feelings; one's voice, actions, and other nonverbal cues speak loudly.
- Seek out information about unknowns, especially when cultural and gender differences are involved.
- Be tactful, polite, clear, prepared, and, above all, let a positive attitude guide all communication.

Sharon Lund O'Neil
D. Gaye Perry

COMMUNISM

(SEE: *Economic Systems*)

COMPARISON SHOPPING

(SEE: *Shopping*)

COMPETITION

Competition is the battle between businesses to win consumer acceptance and loyalty. The *free-enterprise system* ensures that businesses make decisions about what to produce, how to produce it, and what price to charge for the product or service. Competition is a basic premise of the free-enterprise system because it is believed that having more than one business competing for the same consumers will cause the products and/or services to be provided at a better quality and a lower cost than if there were no competitors. In other words, competition should provide the consumers with the best value for their hard-earned dollar.

ASPECTS OF COMPETITION

To be successful in today's very competitive business world, it is important for businesses to be aware of what their competitors are doing and to find a way to compete by matching or improving on the competitors' product or service. For example, if Pepsi-Cola offers a new caffeine-free soda, Coca-Cola may offer a new caffeine-free soda with only one calorie. By offering an improvement on the competitor's product, Coca-Cola is trying to convince soft-drink consumers to buy the new Coke product because it is an improvement on Pepsi's product.

While being aware of the competition and making a countermove is important, it is also very important to pay attention to changing consumer wants, needs, and values and to make the needed changes before the competition does. Doing research and development and being the first to provide a new product or service can give a company a *competitive advantage* in the marketplace. Once consumers purchase a product or service and are satisfied with it, they will typically purchase the same product again. Having a *competitive advantage* means that a company does something better than the competition. Having a competitive advantage might mean inventing a new product; providing the best quality, the lowest prices, or the best customer service; or having cutting-edge technology. To determine an area where a company might have a competitive advantage, a *SWOT analysis* is often done to identify the company's internal *S*trengths and *W*eaknesses and the external *O*pportunities and *T*hreats. A SWOT analysis lets the company know in which area(s) it has a competitive advantage so it can concentrate on those areas in the production and marketing of its product(s) or service(s).

In addition to staying on top of changing consumer preferences, companies must constantly be looking for ways to cut costs and increase productivity. Companies must provide consumers with the best-quality product at the lowest cost while still making a profit if they are to be successful competitors in the long run. One way to remain competitive is through the use of technology. Technology can help speed up production processes through the use of robots or production lines, move information more accurately and more quickly through the use of computer systems, and assist in research and development proceedings.

Global competition has made gaining consumer acceptance an even tougher challenge for most businesses. Firms in other countries may be able to produce products and provide services at a lower cost than American businesses. In order to compete, American businesses must find other ways to win consumers. One way for businesses to accomplish this is through competitive differentiation. *Competitive differentiation* occurs when a firm somehow differentiates its product or service from that of competitors. Competitive differentiation may be an actual difference, such as a longer warranty or a lower price, but often the difference is only perceived. Difference in perception is usually accomplished through advertising, the purpose of which is to convince consumers that one company's product is different from another company's product. Common ways to differentiate a product or service include advertising a better-quality product, better service, better taste, or just a better image. Competitive differentiation is used extensively in the monopolistic form of competition, discussed below.

FORMS OF COMPETITION

Although each form has many aspects, not all of which can be considered here, competition can generally be classified into four main categories: perfect competition, monopolistic competition, oligopoly, and monopoly. (Table 1 summarizes the basic differences among these four types of competition.)

Perfect Competition *Perfect competition* (also known as *pure competition*) exists when a large number of sellers produce products or services that seem to be identical. These types of businesses are typically run on a small scale, and participants have no control over the selling price of their product because no one seller is large enough to dictate the price of the product. Instead, the price of the product is set by the market. There are many competitors in a perfect competition industry, and it is fairly easy to enter or leave the industry. While there are no ideal examples of perfect competition, agricultural products are considered to be the closest example in today's economy. The corn grown by one farmer is virtually identical to the corn grown by another farmer, and the current market controls the price the farmers receive for their crops. Perfect competition follows the law of supply and demand. If the price of a product is high, consumers will demand less of the product while the suppliers will want to supply more. If the price of a product is low, the consumers will demand more of the product, but the suppliers will be unwilling to sell much at such a low price. The *equilibrium point* is where the supply and the demand meet and determine the market price. For example, if the going market price for wheat is $5 a bushel and a farmer tries to sell wheat for $6 a bushel, no one will buy because they can get it for $5 a bushel from someone else. On the other hand, if a farmer offers to sell wheat for $4 a bushel, the crop will sell, but the farmer has lost money because the crop is worth $5 a bushel on the open market.

Monopolistic Competition *Monopolistic competition* exists when a large number of sellers produce a product or service that is perceived by consumers as being different from that of a competitor but is actually quite similar. This perception of difference is the result of product differentiation, which is the key to success in a monopolistic industry. Products can be differentiated based on price, quality, image, or some other feature, depending on the product. For example, there are many different brands of bath soap on the market today. Each brand of soap is similar because it is designed to get the user clean; however, each soap product tries to differentiate itself from the competition to attract consumers. One soap might claim that it leaves you with soft skin, while another soap might claim that it has a clean, fresh scent. Each participant in this market structure has some control over pricing, which means it can alter the selling price as long as consumers are still willing to buy its product at the new price. If one product costs twice as much as similar products on the market, chances are most consumers will avoid buying the more expensive product and buy the competitors' products instead. There can be few or many competitors (typically many) in a monopolistic industry, and it is somewhat difficult to enter or leave such an industry. Monopolistic products are typically found in retailing businesses. Some examples of monopolistic products and/or services are shampoo products, extermination services, oil changes, toothpaste, and fast-food restaurants.

Oligopoly An oligopoly (which is described more completely in another article) exists when there are few sellers in a certain industry. This occurs because a large investment is required to enter the industry, which makes it difficult to enter or leave. The businesses involved in an oligopoly type of industry are typically very large because they have the financial ability to make the needed investment. The type of products sold in an oligopoly can be similar or different, and each seller has some control over price. Examples of oligopolies include the automobile, airplane, and steel industries.

Monopoly A monopoly (which is described more completely in another article) exists when a single seller controls the supply of a good or service and prevents other businesses from entering the field. Being the only provider of a certain good or service gives the seller considerable control over price. Monopolies are prohibited by law in the United States; however, government-regu-

Types of Competition

Characteristics	Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Number of competitors	Many	Few to many	Very few	No direct competition
Ease of entry or exit from industry	Easy	Somewhat difficult	Difficult	Regulated by U.S. government
Similarity of goods/services offered by competing firms	Same	Seemingly different but may be quite similar	Similar or different	No directly competing products
Individual firm's control over price	None (set by the market)	Some	Some	Considerable (in true monopoly) Little (in regulated one)
Examples	Farmer	Fast-food restaurant	Automotive manufacturer	Power company

Table 1

lated monopolies do exist in some business areas because of the huge up-front investment that must be made in order to provide some types of services. Examples of monopolies in the United States are public utility companies that provide services and/or products such as gas, water, and/or electricity.

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MARCY SATTERWHITE

COMPILATION AND REVIEW SERVICES

Public accountants are qualified to provide a range of services related to financial statements. Among the services are reviews and compilations, which are less comprehensive than audits, which are required for publicly owned companies. Statements on Standards for Accounting and Review Services are issued by the Accounting and Review Services Committee, which is the senior technical committee of the American Institute of Certified Public Accountants (AICPA) designated to issue pronouncements in connection with the unaudited financial statements or other unaudited financial information of a nonpublic entity.

NATURE OF ENGAGEMENTS CONTRASTED WITH AN AUDIT

A review is less than an audit inasmuch as a review does not involve obtaining an understanding of internal control, assessing control risk, testing accounting records, and obtaining corroborating evidence to support the financial information shown in the financial statements. The public accountant provides limited assurance with a review. This type of assurance is limited in that the CPA firm states that it is not aware of any modifications that should be made to the financial statements in order for them to be in accordance with generally accepted accounting principles (GAAP). While the CPA firm is not stating that the statements are in accordance with GAAP, it is noting that nothing came to its attention to indicate that the statements are *not* in accordance with GAAP. In order to express this type of limited assurance, the CPA firm should perform more work than in a compilation, but less than in an audit.

A review requires that public accountants make inquiry and perform analytical procedures, which is a type of analysis that examines the relationships among data. For example, if CPAs notice that a company's reported sales are much larger than in the prior year, they should ask management why this is the case. However, the extent of investigation of this change would be much less than if the CPAs were performing an audit. When CPAs issue a review report, the report states explicitly that the procedures performed were much less stringent than what would be required to express an opinion on an audit and that they do not express such an opinion.

A compilation offers *no assurance* that the financial statements are in accordance with GAAP. The word "compilation" is a good description of the type of service performed—the CPAs actually "compile," or put together, the information supplied by the company's management. While CPAs should be familiar with the practices specific to the client's industry, they do not have to perform the verification types of procedures associated with an audit. All the CPAs must do is to make sure the financial statements are free from obvious errors (e.g., the balance sheet should balance!) and make sure necessary footnote disclosures are included. In their compilation reports, CPAs state explicitly that they have not performed a review or an audit and that they do not express an opinion or offer any type of assurance on the financial statements.

Accountants performing a compilation should possess a level of knowledge of the accounting principles and practices of the industry in which the entity operates so that the financial statements compiled will be appropriate in form for a company operating in that industry. This does not mean accountants cannot accept an engagement to prepare a compilation for a company in an industry with which they are unfamiliar. However, accountants in this situation have the responsibility to obtain the required level of knowledge. There are many resources—including AICPA guides, industry publications, financial statements of other companies in the industry, periodicals, and Web sites—that provide the required background information.

To compile financial statements, accountants should have a general understanding of the nature of the company's business transactions, the nature and extent of accounting records maintained, the qualifications of the accounting personnel responsible for the accounting process, and the accounting basis on which the financial statements are to be presented, as well as the form and content of the financial statements. Accountants are not required to make inquiries or perform other procedures to verify, corroborate, or review information supplied by the entity. However, inquiries are likely to be needed in order to become acquainted with the entity's accounting system.

REQUIREMENT FOR INDEPENDENCE

Another important difference among these services provided by the CPA is the level of independence required of the CPA who performs the service. Independence is a state of separation between the CPA and the client. There are two types of independence mentioned in the standards—*independence in fact*, which is an impartial state of mind, and *independence in appearance*, which relates more to how others would perceive the relationship. For example, if the CPA were related to the client or served on the firm's board of directors, readers of the report might perceive it as biased. In order to provide any type of assurance, CPAs must be independent in fact and appearance. Therefore, both audits and reviews require independent CPAs. However, CPAs do not have to be independent to perform a compilation; but if they are not independent, they must disclose this to readers of their compilation report.

APPROPRIATE USE OF COMPILATIONS AND REVIEWS

So, what type of a client hires a CPA to perform a compilation or a review instead of a full-blown audit? To understand this issue, it is first necessary to understand why some companies need audits. If the management of the company is separate from the suppliers of funding (i.e., stockholders or banks), there is a "monitoring" problem. Basically, banks or stockholders cannot be sure the information provided is reliable, so they charge the company a higher interest rate (or offer them a lower return on their investment) because of the increased risk they face due to this uncertainty. The management of the company, therefore, hires an auditor to attest to the fact that the information is reliable in order to lower the company's "cost of capital."

Now, picture the case of a small sole practitioner who is both the owner and manager of her company. It might be the case that she wants financial statements prepared so that she can assess her own performance, but does not require a great deal of assurance regarding the reliability of the numbers because she is the one who provided them to the CPA. In essence, the person providing the information is also the user of the report, so it would not be necessary to have an independent auditor provide assurance on the reliability of the financial statements. In this case, the owner/manager would probably hire the CPA to perform a compilation because it would cost less money and would be sufficient for her purposes.

Many banks want some form of assurance from small-business owners before lending them money but realize that an audit might be too expensive. They therefore require an independent CPA to provide a review report to give them limited assurance that the financial statements are fairly presented. This type of review is most often performed for nonpublic companies whose securities are not traded on an exchange.

Reviews are also performed for public companies. These companies are audited annually, but the Securities and Exchange Commission (SEC) also requires them to file quarterly financial statements, which are unaudited. Public companies often hire CPAs to perform a review of these interim financial statements. While a review is not required for quarterly reports, the Big Five international CPA firms in 1999 announced that they would not audit any public company that would not allow them to review their quarterly financial statements. They feel that this will provide them with ongoing access to firms' information and thus prevent any big audit surprises at the end of the year. While this Big 5 agreement is not an official accounting standard, it is an important development. Smaller accounting firms have not disclosed whether they will also follow this practice of requiring reviews of quarterly data, but it seems likely that a lot more review reports will be issued in the near future.

SUMMARY

Audits require an independent CPA to perform a substantial amount of work in order to provide positive assurance that the client's financial statements are fairly presented in accordance with GAAP. A review requires an independent CPA to perform more limited procedures to see if the financial statements seem reasonable enough to allow the CPA to provide negative assurance that no problems were noted. To perform a compilation, the CPA does not have to be independent and does not provide any assurance as to whether or not the financial statements are presented in accordance with GAAP.

(SEE ALSO: *Accounting*)

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VICKY B. HOFFMAN

COMPLIANCE AUDITS

(SEE: *Auditing*)

COMPUTER GRAPHICS

The basic building block of images on a computer screen is a dot of light called a *pixel*—the word created by combining the words "picture" and "element."

The computer, because it can present thousands of pixels on a computer screen in millions of different colors, can create shapes that the human eye recognizes as an image—a computer graphic.

It is hard now to imagine a world without computer graphics. Today's children have grown up with video games, and graphic designers work almost exclusively with computer programs to create images once laboriously drawn with pen, compass, ruler, and T-square on paper. Pilots learn the latest techniques of flying in flight simulators; engineers and architects design everything from aircraft to skyscrapers, making three-dimensional models with their computers; TV weather maps display precipitation as it occurs; and doctors can look inside a patient's body without breaking the skin.

It was in the early 1960s that computer pioneers at leading universities began developing computers and the graphics programs that have revolutionized the way we create visual images. The invention of the video display terminal, or computer monitor or screen, and its widespread use beginning in the 1970s, led to the revolution in the way computers were put to use. This revolution was accelerated by the introduction of the photocopier and the electronic spreadsheet to the computer field.

The photocopier was invented by Chester Carlson in 1940 and first produced commercially by Xerox Corporation in 1959. The photocopier's cousin, the desktop laser printer, along with software for desktop publishing (a term coined in the early 1980s), made it possible for amateurs to create polished newsletters, flyers, party invitations, and other documents for modest-sized audiences. Now, with the use of scanners, individuals can produce documents containing color photos, original drawings, or any graphic image from a publication or the Internet with permission from the owners of those images.

Electronic *spreadsheets*, which appeared in 1978, incorporated mathematical formulas behind each element in a table of data. These formulas could refer to other elements of the table. Any change in one value would immediately affect the other cells, so business projections such as sales, growth, or changes in interest rates could be manipulated to explore "what if" scenarios; the impact of every change would be instantly apparent. Such tables can then be imported via computers into a text document to clarify and enhance the information in the document.

Computer memory and speed seem to expand by the day, along with the sophistication of graphics programs, allowing individuals in their own homes and offices to produce graphic materials that match or exceed the capabilities of even the most advanced printing firms only a few years ago.

To create a graphic image, a computer program will supply a series of instructions. Those instructions will tell a computer how to connect two points to form a straight line, draw a circle, or form a letter in printed text. To accomplish

Computer airplane simulators used to help train pilots feature extensive graphics.

this, computer scientists have devised methods to break down complex drawing tasks to simple components. The computer program then repeats those drawing tasks over and over to form a complete image.

Drawing an image of a brick wall by hand, for example, would require an artist or draftsperson to draw hundreds or thousands of rectangles individually. The computer, on the other hand, would draw one brick, then using the same mathematical formula it used to create the first brick, would duplicate it thousands of times almost instantaneously.

Computers are excellent number crunchers. The thousands of calculations—even simple addition or subtraction calculations—needed to create a computer image would be an immensely time-consuming process without computers. But with these calculations written into a computer graphics program, the computer will quickly and precisely light up the pixels needed to create the desired graphic image on the video monitor.

Pixels are arranged in rows and columns on a screen. The number of pixels in rows times the number of pixels in columns determines their density, or *resolution.* Resolution is one component of the computer's ability to form a distinguishable image. A typical computer screen contains 640 pixels in a line and 480 pixels vertically. Multiplied, the number of pixels on a typical screen equals 307,200.

To draw the simplest graphics—those in black and white—the computer program will assign the number 1 to those pixels that are to be lighted and 0 to those that will remain unlit. The contrast created between lighted and unlighted dots forms the graphic image. Numbers written into computer programs likewise determine the color of each pixel in a color system.

Although the ability of computer hardware and software to produce a dense or high-resolution image is important to creating a quality image, their ability to duplicate colors is even more important.

Primary colors—reds, greens, and blues—can be combined to produce full or true color. Their lightness or darkness—or values—as well as their color create shapes, just as they would in a painting or drawing.

The number of pieces of information (*bits*) set aside for each pixel in a region of computer memory known as the *video buffer* determines how many colors the screen can display at once. A true color system is capable of displaying more than 16.7 million colors. However, because of the limits of computer memory, ordinary computers employ a 256-color system.

A program will command the use of one of the 256 colors from a *color palette*, which in turn will transfer that color to a pixel. Determining the numbers to achieve the desired color and value is the core of the science of computer graphics.

By limiting the possible colors to 256, each pixel cannot be illuminated with the perfect color. However, the computer, through a process called *dithering*, can fool the eye by blending colors among adjacent pixels. If a particular red color is not available from the color palette, the computer will spread its available red values around adjacent pixels—giving more red values and fewer green and blue values to some while giving fewer red values and more green and blue values to others to achieve the desired overall color. The process of dithering starts at the image's upper-left corner. In turn the computer will dither each pixel's red, blue, and green color values to make the image appear to the eye as color-accurate, ending at the lower-right corner of the image.

In addition to dithering, a computer can reproduce a true color image, such as a photograph containing thousands of colors, with accuracy by optimizing the use of the 256 colors available through the computer's palette.

One such technique counts the number of colors in an image and gives priority to the ones used the most. But this leaves some colors unrepresented and thus unavailable where needed. To solve this problem, a computer program will carve up an image containing several thousand colors into 256 equal "blocks" grouped according to their intensity of color. It discards the blocks with no or few dots. The remaining pixels are then divided up into 256 blocks with an equal number of pixels.

With color space divided up this way, the average of all the pixel values in each block represents an optimal choice for a palette color.

When a computer graphics program draws a line or circle, it chooses which of the pixels to illuminate on a line from point A to point B, for example, by a simple method of addition and subtraction. First the computer illuminates the pixel at point A. Then the computer moves toward B one pixel closer. Should it illuminate the pixel on the same row or one on the row above or below? A simple calculation shows the computer which of the two pixels lies closer to the ideal line, and it illuminates that pixel.

In milliseconds, the program continues to move along the line, calculating which pixel to illuminate until it reaches point B, creating a line that is not strictly straight, but straight enough to appear so to the eye.

Just as with lines, the program will create any shape—triangle, square, or polygon—using a mathematical formula pertaining to that shape. Circles are created in much the same way. The program will choose which pixel to illuminate by measuring its distance from the center of the circle and calculating whether the one at that point along the circumference will help create the circle's ideal shape. Again, the circle is not perfectly circular, but the eye is somewhat deceived because each pixel that is illuminated differs only slightly from its neighbor.

Because computer graphic images can require large amounts of computer memory to be reproducible, techniques have been developed to reduce, or compress, the number of bits of memory needed to store the image.

One such image compression technique is named *run-length encoding (RLE)*. It uses markers that stand for runs of repeating numbers in a graphics file, reducing to two—one specifying the number and another the number of that number in a run—in a file. For example, a file that contains 50 identically colored red pixels with a value of 200 can be substituted with the numbers 50 and 200. With this process, the computer knows the image requires 50 characters with a 200 red value, but it stores only those two commands, a one-twenty-fifth reduction.

Another compression method, *JPEG*, takes its name from, the *Joint Photographic Experts Group*, the organization that invented it. It uses mathematical formulas to segregate information about an image by its importance, and then discards the less important information. The image that results after such compression will not exactly match the original, since some information has been lost in the process.

Another important file format is the *Tagged-Image File Format (TIFF)* which can be read in either IBM-PC-compatible or Macintosh computers.

To create three-dimensional images, a computer uses a mathematical transformation called a *projection.* Although the images are presented on a two-dimensional screen, the computer, through using the principle of perspective—foreshortening, shading, and hidden surface removal—and through its ability to make quick calculations, can portray the object so as to make it appear to the human eye as a three-dimensional object. These techniques are the basis for computer-aided drafting and computer animation.

Rapidly changing 3-D images on the computer screen creates the illusion of motion, or animation. An animated movie will use slightly differing images on a filmstrip to create the illusion of motion. A computer acts much the same way, although it cannot produce the twenty-four full-screen images per second typical in an animated film.

The computer, however, will accomplish the same effect by displaying one image on the screen while creating a new image in the background and swapping the screen. This eliminates the time between display of the images, creating the illusion of motion.

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WALTER A. HAMILTON

COMPUTERS

(SEE: *Information Technology*)

CONFLICT MANAGEMENT

(SEE: *Management Theories*)

CONSUMER ADVOCACY AND PROTECTION

Consumer advocacy refers to actions taken by individuals or groups to promote and protect the interests of the buying public. Historically, consumer advocates have assumed a somewhat adversarial role in exposing unfair business practices or unsafe products that threaten the welfare of the general public. Consumer advocates use tactics such as publicity, boycotts, letter-writing campaigns, Internet “gripe sites,” and lawsuits to raise awareness of issues affecting consumers and to counteract the financial and political power of the organizations they target. Since even large, multinational businesses can be visibly wounded when their mistreatment of consumers or other constituencies arouses the ire of consumer advocacy organizations, it should be obvious to business owners that they can ill afford to engage in business practices that could draw the attention of consumer advocates.

Periods of vocal consumer advocacy around the turn of the twentieth century and in the late 1960s have left a legacy of federal legislation and agencies intended to protect consumers in the United States. The rights of consumers have expanded to include product safety, the legitimacy of advertising claims, the satisfactory resolution of grievances, and a say in government decisions.

President Lyndon B. Johnson, surrounded by advisors and staff, signing a consumer bill.

In the early days of industry, companies could afford to ignore consumers' wishes because there was so much demand for their goods and services. As a result, they were often able to command high prices for products of poor quality. The earliest consumer advocates to point out such abuses were called "muckrakers," and their revelations of underhanded business practices spurred the creation of several federal agencies and a flurry of legislation designed to curb some of the most serious abuses. At the same time, increased competition began to provide consumers with more choices among a variety of products of higher quality. Still, some notable cases of corporations neglecting the public welfare for their own gain continued, and corporate influence in American politics enabled many businesses to resist calls for reform in advertising, worker or consumer safety, and pollution control.

This situation led to the consumer movement of the 1960s. One of the country's most outspoken and controversial consumer advocates, lawyer Ralph Nader, came to the forefront during this time. Nader's effective and well-publicized denunciations of the American automobile industry included class-action lawsuits and calls for recalls of allegedly defective products, and many of his actions served as a tactical model for future advocacy organizations.

The efforts of Nader and other activists led to the formation of several federal agencies designed to protect consumer interests. The U.S. Office of Consumer Affairs, created in 1971, investigates and resolves consumer complaints, conducts consumer surveys, and disseminates product information to the public. The Consumer Product Safety Commission, formed in 1973, sets national standards for product safety and testing procedures, coordinates product recalls, and ensures that companies respond to valid consumer complaints. Other government agencies that benefit consumers include the Better Business Bureau and state consumer agencies. The Consumer Federation of America is the largest consumer advocacy group in the United States, consisting of about two hundred twenty member organizations. The International Organization of Consumers Unions, based in the Netherlands, actively promotes consumer interests on a global scale.

CONSUMER ADVOCACY IN CYBERSPACE

In the early 1990s, the widespread use of home computers advanced consumer advocacy by making it easier for citizens to gather information and make their views known. And by the late 1990s, the Internet had become one of the primary weapons of consumer advocates. As of 1998, according to Simon Reeve in the *European,* there were more than 8000 "so-called global 'gripe sites' established by campaigners or disgruntled customers with the aim of harassing and haranguing large companies."

Before the advent of the World Wide Web, it was difficult for individuals or small groups, which lacked the resources of major corporations, to make their voices heard over their targets' advertising messages. "But the Internet has created a level playing field for advocacy," Reeve wrote. "With little more than a personal computer and a subscription to an Internet service provider, anyone can open a site on the World Wide Web and say more or less whatever they like." Current and potential customers of major corporations typically use common Internet search engines to access the companies' carefully prepared home pages. Yet these search engines also lead the customers to sites created by protesters that are filled with complaints and allegations against the companies, ranging from the use of child labor to the exploitation of resources in less-developed countries. Thus, for consumer advocates, "the Internet means a new freedom to take on the mightiest corporations, in an environment where massive advertising budgets count for little," Reeve stated.

For businesses, on the other hand, Internet "gripe sites" pose a difficult problem. Although the material posted on such sites might be distorted, false, or even outright libelous, it can still prove damaging to a company's image. Moreover, few legal remedies exist as the law struggles to keep up with technology. It is often difficult for companies to trace the operators of gripe sites, for example, and suing the Internet service providers that provide access to protesters has not proved successful. In addition, turning to the law for help can turn into a public relations disaster for companies, making a small problem into a much bigger one. "The Internet is an uncontrollable beast," attorney Simon Halberstam told Reeve. "While legally the firm may have recourse to law, the reality is that they may just have to accept the problem and carry on with their business."

(SEE ALSO: *Antitrust Legislation*; *Consumer Bill of Rights*; *Consumer Product Safety Act of 1972*; *Consumer Protest*; *Environmental Protection Agency*; *Fair Packaging and Labeling Act of 1966*; *Food and Drug Administration*; *Food, Drug, and Cosmetic Act*; *Price Fixing*; *Product Labeling*)

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LAURIE COLLIER HILLSTROM

CONSUMER AND INDUSTRIAL GOODS

The classification of goods—physical products—is essential to business because it provides a basis for determining the strategies needed to move them through the marketing system. The two main forms of classifications are consumer goods and industrial goods.

CONSUMER GOODS

Consumer goods are goods that are bought from retail stores for personal, family, or household use. They are grouped into three subcategories on the basis of consumer buying habits: convenience goods, shopping goods, and specialty goods.

Consumer goods can also be differentiated on the basis of durability. Durable goods are products that have a long life, such as furniture and garden tools. Nondurable goods are those that are quickly used up, or worn out, or that become outdated, such as food, school supplies, and disposable cameras.

Convenience Goods Convenience goods are items that buyers want to buy with the least amount of effort, that is, as conveniently as possible. Most are nondurable goods of low value that are frequently purchased in small quantities. These goods can be further divided into two subcategories: staple and impulse items.

Staple convenience goods are basic items that buyers plan to buy before they enter a store, and include milk, bread, and toilet paper. Impulse items are other convenience goods that are purchased without prior planning, such as candy bars, soft drinks, and tabloid newspapers.

Since convenience goods are not actually sought out by consumers, producers attempt to get as wide a distribution as possible through wholesalers. To extend the distribution, these items are also frequently made available through vending machines in offices, factories, schools, and other settings. Within stores, they are placed at checkout stands and other high-traffic areas.

Shopping Goods Shopping goods are purchased only after the buyer compares the products of more than one store or looks at more than one assortment of goods before making a deliberate buying decision. These goods are usually of higher value than convenience goods, bought infrequently, and are durable. Price, quality, style, and color are typically factors in the buying decision. Televisions, computers, lawnmowers, bedding, and camping equipment are all examples of shopping goods.

Because customers are going to shop for these goods, a fundamental strategy in establishing stores that specialize in them is to locate near similar stores in active shopping areas. Ongoing strategies for marketing shopping goods include the heavy use of advertising in local media, including newspapers, radio, and television. Advertising for shopping goods is often done cooperatively with the manufacturers of the goods.

Specialty Goods Specialty goods are items that are unique or unusual—at least in the mind of the buyer. Buyers know exactly what they want and are willing to exert considerable effort to obtain it. These goods are usually, but not necessarily, of high value, and they may or may not be durable goods. They differ from shopping goods primarily because price is not the chief consideration. Often the attributes that make them unique are brand preference (e.g., a certain make of automobile) or personal preference (e.g., a food dish prepared in a specific way). Other items that fall into this category are wedding dresses, antiques, fine jewelry, and golf clubs.

Producers and distributors of specialty goods prefer to place their goods only in selected retail outlets. These outlets are chosen on the basis of their willingness and ability to provide a high level of advertising and personal selling for the product. Consistency of image between the product and the store is also a factor in selecting outlets.

The distinction among convenience, shopping, and specialty goods is not always clear. As noted earlier, these classifications are based on consumers' buying habits. Consequently, a given item may be a convenience good for one person, a shopping good for another, and a specialty good for a third. For example, for a person who does not want to spend time shopping, buying a pair of shoes might be a convenience purchase. In contrast, another person might buy shoes only after considerable thought and comparison: in this instance, the shoes are a shopping good. Still another individual who perhaps prefers a certain brand or has an unusual size will buy individual shoes only from a specific retail location; for this buyer, the shoes are a specialty good.

INDUSTRIAL GOODS

Industrial goods are products that companies purchase to make other products, which they then sell. Some are used directly in the production of the products for resale, and some are used indirectly. Unlike consumer goods, industrial goods are classified on the basis of their use rather than customer buying habits. These goods are divided into five subcategories: installations, accessory equipment, raw materials, fabricated parts and materials, and industrial supplies.

Industrial goods also carry designations related to their durability. Durable industrial goods that cost large sums of money are referred to as capital items. Nondurable industrial goods that are used up within a year are called expense items.

Installations Installations are major capital items that are typically used directly in the production of goods. Some installations, such as conveyor systems, robotics equipment, and machine tools, are designed and built for specialized situations. Other installations, such as stamping machines, large commercial ovens, and computerized axial tomography (CAT) scan machines, are built to a standard design but can be modified to meet individual requirements.

The purchase of installations requires extensive research and careful decision making on the part of the buyer. Manufacturers of installations can make their availability known through advertising. However, actual sale of installations requires the technical knowledge and assistance that can best be provided by personal selling.

Accessory Equipment Goods that fall into the subcategory of accessory equipment are capital items that are less expensive and have shorter lives than installations. Examples include hand tools, computers, desk calculators, and forklifts. While some types of accessory equipment, such as hand tools, are involved directly in the production process, most are only indirectly involved.

The relatively low unit value of accessory equipment, combined with a market made up of buyers from several different types of businesses, dictates a broad marketing strategy. Sellers rely heavily on advertisements in trade publications and mailings to purchasing agents and other business buyers. When personal selling is needed, it is usually done by intermediaries, such as wholesalers.

Raw Materials Raw materials are products that are purchased in their raw state for the purpose of processing them into consumer or industrial goods. Examples are iron ore, crude oil, diamonds, copper, timber, wheat, and leather. Some (e.g., wheat) may be converted directly into another consumer product (cereal). Others (e.g., timber) may be converted into an intermediate product (lumber) to be resold for use in another industry (construction).

Most raw materials are graded according to quality so that there is some assurance of consistency within each grade. There is, however, little difference between offerings within a grade. Consequently, sales negotiations focus on price, delivery, and credit terms. This negotiation plus the fact that raw materials are ordinarily sold in large quantities make personal selling the principal marketing approach for these goods.

Fabricated Parts and Materials Fabricated parts are items that are purchased to be placed in the final product without further processing. Fabricated materials, on the other hand, require additional processing before being placed in the end product. Many industries, including the auto industry, rely heavily on fabricated parts. Automakers use such fabricated parts as batteries, sun roofs, windshields, and spark plugs. They also use several fabricated materials, including steel and upholstery fabric. As a matter of fact, many industries actually buy more fabricated items than raw materials.

Buyers of fabricated parts and materials have well-defined specifications for their needs. They may work closely with a company in designing the components or materials they require, or they may invite bids from several companies. In either case, in order to be in a position to get the business, personal contact must be maintained with the buyers over time. Here again, personal selling is a key component in the marketing strategy.

Industrial Supplies Industrial supplies are frequently purchased expense items. They contribute indirectly to the production of final products or to the administration of the production process. Supplies include computer paper, light bulbs, lubrication oil, cleaning supplies, and office supplies.

Buyers of industrial supplies do not spend a great deal of time on their purchasing decisions unless they are ordering large quantities. As a result, companies marketing supplies place their emphasis on advertising—particularly in the form of catalogues—to business buyers. When large orders are at stake, sales representatives may be used.

It is not always clear whether a product is a consumer good or an industrial good. The key to differentiating them is to identify the use the buyer intends to make of the good. Goods that are in their final form, are ready to be consumed, and are bought to be resold to the final consumer are classified as consumer goods. On the other hand, if they are bought by a business for its own use, they are considered industrial goods. Some items, such as flour and pick-up trucks, can fall into either classification, depending on how they are used. Flour purchased by a supermarket for resale would be classified as a consumer good, but flour purchased by a bakery to make pastries would be classified as an industrial good. A pick-up truck bought for personal use is a consumer good; if purchased to transport lawnmowers for a lawn service, it is an industrial good.

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Earl C. Meyer
Sharon K. Slick

CONSUMER BEHAVIOR

In September 1999, Polaroid Corparation introduced to the U.S. market a small, instant camera with a cheap lens that produced fuzzy, postage-stamp-sized photographs that could double as stickers. Scientists and engineers at Polaroid, holding true to the company's long-standing reputation for building high-quality, technologically innovative products, were skeptical. They worried that this new instant camera, called the I-Zone Instant Pocket Camera, would taint their reputation. Before becoming one of I-Zone's ardent supporters, Ed Coughlan thought the camera was crazy, "I'm an old engineer. I couldn't for the life of me figure out who'd buy it" (quoted in Klein, 2000, p. A1).

Figuring out not only *who* would buy it, but *why* they would buy it, *where* they would buy it, *how often* they would buy it, and *how* they would use it is the cornerstone of understanding consumer behavior. Consumer behavior is the study of people: how we buy, consume and dispose of products. There were 275 million people in the U.S. alone in 2000. Each of us is a consumer of hundreds of products every day. As consumers, we can benefit from a better understanding of how we make our decisions so that we can make wiser ones. Marketers can benefit from an understanding of consumer behavior so that they can better predict what consumers want and how best to offer it to them. Trusting their understanding of the changing consumer market, the marketing specialists at Polaroid convinced the company to launch the I-Zone. Less than three months after its launch, the I-Zone Instant Pocket Camera became America's number-one-selling camera (Klein, 2000).

There are two major forces that shape who we are and what we buy. Our personal motives, attitudes, and decision-making abilities guide our consumption behavior. At the same time, our families, cultural background, the ads we see on TV, and the sites we visit on the Internet influence our thoughts and actions (see Figure 1).

UNDERSTANDING CONSUMERS: INTERNAL FACTORS

Our consumption behavior is a function of who we are as individuals. Our thoughts, feelings, attitudes, and patterns of behavior determine what we buy, when we buy it, and how we use it. Internal factors have a major impact on consumer behavior.

Consumer motivation. A marketer's job is to figure out what needs and wants the consumer has, and what motivates the consumer to purchase. Motivation is the drive that initiates all our consumption behaviors, and consumers have multiple motives, or goals. Some of these are overt, like a physiological thirst that motivates a consumer to purchase a soft drink or the need to purchase a new suit for an interview. Other motives are more obscure, like a student's need to tote a Kate Spade bookbag or wear Doc Martens to gain social approval. Most consumption activities are the result of several motives operating at the same time. Researchers specially trained in uncovering motives often use qualitative research techniques in which consumers are encouraged to reveal their thoughts (cognitions) and feelings (affect) through probing dialogue. Focus groups and in-depth interviews give consumers an opportunity to discuss products and express opinions about consumption activities. Trained moderators or interviewers are often able to tap into preconscious motives that might otherwise go undetected. Sentence completion tasks (e.g., Men who wear Old Spice are . . .) or variants of the Thematic Apperception Tests (TAT), in which respondents are shown a picture and asked to tell a story surrounding it, are additional techniques that provide insight into underlying motives.

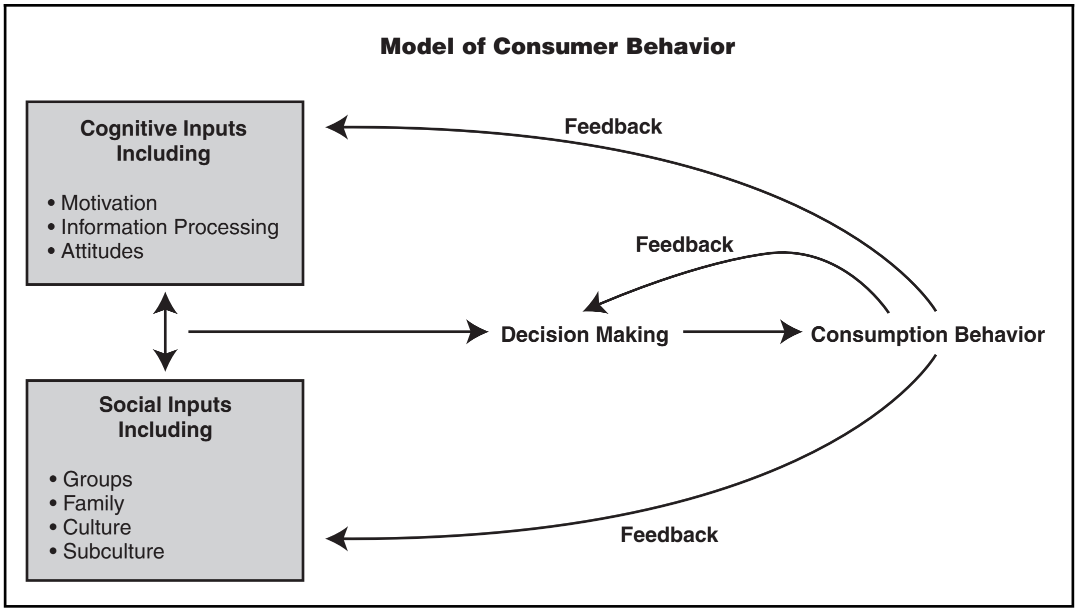

Figure 1

Consumer motives or goals can be represented by the values they hold. Values are people's broad life goals that symbolize a preferred mode of behaving (e.g., independent, compassionate, honest) or a preferred end-state of being (e.g., sense of accomplishment, love and affection, social recognition). Consumers buy products that will help them achieve desired values; they see product attributes as a means to an end. Understanding the means-end perspective can help marketers better position the product and create more effective advertising and promotion campaigns.

Consumer information processing. The consumer information-processing approach aids in understanding consumptive behavior by focusing on the sequence of mental activities that people use in interpreting and integrating their environment.

The sequence begins with human *perception* of external stimuli. Perception is the process of sensing, selecting, and interpreting stimuli in one's environment. We begin to perceive an external stimulus as it comes into contact with one of our sensory receptors—eyes, ears, nose, mouth, or skin. Perception of external stimuli influences our behavior even without our conscious knowledge that it is doing so. Marketers and retailers understand this, and they create products and stores specifically designed to influence our behavior. Fast-food chains paint their walls in "hot" colors, like red, to speed up customer turnover. Supermarkets steer entering customers directly into the produce section, where they can smell and touch the food, stimulating hunger. A hungry shopper spends more money.

Close your eyes and think for a moment about the hundreds of objects, noises, and smells surrounding you at this very moment. In order to function in this crowded environment, we choose to perceive certain stimuli while ignoring others. This process is called *selectivity.* Selectivity lets us focus our *attention* on the things that provide meaning for interpreting our environment or on the things that are relevant to us, while not wasting our limited information-processing resources on irrelevant items. Did you even notice that after you decide on, say, Florida, for your vacation destination, there seems to be an abundance of ads for Florida resorts, airline promotions for Florida, and articles about Florida restaurants and attractions everywhere? Coincidence? Not really. There are just as many now as there were before, only now you are selectively attending to them, whereas you previously filtered them out. Marketers continuously struggle to break through the clutter and grab consumers' attention. Advertising and packaging is designed to grab our attention through a host of techniques, like the use of contrast in colors and sound, repetition, and contextual placement.

Did you watch TV last night? You may have paid attention to many of the ads you saw during the commercial breaks; you may even have laughed out loud at a few of them. But how many can you recall today? Consumers' ability to store, retain, and retrieve product information is critical to a brand's success. When information is processed, it is held for a very brief time (less than one minute) in *working*, or *short-term*, memory. If this information is *rehearsed* (mentally repeated), it is transferred to *long-term memory*; if not, the information is lost and forgotten. Once transferred to long-term memory, information is *encoded* or arranged in a way that provides meaning to the individual. Information in long-term memory is constantly reorganized, updated, and rearranged as new information comes in, or learning takes place. Information-processing theorists represent the storage of information in long-term memory as a *network* consisting of nodes (word, idea, or concept) and links (relationships among them). Nodes are connected to each other depending on whether there is an association between concepts, with the length of the linkages representing the degree of the association. Figure 2 illustrates a network model of long-term memory. When Edwin Land invented the first Polaroid instant camera, knowledge structures for cameras changed to reflect the association between photography and instant output. Now, knowledge structures are changing to reflect the new I-Zone camera.

The complete network brought to mind when a product is activated is called the product *schema*. Knowing the set of associations that consumers retrieve from long-term memory about a particular product or category is critical to a successful marketing strategy. For new products or services, marketers must first select the set of associations they want consumers to have. This is called *positioning* the product, or selecting the brand *image*. Peak Freans' unique positioning as an adult cookie was accomplished by establishing a link between the concept "serious" and "cookie." The brand position is then translated into clever ads, reinforced on product packaging, and integrated into all promotion and communication strategies. Over time, a brand's image can fade or become diluted. Sometimes consumers associate concepts that are not favorable to a brand. When this occurs, marketers *reposition* the brand, using advertising and other marketing tools to help consumers create new links to positive association and discard links to the unfavorable ones. In the mid-1990s, Hush Puppies shoes made a comeback after decades of low sales. Introducing exciting, vibrant colors, Hush Puppies repositioned their basic comfort shoe as fashionable, youth-oriented, and "cool." Strategies for successful *brand extensions* also depend on the brand schema. Generally speaking, a brand extension is more likely to be successful if the set of associations for the extension matches the set of associations of the core product. Would Lifesavers brand toothpaste sell? Probably not, because the associations for Lifesavers (sweet, candy, sugar, fruity) are not the same as those for toothpaste (mint, clean, noncandy). On the other hand, a Lifesavers brand sugared children's cereal with colorful, fruity rings has a much better match of associations.

Attitude formation and change. The set of beliefs consumers have stored in long-term memory provides another critical function to marketers: It provides the basis for a consumer's *attitude* toward a brand or an ad. An attitude is an overall evaluation of an object, idea, or action. Attitudes can be positive or negative, and weakly or strongly held. The statement "I love Ben & Jerry's Vanilla Toffee Crunch" is a strong, positively valenced attitude toward a product. The statement "I dislike the new Toyota ad" is a weak, negatively valenced attitude toward an advertisement. Marketers work hard to continuously

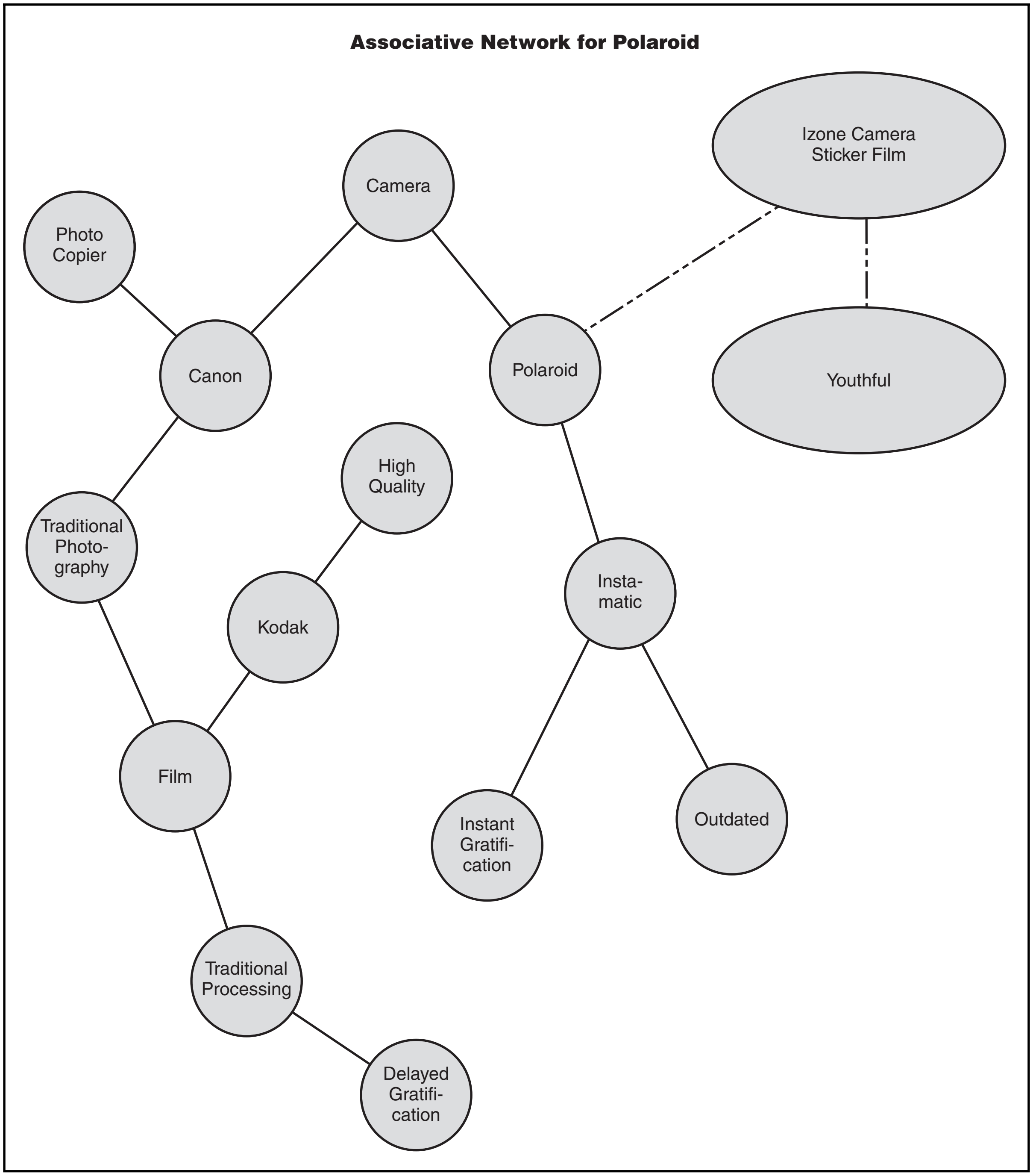
Associative Network for Polaroid
Izone Camera Sticker Film
Camera
Photo Copier
Canon
Polaroid
Youthful
High Quality
Traditional Photo-graphy
Kodak
Insta-matic
Film
Instant Gratifi-cation
Outdated
Traditional Processing
Delayed Gratifi-cation

Figure 2

monitor consumer attitudes toward their products. Among other things, attitudes can indicate problems with a product or campaign, success with a product or campaign, likelihood of future sales, and overall strength of the brand or brand equity.

A popular perspective is that attitude has three components: cognitive, affective, and conative. The cognitive component reflects the knowledge and beliefs one has about the object (e.g., "Digital Club Network is an on-line live music Internet site."), the affective component reflects feelings (e.g., "I like the Digital Club Network site") and the conative component reflects a behavioral tendency toward the object (e.g., "I will become a registered user of digitalclubnetwork.com"). Thus, attitudes are predispositions to behave in a certain way. If you have a favorable attitude toward a politician, you will likely vote for him or her in the next election. Because of this, many marketers use attitude measures for forecasting future sales. It is important to note, however, that the link between attitudes and behavior is far from perfect. Consumers can hold positive attitudes toward multiple brands but intend to purchase only one. External economic, social, or personal factors often alter behavioral plans.

Attitudes are dynamic, which means they are constantly changing. As an individual learns new information, as fads change, as time goes on, the attitudes you once held with confidence may no longer exist. Did you ever look at old photos of yourself and wonder "What was I thinking wearing clothes like that? And look at my hairstyle!"

UNDERSTANDING CONSUMERS: EXTERNAL FACTORS

In addition to the internal factors, consumer behavior is also shaped to a large extent by social factors, such as culture, family relationships, and other aspects of the external environment. Awareness of these influences can help marketers to identify groups of consumers who tend to think, feel, or act similarly and separate them into unique market segments. Aspects of the marketing program—such as product design, advertising, and pricing—can then be tailored to meet the unique needs, values, and goals of these distinct groups.

Group influences on individual consumer behavior. Group influences on consumer behavior can impact motivation, values, and individual information processing; they can come from groups to which consumers already belong or from groups to which they aspire to belong (aspirational groups). Groups can exert a variety of influences on individuals, including: (1) *informational influences* where the group acts as a source for expert opinions; (2) *comparative influences* such that the group provides opportunities to manage the individual's self-concept with respect to the group's identity; and, (3) *normative influences*, whereby the group specifies guidelines and sanctions for appropriate or inappropriate individual behaviors.

The influence of groups on consumer behavior tends to vary with a variety of group- and product-related factors. For example, the more the group is perceived to be a credible, valued source of approval or disapproval to the consumer, the more likely that consumer is to conform to group values. In addition, the more frequently group members interact, and the more outwardly visible use of the product is to group and non-group members, the greater the group's influence on individual consumption behavior.

Family influences on consumer behavior. Families have a particularly significant influence on consumer behavior. For example, consumption behavior often changes substantially as family status changes over time. Thus, young unmarried adults, who are often focused on individual self-definition, tend to purchase products that enhance or define their self-concepts. In contrast, couples with children may be more interested in purchasing items or experiences that can be shared by all family members and, as a result, may spend less on individually oriented products.

Family membership also leads to a greater need for joint rather than individual decision making, further complicating consumer behavior at the household level. For example, the person who buys a product may not be the ultimate consumer of the product. Or perhaps the husband and wife have differing levels of involvement with certain product decisions, leading to different types of separate decision processes that must be integrated before a choice is ultimately made. Understanding the dynamics involved in joint decision making and which family members influence which types of decisions has important implications for marketers interested in directing marketing efforts to the right person. Importantly, these family dynamics and lifestyle transitions are complicated by the decline in traditional households and the accompanying rise in nontraditional family structures, such as cohabitating couples or couples integrating families from previous marriages.

Cultural and sub-cultural influences on consumer behavior. *Culture* comprises the common meanings and socially constructed values accepted by the majority of members of a society or social group. It includes such things as shared values, beliefs, norms, and attitudes, as well as affective reactions, cognitive beliefs, and patterns of behavior. Typically, when we think of culture, we tend to think of differences among individuals from different countries or regions of the world. With the increasing globalization of the world economy, understanding differences and similarities in consumer behavior across cultures becomes increasingly meaningful, with important implications about the degree to which marketing strategies can be standardized across countries and cultures, or localized to reflect country- or region-specific cultural distinctions.

One important cultural difference is the degree to which the self is defined as *independent* from others versus *interdependent* with important others. *Individualistic cultures*, such as the United States, tend to foster an independent sense of self, with the self believed to be a set of internal attributes unique to each person. *Collectivist cultures*, however, such as China, foster an interdependent sense of self, with the self believed to be inseparable from others and the social context; person-specific attributes are less important in self-definition than are interpersonal relations. These differences in self-definition affect a variety of consumer behaviors, including emotional reactions to advertisements, the degree to which information from others is valued when making consumption decisions, and gift-giving behavior.

In addition to cultural differences that exist across countries, marketers are also increasingly recognizing the importance of cultural differences within a society. *Subcultures* are distinctive groups within a society that share common meanings. Subcultures can often be identified based on demographic characteristics, such as geographic location (e.g., the southern United States), ethnicity (e.g., Hispanic Americans), or age (e.g., baby-boomers). Polaroid's I-Zone camera is targeted in the United States to appeal to the teenage subculture.

Subcultures can also be identified based on common lifestyles. For example, a strong subculture exists around Harley-Davidson motorcycles and the Harley Owner's Group (HOG). Members of this group share a core cultural value of personal freedom, which is exemplified in both the experience of using the product (taking to the open road) and in the company's marketing strategy (e.g., the open-winged insignia [Schouten and Alexander, 1995]). Importantly, identification of lifestyle subcultures, and the corresponding development of an inventory of shared meanings, is typically more difficult than the development of such understanding of subcultures based on observable demographic characteristics.

Increasingly, Internet marketers have come to realize the value of subculture segments and have tailored product offerings and/or Web site content to appeal to particular subcultures, most often demographically based, and to foster a greater sense of community and connection among subculture members. For example, iVillage.com features content of particular interest to women and offers forums for discussion of issues relevant to its users. Similarly, Hispanic.com aims to provide services and information to Hispanic Americans as well as to provide a virtual meeting space for Hispanic Americans to meet and help one another. These represent early attempts to use the Internet to target and serve subculture populations. Future sites are likely both to target more narrowly defined subcultures (e.g., Hispanic Americans with an interest in gourmet cooking) and to focus on reaching more lifestyle-based subcultures.

THE CONSUMER DECISION-MAKING PROCESS

What consumers think and the social environment they live in determine what they buy and how that purchase decision is made. Typically, the decision process is described as a series of five stages. The first stage, *need recognition*, occurs when consumers perceive a difference between their ideal and actual states. Need recognition is often prompted by persuasive advertising. Consumers then begin the *information search* process by conducting an *internal search* of their own knowledge structures, followed by an *external search* for information from friends, family members, salespeople, and advertisements. This step can clarify the problem, providing criteria to use for assessing product alternatives and resulting in a subset, or "consideration set," of potential choices. These options are then assessed more completely in the third stage, *alternative evaluation.* In this stage, products in the consideration set are compared with one another. Sometimes a simple heuristic rule of thumb, such as "I'm going to buy the cheapest product" is used. At other times a more complex strategy, such as a weighted-average model that compensates for product strengths and weaknesses, is used. After examining each alternative, consumers are ready to *purchase*, the fourth step in the decision process. Finally, after buying, the consumers enter the *post-purchase phase* of the process, during which the performance of the chosen alternative is evaluated in light of prior expectations. Consumers will be satisfied with the product if it meets or exceeds expectations; dissatisfaction occurs if the product does not meet expectations.

This model of consumer behavior, while very useful, is highly simplified and does not always accurately reflect the decision process consumers follow. Consumers may not always proceed linearly through the five steps as described, and sometimes they may skip certain steps entirely. However, the model is a close approximation of the process for most consumers for most purchase occasions.

We are all consumers. Understanding why we behave as we do is integral to an efficient transfer of goods and services in a market-driven economy.

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Lauren G. Block
Patti Williams

CONSUMER BILL OF RIGHTS

Webster's dictionary defines consumerism as "a movement for the protection of the consumer against defective products, misleading advertising, etc." Limited consumer protection was present until the 1950s and early 1960s. In the 1950s, a significant breakthrough occurred with the establishment of the product-liability concept, whereby a plaintiff did not have to prove negligence but only had to prove that a defective product caused an injury. In his 1962 speech to Congress, President John F. Kennedy outlined four basic consumer rights, which later became known as the Consumer Bill of Rights. Later, in 1985, the United Nations endorsed Kennedy's Consumer Bill of Rights and expanded it to cover eight consumer rights. Consumer protection can only survive in highly industrialized countries because of the resources needed to finance consumer interests.

Kennedy's Consumer Bill of Rights included the right to be informed, the right to safety, the right to choose, and the right to be heard. The right to be informed involves protection against misleading information in the areas of financing, advertising, labeling, and packaging. Several laws of the 1960s and 1970s were aimed at this right. The Cigarette Labeling Act (1965), Fair Packaging and Labeling Act (1966), and the Wholesome Meat Act (1967) all addressed packaging. This legislation dealt with the accurate identification of the content of the product and any dangers associated with the product. The Truth-in-Lending Act required full disclosure of all costs and the annual percentage rate on installment loans. Prior to Truth-in-Lending, the actual cost was hidden and confusing to calculate. Another significant piece of legislation, the Magnuson-Moss Warranty Act, requires a warranty which states that a product will meet performance standards and affirms that a warranty can be stated or implied. Other regulation took place at the state level. Forty states have a cooling-off law, which allows a consumer to change his or her mind when purchasing products from direct salespeople.

The second consumer right, the right to safety, is aimed at injuries caused by using products other than automobiles. To address this problem, the government established the Consumer Product Safety Commission (CPSC) in 1972. The CPSC has jurisdiction over thirteen thousand diverse products. The powers of the CPSC include the right to require warning labels, to establish standards of performance, to require immediate notification of a defective product, and to mandate product testing. However, its greatest power is product recall.

The right of consumer choice means the consumer should have a range of products from various companies to choose from when making a purchasing decision. To ensure these rights, the government has taken a number of actions, such as imposing time limits on patents, looking at mergers from the standpoint of limiting consumer choice, and prohibiting unfair price cutting and other unfair business practices.

The final consumer right is the right to be heard. Presently, no government agency is responsible for handling consumer complaints. However, a number of government agencies do attempt to protect certain consumer rights. The Office of Consumer Affairs publishes a Consumer's Resource Handbook listing agencies that work in the area of consumer rights. In addition, a number of consumer groups issue complaints to the government and industry groups.

The growth of consumerism in this country has not been without opposition. Although corporations have taken positive steps in many areas, they have also opposed advancement of some consumer rights. Because corporations can have deep pockets, they are able to appeal court cases and slow down litigation. Today, however, because of past successes, the need for consumer protection is not nearly as great as it was in previous years.

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Mary Jean Lush
Val Hinton

CONSUMERISM

(SEE: *Consumer Behavior*)

CONSUMER PRICE INDEX

The Consumer Price Index (CPI) provides a standardized method for comparing the average level of prices faced by the consumers and households of a nation over time. Price-level information is vital to a wide range of personal, government, and business decision makers. The CPI focuses solely on the prices faced by consumers and does not attempt to reflect prices faced by all buying entities in a country. Nevertheless, it is the most commonly used price-level indicator in a nation. It is the basis for the calculation of a country's inflation rate.

COMPUTATION

The Bureau of Labor Statistics (BLS) publishes CPI data monthly. BLS workers collect price data on a set market basket of goods and services in selected cities across the country each month. The market basket includes hundreds of goods and services typically purchased by consumers. The price data is then weighted to represent the mix of goods and services typically purchased by consumers. The mix of goods and services and the weights are based on the Consumer Expenditure Survey, a national survey of the spending habits of 29,000 families (BLS, "How BLS Measures"). The decennial census of the population is used for selection of the urban areas included in the monthly surveys.

The CPI is computed by dividing the weighted price of the market basket in a time period by the weighted price of the market basket in a designated base time period. The resulting ratio times 100 yields an index with a value of 100 for the base time period. CPI values above or below 100 indicate that the price level is higher or lower than it was during the base period. For example, an index value of 140 indicates that the average price level is 40 percent higher than it was in the base year.

The prices of hundreds of goods and services are surveyed each month. The goods and services are organized into eight main groups: food and beverage, housing, apparel, transportation, medical care, recreation, education and communication, and other goods and services.

Each month the BLS publishes numerous CPIs based on the data collected. The two main CPI series are the CPI-U (Consumer Price Index for All Urban Consumers) and the CPI-W (Consumer Price Index for Urban Wage Earners and Clerical Workers) Separate indices are published for twenty-six selected urban areas and four geographic regions of the country. There are also indices for three classes of cities (population of over 1.5 million, mid-sized to small metropolitan areas, and nonmetropolitan areas) and for categories of goods and services.

MEASUREMENT ISSUES

The CPI provides a general approximation of the price level faced by consumers in a given time period. It is not designed to measure the exact price level faced by any one consumer. The BLS collects data only in urban areas. Thus the CPI does not attempt to provide a measure of rural price levels. However, the CPI-U should be serviceable for approximately 87 percent of the U.S. population (BLS, "*Guide to Available.*") A two-week lag time exists between the completion of data collection and the publication of CPI data. The measure has limitations. The computational methodology has been gradually adjusted over time to allow for more accurate measurement of changing price levels. Measurement issues include index bias due to product innovation and quality changes that affect prices and consumption patterns, as well as uneven price changes across retail outlets and geographic areas.

Historically, the CPI has been calculated as a Laspeyres index, or an index based on a fixed market basket of goods and services. This has been criticized as an inaccurate approach because it does not allow for changing consumption patterns. Consumption patterns may change due to the availability of new products, changing features of current products, changing consumer preferences, or changes in the relative prices of goods and services. The impact of the availability of new products on purchasing patterns is exemplified by products such as videocassette recorders and microwave ovens, which were not available for consumer purchase until the late 1970s but became common household purchases in less than a decade. The emergence of audio CDs and CD players reduced purchases of audiocassette tapes.

Price changes due to changes in product quality or features can be seen in the development of the manual typewriter, electric typewriter, and word processor. Adjustments are made in the computation of the CPI for the impact of quality changes on price. Also, periodic adjustments in the market basket have been made every eight to twelve years to allow for changing consumption patterns due to new products. This creates a situation in which price-level comparisons may be more accurate when made over relatively short periods of time rather than over many years or decades during which the nature and mix of goods and services in the market basket changed considerably. The base year is also changed periodically. For example, in January 1988 the CPI base year was changed from 1967 = 100 to 1982-1984 = 100.

Beginning with January 1999 data, the BLS changed to a geometric-mean-estimator method of indexing. This method does not employ the Laspeyres fixed market basket; rather, it allows consumers to adjust purchases within broad categories of goods and services due to changes in the relative prices of the goods or services within each category. The consensus of experts was that the Laspeyres method led to a CPI which systematically overestimated the price level actually paid by consumers, because consumers would substitute away from goods that increased in price in favor of similar goods with lower increases in price. The geometric-mean-estimator method was adopted to reduce this overestimation. As part of this change, the BLS reports that CPI expenditure weights are to be updated on a regular two-year schedule (BLS, "Future Schedule").

During a year the prices of many goods and services fluctuate because of seasonal factors, such as increases in supply affecting vegetable prices during harvest season. The BLS also publishes monthly seasonally adjusted CPI measures, which factor out the monthly variation due to the season of the year.

The CPI does not provide any explanation for price-level changes, nor does it forecast future price levels. However, historical CPI data are used extensively by analysts in research on these issues.

HISTORICAL TREND

The CPI tracks an ongoing trend of increasing prices in the United States. When making comparisons of the CPI over time, it is important to make sure that all data use the same base year.

RELATED MEASURES

The CPI is not the only measure of price level published by the government. Other common price indexes include a producer price index, which tracks the average prices producers pay for inputs, and the GDP deflator, which includes not only consumer prices but also the prices paid by other purchasers such as investors and the government.

Several other measures are based directly on the CPI. A country's inflation rate is the annual rate of change in its CPI. Also, purchasing power indices are based on CPI data. Typically a purchasing power index is the reciprocal of a price index. In essence, the price index relates how much it would cost to purchase the same group of goods and services compared to a base-time period. A purchasing power index reflects the percentage of the base-period group of goods and services that could be purchased at current prices if income were constant.

USES

Households, businesses, and governments use price-level data in a variety of ways. One of the most common uses is to adjust other statistics for the changes in price level. The resulting price-adjusted measures go by several terms including: real, in constant dollars, in (list base year) dollars, or deflated. For example, if an individual received a 10 percent raise while the CPI rose 3 percent, the individual would have a 7 percent increase in real income. Data which are not adjusted for price-level changes go by the descriptive term *nominal.* Real measures are commonly used in media reports and by decision makers. Other examples of real measures are real gross domestic product, real interest rates, real exchange rates, and real government purchases.

Individuals and households rarely make direct use of the CPI, although they use CPI-based information frequently. Examples of this include comparisons of the cost of living in different cities, planning how much income will be needed to provide a comparable standard of living in retirement, negotiating with employers for raises, and determining the real return received on savings.

Businesses use the CPI extensively in forecasting future average price levels and consumer expenditures. The expected price level also becomes an important issue in negotiating escalator clauses in long-term contracts. Labor contracts and pension plans may include cost-of-living-adjustment (COLA) clauses that tie wage or pension increases to CPI increases. International business decision makers closely monitor differences in the inflation rates of relevant countries.

Many branches of government use the CPI. A stable price level is one of the three main goals of economic stability, and the CPI is the main measuring tool to assess a nation's progress toward this goal. Thus both fiscal and monetary policy makers use this statistic. Levels of many government expenditures, such as transfer payment levels and government employee salaries, are tied to changes in the CPI. The legal system may integrate CPI adjustments into alimony or child-support agreements. In the 1980s the U.S. began to index progressive income tax brackets to the inflation rate. Under an indexed income tax system, an individual will end up in a higher marginal income tax bracket only if his or her income rises more rapidly than the CPI.

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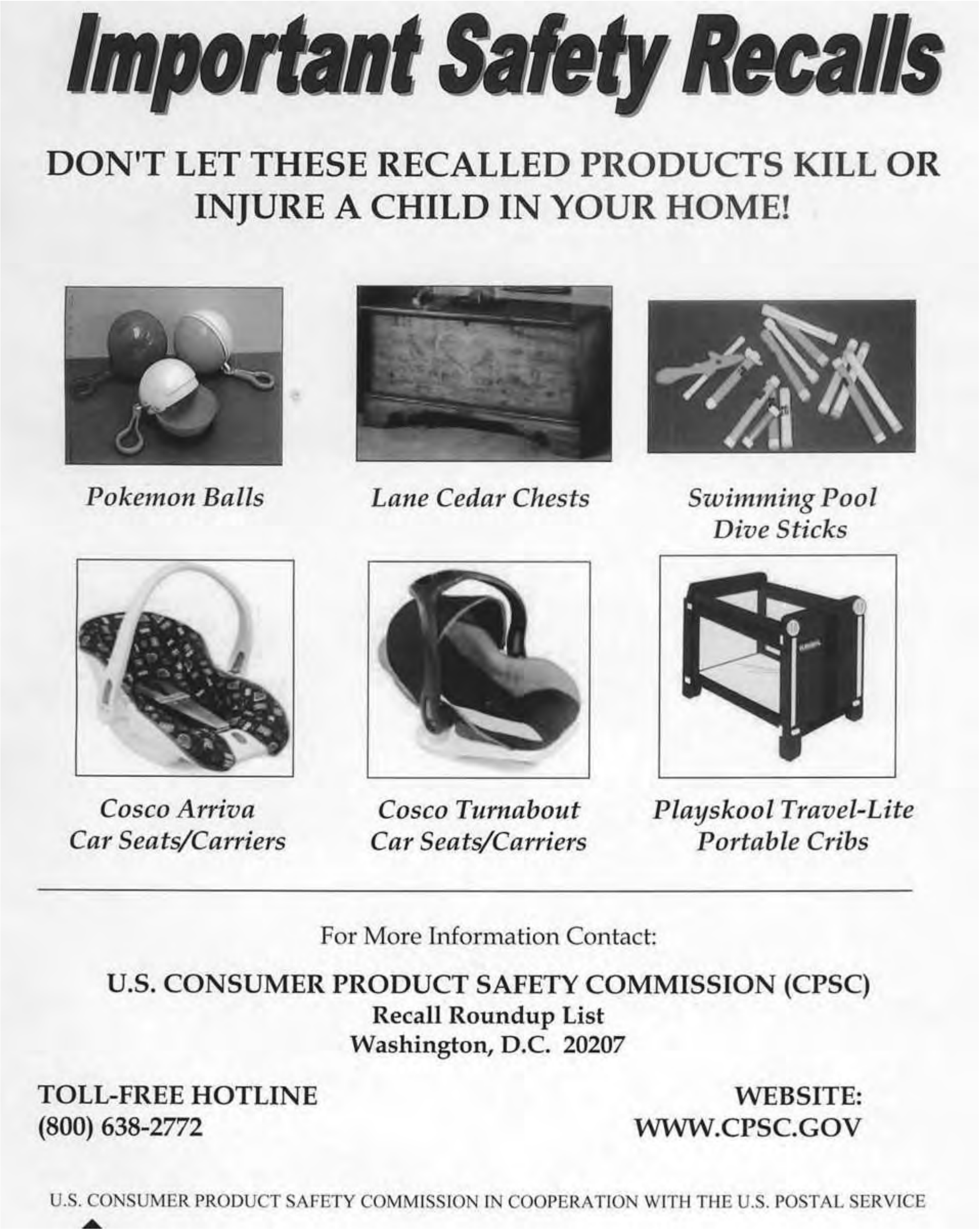
C. BETH HAYNES

CONSUMER PRODUCT SAFETY ACT OF 1972

Congress passed the Consumer Product Safety Act in 1972 to "assist consumers in evaluating the comparative safety of consumer products; to develop uniform safety standards for consumer products and to minimize conflicting state and local regulations; and to promote research and investigation into the causes and prevention of product related death, illnesses, and injuries." The act also established the Consumer Product Safety Commission (CPSC) to "protect the public against unreasonable risks associated with consumer products." The CPSC has authority to set mandatory standards, ban products, order recalls of unsafe products, and institute labeling requirements.

The CPSC is an independent regulatory agency charged with protecting consumers from unreasonable risk of injury associated with consumer products. The most serious risks include amputation, electrocution, burns, asphyxiation, and cancer. Examples of recent product liability lawsuits in which defendant companies lost include breast implants that leaked silicone gel and football helmets that did not have enough padding. The commission has jurisdiction over about 15,000 types of consumer products, such as automatic coffee makers, toys, furniture, clothing, and lawn mowers. The CPSC works to reduce the risk of injury and death from consumer products by:

- Developing voluntary standards with industry
- Issuing and enforcing mandatory standards and banning consumer products if no feasible standard would adequately protect the public



Important Safety Recalls

DON'T LET THESE RECALLED PRODUCTS KILL OR INJURE A CHILD IN YOUR HOME!

Pokemon Balls

Lane Cedar Chests

Swimming Pool Dive Sticks

Cosco Arriva Car Seats/Carriers

Cosco Turnabout Car Seats/Carriers

Playskool Travel-Lite Portable Cribs

For More Information Contact:

U.S. CONSUMER PRODUCT SAFETY COMMISSION (CPSC)
Recall Roundup List
Washington, D.C. 20207

TOLL-FREE HOTLINE
(800) 638-2772

WEBSITE:
WWW.CPSC.GOV

U.S. CONSUMER PRODUCT SAFETY COMMISSION IN COOPERATION WITH THE U.S. POSTAL SERVICE

A safety recall poster highlighting possible dangers to children.

- Obtaining the recall of products or arranging for their repair
- Conducting research on potential product hazards
- Informing and educating consumers through the media, state and local governments, and private organizations, and by responding to consumer inquiries. (CPSC, 1999).

The CPSC has three key program areas:

1. The Office of Hazard Identification and Reduction, which collects and analyzes consumer injury and death data to determine trends in consumer product hazards.
2. The Office of Compliance and Enforcement, which supervises compliance and administrative activities related to the act. This office also reviews proposed standards and rules with respect to their enforceability.
3. The Office of Information and Public Affairs, which is responsible for the development, implementation, and evaluation of a comprehensive national information and public affairs program designed to promote product safety. (Fise, 1998).

In recent years, the CPSC has been involved in actions to protect children. In 1987, for example, the commission began to examine toys that pose choking hazards. This led Congress to pass the Child Safety Protection Act of 1994. A sample of child safety issues investigated by the commission includes bicycle helmets, public playgrounds, upholstered furniture, walkers, drawstrings on children's clothing, baseball protective equipment, and toys. More than 160 deaths from toys were reported between 1990 and 1997, and at least seventy-two different toys that posed a small-parts hazard were recalled between October 1996 and September 1997 by the CPSC. (Public Interest Research Group [PIRG], 2000). PIRG reports that in 1998 fewer toys posing choking hazards appeared on shelves.

In addition, the commission has also written rules to establish performance, design, composition, packaging, and construction standards for many products. Examples of products with mandatory safety standards include matchbooks, walk-behind power lawn mowers, residential garage door openers, swimming pool slides, chainsaws, home-use pesticides, and cellulose insulation (Garman, 1997).

Consumers have benefited in the areas where the CPSC has taken action. The commission is constantly challenged to keep abreast of new products and potential hazards that may be associated with them. The commission is usually able to react, however, only after a consumer has been injured or died. The CPSC has changed the way many products are designed and manufactured. Continuing education by consumer groups, the media, and the CPSE has helped increase public awareness of possible consumer safety hazards. The CPSC is an important consumer protection agency, protecting consumers by assuring that products they use every day are safe.

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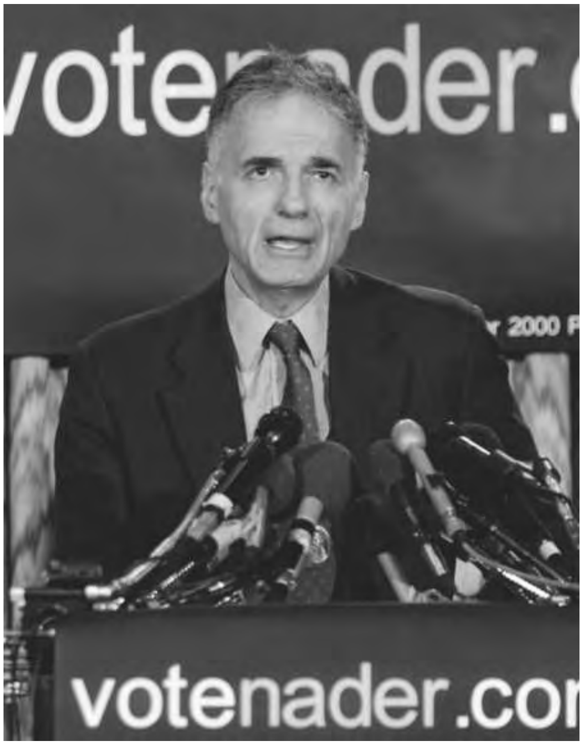
Phyllis Bunn

CONSUMER PROTEST

The United States was built on the philosophy of ensuring citizens' rights. Specifically, individuals have rights set forth in the Constitution and Bill



Consumer advocate Ralph Nader.

of Rights. Throughout history, American citizens and consumers have expended considerable energy toward ensuring that organizations, retailers, and governments recognize and adhere to these rights. Further, when citizens believe one of those rights has been overlooked or denied, they join in protest to rectify the perceived injustice.

For example, even before the American Revolution, when they were still English subjects, colonists were disgruntled by the British Parliament's imposition of a tax on tea imports. On December 16, 1773, to protest the tea tax (which had been implemented to help the poorly managed and corrupt East India Tea Company avoid bankruptcy), citizens donned Mohawk Indian disguises, boarded three East India Tea Company ships docked in Boston harbor, and threw 342 chests of Ceylon and Darjeiling tea overboard.

Since the Boston Tea Party, consumers' quests to attain and maintain their rights have continued as an undercurrent of resistance to unfair business and industry practices that directly affected consumers' health, welfare, and safety. However, during certain volatile times (the Progressive era of the late 1890s, the Depression years of the 1930s, and the 1960s through the 1970s), consumer concerns have been more strongly emphasized.

Further, women's magazines (*McClure's* and *Ladies' Home Journal*, for example) awakened women to the activist movement as a way of ensuring safe products, achieving justice, and attaining a level of equality (Nader, 1999). Women have been concerned about such issues as price rigging, monopolies, dishonest labeling of medicines, and contaminated food. Outcomes of these efforts have included both self-policing and external policing by some business, industry, and government agencies to protect the environment and consumers.

Upton Sinclair's 1906 novel *The Jungle* exposed unsanitary food-processing and meatpacking conditions. The graphic nature of the book sparked a public outcry that led to the passage of legislation by Congress, including the Pure Food and Drug Act of 1906, which created the Food and Drug Administration (FDA).

When use of a liquid sulfur drug, Elixir Sulfanilamide, resulted in the deaths of more than 100 people in 1937, the Pure Food and Drug Act was proven to be inadequate. In 1938 the federal Food, Drug, and Cosmetic Act, became law; before marketing new drugs, manufacturers were required by this law to prove their safety to the FDA.

Consumer concerns were minimized by World War II and did not retake the stage until the early 1960s. President John F. Kennedy, considering consumer protection an important issue, suggested improvements in existing programs and also proposed two new consumer-protection programs: creation of the position of special assistant for consumer affairs (created by President Lyndon B. Johnson in 1964) and creation of a national oversight board made up of labor, cooperative, and consumer groups, the Consumer Federation of America (established in 1967).

Individuals have played, and continue to play, integral roles in ensuring consumer protection. Ralph Nader, for instance, has led a crusade to ensure consideration and enforcement of consumer rights for more than three decades. Nader and his advocacy groups, known as Nader's Raiders, have investigated complaints, documented harm, determined responsibility, disseminated information about consumer abuse, proposed alternatives, instigated reform, and campaigned to provide the consumers' viewpoint to a wide range of audiences, including government and large corporations. Often these activities not only resulted in important consumer victories; they also resulted in positive changes in the political climate and in the institution of self-regulation to ensure that regulations are met.

From the appearance of the automobile on the American landscape through 1966, when a federal auto safety law was enacted, corporate decision makers had determined the level of safety for their automobiles. From the first death in 1899 until 1966, about 2 million automobile-related deaths occurred as well as about 100 million injuries, a figure three times greater than U.S. combat losses in all military actions. Consumer advocates postulated that many of those deaths and injuries might have been avoided had automobile producers included certain safety features as part of the standard package. Consumers began to demand automobile safety features such as turn signals, seat belts, and air bags.

Nader began his first consumer campaign in 1965 with his book *Unsafe at Any Speed*, which detailed Detroit automakers' negligence and calling the Corvair "one of the nastiest handling cars ever built (quoted in Watson, 1997). In 1969, after considerable consumer activism, Chevrolet ceased Corvair production. Later, in 1972, the Department of Transportation (DOT) tested the Corvair and found the handling "at least as good as the performance of some contemporary vehicles, both foreign and domestic" (quoted in Watson, 1997); however, Nader contested the DOT findings.

Another federal agency, the National Highway and Traffic Safety Administration (NHTSA), was established to ensure highway and automobile safety. It was responsible for setting minimal safety standards for automobiles, as well as ensuring consumer notification of automobile safety defects. NHTSA developed and issued thirty standards in 1967 aimed at reducing crash potential and resulting damage. However, consumers were generally not aware of these safety requirements, which included, among others, installation of simple components that would reduce head trauma (laminated windshields), prevent injury to the upper body (collapsible steering columns), and prevent occupants from being ejected from the car on impact (stronger door locks). Consumer rights are also protected by local and state governments. For instance, establishing minimum safety standards to ensure highway safety is the responsibility of the individual states; and consumer complaints against specific businesses are often resolved with assistance from local consumer affairs offices.

Over the years, Nader and his associates formed several consumer watchdog groups and instigated activist movements. Included among these were the Critical Mass research project, which was directed at nuclear power's negative impact on citizens' health, and the Public Interest Research Group (PIRG), which addressed banking and corporate accountability as well as tax exemptions and government subsidies for big business.

Based on the initial successes of the PIRG, Nader formed the Public Citizen Tax Reform Research Group in 1972. The tax group's *People and Taxes* was the first publication to explain the manipulation of the tax system to subsidize big corporations, thereby burdening the average taxpayer. In 1976, after many successful tax-reform actions, Tom Stanton, and his colleagues Bob Brandon and Jonathan Rowe, published a succinct, understandable tax analysis: *Tax Politics: How They Make You Pay and What You Can Do About It.*

Nader and his Raiders have played major roles in addressing and resolving consumer matters involving, among others, consumers', workers', and airline passengers' rights; telecommunications; education; banking; automobile safety; environmental protection; and legal issues. Their campaigns, publications, and books have also resulted in the emergence of public opinion in support of environmental protection. Additionally, John C. Esposito's 1970 book, *The Vanishing Air*, presented the Clean Air Act of 1967 as having failed to initiate effective air pollution controls. At about the same time, the Environmental Protection Agency increased its focus on environmental issues, and the Clean Water Act (1972) was passed, both resulting from public reaction to the publication of David Zwick's *Water Wasteland*, which critiqued the failures of pollution-control laws. Further, in response to statistical findings in 1970 that worker deaths and disabilities totaled over 14,000 annually, Nader sponsored Joseph Page's report *Bitter Wages*, which helped turn the public and political tide toward enacting the Occupational Health and Safety Act legislation.

While OSHA has often been perceived by consumer activists as being slow to act or react, it has established standards that ensure business compliance with workplace safety mandates. Additionally, OSHA standards aid in reducing and, hopefully, minimizing cancer risks resulting from use of ordinary carcinogens, including industrial chemicals, such as benzene; pesticides, such as DBCP; ethylene oxide, a carcinogenic gas that is used for medical equipment sterilization; and formaldehyde, which is used in countless educational and industrial environments. All these standards stemmed from the work (from 1974 through 1983) of the Public Citizen Health Research Group headed by Dr. Sidney M. Wolfe.

Nader and his Raiders managed to pinpoint and report dozens of consumer inequities, including ones involving such corporations as Du Pont and Citicorp, but they have not been alone in the quest to establish and enforce consumer rights. Individuals and other traditional and newly established groups (such as the Rainforest Action Network, People for Ethical Treatment of Animals, Earth First) have used various means, including boycotts, to make their displeasure known to business, industry, and government entities. Manufacturers suffered from more than 200 boycotts in 1990 (Rice, 1990), and the numbers have continued to increase as technology has facilitated ease of information access.

Friedman (1995) defines a consumer boycott as an action that deprives the organization of sales, thus threatening its survival. Such action is "an attempt by one or more parties to achieve certain objectives by urging individual consumers to refrain from making selected purchases in the marketplace." (p. 199) Local, state, and international boycotts appear to be less common than national boycotts, and the duration of boycotts varies. Short-term boycotts usually last three months or less, whereas long-term boycotts sometimes last more than a year. Friedman (1995) also noted that boycott characteristics evolve over time. From the beginning announcement that a boycott is being considered, the level of militancy builds, and many media-oriented boycotts combine the power of the media with their own actions to achieve the desired outcome.

In 1994, protesters boycotted dairy products in an effort to prevent products from cows injected with BGH, a hormone to increase bovine milk production, from being marketed. The hormone has potential to create other medical complications, which could result in potential health risks to consumers. The FDA affirmed that the concerns expressed by boycott participants might be valid. Additionally, in response to the boycott, several national food distributors and grocery chains announced that they would not sell goods from BGH-treated cows.

In 1996, Consumers Union of the U.S., Inc., published its 60th anniversary article, which detailed consumer action victories over the preceding sixty years and affirmed the value of their publication *Consumer Reports*. This publication's mission is to detail the most urgent consumer issues. That article provided a listing of consumer issues perceived at that time to be most pressing: commercial clutter, health care, the information age, economic insecurity, the environment, and consumer rights.

As mentioned earlier, self-regulation through codes of ethical conduct and establishing, reviewing, and maintaining product standards has become essential for maintaining fruitful customer/organizational interaction. Self-regulation, has engendered creation of such consumer-focused organizations, as Better Business Bureaus, the International Business Ethics Institute, and the Internet Law and Policy Forum, to name a few. Additionally, self-regulation programs have been created, such as the Chemical Manufacturer Associations Responsible Care program and the standards of ethical conduct drafted by numerous professional organizations (e.g., American Bar Association, American Medical Association, Institute of Electrical and Electronic Engineers, and American Dental Association). While these self-regulation initiatives generally were responses to consumer concerns in the early days of consumer protest, industries subsequently began to self-regulate voluntarily and now view it a matter of course and as a complement to government regulation.

Today, the consumer movement continues pressuring for consumer protection against such problems as misleading advertising and defective products and for such benefits as safer food and drugs, and affordable utilities. As the level of activism grows greater, challenges are generated for businesses and industries, for some complaints are costly to resolve. In the past, the sides (activist versus business) became polarized, resulting in delayed resolution. Wise business and industry representatives, therefore, are not only proactively assuming responsibility for meeting activist-generated challenges, but also taking an active role in setting the public agenda for consumer concerns.

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MARY JEAN LUSH

CONTEMPORARY MANAGEMENT THOUGHTS

(SEE: *Management*)

CONTINGENCY MODEL

(SEE: *Management Styles*)

CONTINUING PROFESSIONAL EDUCATION

(SEE: *Professional Education*)

CONTRACTS

> *"A contract is a promise or a set of promises for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty."*

The freedom to contract has not existed throughout history. In medieval England, the courts did not engage in the enforcement of agreements between individuals. Rather, the feudal society that ruled personal interaction was relied upon for all forms of trade. As society evolved to emphasize individual freedoms over social caste, the ability to contract was viewed as a fundamental tenet of individual liberty. Writers and economic theorists such as Adam Smith, David Ricardo, Jeremy Bentham, and John Stuart Mill "successively insisted on freedom of bargaining as the fundamental and indispensable requisite of progress; and imposed their theories on the educated thought of their times."

Article I, Section 10 of the U.S. Constitution protects the individual right to contract by stating that, "No State shall . . . pass any . . . law impairing the obligations of Contracts." Many state constitutions contain similar provisions.

Generally, the law of contracts does not come from statutes passed by Congress or by state legislatures, but rather is a product of the common law, the continuing line of court decisions dating back to pre-colonial English courts. The common law is living and constantly evolving, as modern courts continue to analyze, revise and even disagree on its application. The American Law Institute, a collection of legal scholars and practitioners, attempted to catalogue the common law of contracts in its Restatements of the Law of Contracts in 1932. The Restatement, Second, of the Law of Contracts was published in 1979. The Restatement, although it does not have the force of law itself, is generally regarded as an excellent source. The law of contracts is also significantly influenced by the Uniform Commercial Code (UCC), which has been adopted in forty-nine states. The UCC is an attempt to standardize laws dealing with contracts and commerce. The UCC is beyond the scope of this article.

FORMATION OF A CONTRACT

A contract consists of one individual making an *offer*, another *accepting* the offer, and the existence of *consideration* between the contracting parties.

OFFER

An *offer* is the expression of a willingness to enter into a bargain. An offer must be directed to a particular offeree and be sufficiently clear so as to justify another individual in the belief that acceptance of the offer would constitute an agreement. Although an offer need not set forth all terms of the potential bargain (even the price may be left to be later determined), a valid offer must identify the fundamental elements of the proposed agreement. An offer may be revoked at any time before it is accepted or before it is reasonably relied upon by another individual.

ACCEPTANCE

Acceptance of an offer is the communication by the offeree of *mutual assent*, that is, the agreement to be bound by the terms of an offer. An offer may be accepted only by a person to whom the offer was directed and only before the offer terminates or is revoked. A valid acceptance must be communicated to the offeror by the same or similar means under which the offer was communicated, and must be unequivocal to make the agreement binding. At common law, it is generally held that any deviation from the terms of the offer is not an acceptance, but rather a rejection and a counteroffer. If the offer identifies a specific mode of acceptance, such as form, date, time, or place, that mode must be followed for an acceptance to be valid. Generally, an acceptance is not effective until it comes into the possession of the offeror, although some states employ the *mailbox rule*, which makes acceptance sent by U.S. mail effective upon its deposit in the mail. If an offer specifically invites acceptance by performance of a specified act, performance of that act by the offeree constitutes acceptance without notification of the offeror. Except in very limited circumstances, such as where the parties have a pattern of previous dealings or where it would be inequitable to find otherwise, silence does not constitute acceptance.

CONSIDERATION

An offer and acceptance alone do not create a valid and binding contract. A third element, *consideration*, must exist. Consideration is a *bargained-for exchange*, that is, the existence of *mutuality of obligation*. Both parties must derive some benefit—or, alternatively, both parties must experience some detriment or forbearance—for a contract to exist. Without consideration, an offer and acceptance represent merely a naked, unenforceable promise.

While the existence of consideration is critical to the enforceability of a contract, the quantity or quality of consideration is immaterial. Generally, courts are not concerned with the value or adequacy of consideration and will not interfere with a bargain entered into between the parties because of insufficient consideration. Certain acts or forbearance cannot constitute consideration. A preexisting duty to perform or refrain from performing may not be consideration for a contract. Therefore, fulfilling an existing contractual obligation or refraining from an unlawful act cannot constitute consideration. An exception to this rule is that the agreement to pay a preexisting debt may be consideration. A promise to make a gift is not consideration, nor is a moral obligation. A promise not to sue, so long as the right to sue actually exists, may be consideration.

DEFENSES

In its most basic form, a contract exists where there is an offer, an acceptance of the offer, and consideration to support the contract. Despite the existence of these three elements, enforcement of a contract may be denied if a sufficient *defense* to the formation of a contracts is present.

In order for an individual to enter into a contract, that person must have the legal *capacity* to do so. At common law, minors, individuals who are mentally ill, persons under the influence of alcohol or drugs and those under a legal guardianship lack legal capacity to contract. The rule as to minors is that a contract of a minor is *voidable*, not *void*. That is, a minor has the option to make a contract valid or not. However, if a minor enjoys the benefit of a contract, the minor is obligated either to repay the other party or to fulfill the minor's obligations under the contract. In addition to capacity, an individual must have the legal *competency* to enter a contract. Competency is generally defined as the mental ability of a party to contract. In other words, a legally competent person is one who possesses the ability to recognize and understand the contractual obligations that will result. Courts will assume that capacity and competency exist until it is proved otherwise.

If the parties to a contract make a *mutual mistake* with regard to that contract, such as a mutual misunderstanding, there is no mutual assent and therefore no contract. Clerical errors, known as *scrivener's errors*, will generally be corrected by a court. That is, rather than finding the contract invalid, the court will merely correct the error.

A contract that is based on a *fraudulent misrepresentation* of a material term is unenforceable. A fraudulent misrepresentation is material if the maker intended for the misrepresentation to induce the other party to enter the contract and if the misrepresentation would likely induce a reasonable person to so enter the contract.

Duress may make a contract unenforceable. Physical duress, or forcing a person to accept an offer, invalidates the contract, while the threat of physical harm makes the contract voidable at the election of the victim. Courts are divided on whether economic duress is sufficient to deny the enforceability of a contract.

A contract that is entered into under *undue influence* is also voidable at the election of the victim. Undue influence exists where one improperly takes advantage of one's relationship with another to coerce the other person to enter a contract. Examples are the influence that an adult child may have over an elderly parent who is dependent on the child for care, or the reliance of an unsophisticated individual on a sophisticated adviser, where the adviser is aware of the reliance.

As a general rule, an *illegal* bargain is void as a matter of law and may not be enforced. Therefore, a contract to commit murder, to rob a bank, or to steal a car is void as a matter of law.

A contract may be void because enforcement of the contract would be *unconscionable.* It is important to understand that mere disproportionality of the benefits of a contract, no matter how great, does not make the contract void as unconscionable. Unconscionability may be found only where there is grossly disproportionate bargaining power to the extent that one of the parties had virtually no choice in accepting the terms of the contract. Contracts are rarely found to be unconscionable unless a significant public policy issue is involved.

CONTRACT INTERPRETATION

An offer, acceptance, and consideration must be present to form a contract. The defenses to contract formation, as discussed above, may be used to show that no contract exists. However, even if it is shown that a contract does exist, questions may arise as to the content and meaning of that contract.

RULES OF CONSTRUCTION

In interpreting contracts, courts generally follow certain fundamental *rules of construction.* Under the *four corners rule*, courts will restrict their analyses to the written terms of the agreement itself, wherever possible. Ambiguities will be construed against the drafter. Courts will generally seek to harmonize the terms of a contract in a manner that makes those terms consistent. Courts will generally find that specifics in a contract will control over generalities. Words and phrases used in a contract are given their *plain meaning* absent evidence to the contrary.

PAROL EVIDENCE RULE

The *parol evidence rule* provides that if the parties to a contract intended for their contract to be a complete *integration*, that is, if the parties intended that the written agreement be the full extent of the understanding between them, then evidence other than the contract itself may not be admitted to contradict the written terms. Therefore, in interpreting a contract, the court should generally not look beyond the contract itself for interpretation. The parol evidence rule permits evidence intended to prove or disprove the legitimacy of contract formation, such as evidence showing a party's capacity or showing fraud or mutual mistake, but prohibits evidence intended to vary, contradict, or change the terms of the written agreement. Of course, if a contract refers to another document, that other document may be admitted to explain the terms of the contract at issue.

STATUTE OF FRAUDS

A common mistake is the belief that oral contracts are not enforceable. In fact, most oral contracts, if they fulfill all of the requirements of a contract, are indeed enforceable. However, the *statute of frauds* requires that in certain specific circumstances, contracts must be in writing. While the requirements vary from state to state, generally the statute of frauds requires the following contracts to be in writing: contracts by executors, administrators, or other personal representatives; contracts in consideration of marriage; contracts for the sale of real estate; contracts for the sale of goods exceeding $500; and contracts that will not be performed within one year of the making of the contract. The statute of frauds generally does not require any particular written form, and generally a contract will suffice so long as it identifies the parties, describes the subject matter, states the essential and material terms, states that consideration exists, and is signed by the party against whom enforcement is sought.

REMEDIES AND DAMAGES

Throughout this article, reference has been made to the court's enforcement of a contract. This, of course, begs the question of what course of action may be taken to enforce a contract, to repay the victim of a breach of contract, or to punish those who breach.

Generally, the victim of a breached contract is entitled to be made whole, or put in the same position as that party would have been in had the contract been fulfilled. Commonly, this is done by forcing the breaching party to pay the aggrieved party *compensatory damages.* Compensatory damages are intended to compensate the nonbreaching party for the actual damages suffered. Normally, compensatory damages are measured by the party's *expectancy*, or what the parties should have reasonably foreseen as flowing from the breach. Expectancy damages are often described as conferring the *benefit of the bargain* upon the nonbreaching party. Where expectancy damages are difficult to determine or otherwise impractical, a party may receive reliance damages, which are intended to compensate for the losses incurred in relying on the breaching party's fulfillment of the contract. A third alternative for compensation is *restitution*, where the breaching party must compensate the victim for the benefit conferred upon the breaching party.

Liquidated damages are a method used by contracting parties to estimate the damages that will result in the event of a breach. Liquidated damages may not serve as a penalty against the breaching party, but so long as they are a reasonable estimate of the damages that would be suffered by the nonbreaching party, they will be enforced. A clause in an apartment rental contract that requires a breaching party to pay two months rent is a common form of liquidated damages.

Punitive damages are those intended to punish the breaching party. Punitive damages are available only in very rare cases; they generally are not awarded in contract disputes.

Finally, *equitable relief* is available to nonbreaching parties where none of the above remedies would be sufficient. Under the concept of equity, a court may take corrective action other than by awarding money. In rare circumstances where none of the above described compensatory damages would be sufficient, a court may order *specific performance*. That is, the court will order the parties to fulfill their obligations under the contract. This method is not favored because of the practical difficulty of enforcement, but in some cases, such as the purchase of real estate, art, and the like, it is the only remedy that is sufficient. Also available is an *injunction*, which is a court order preventing a party from taking further action, such as a continued breach of a contract.

KEITH A. BICE

COOPERATIVE

A *cooperative* (also referred to as a *co-op*) is a form of business ownership that consists of a group of people who have joined together to perform a business function more efficiently than each individual could do alone. The purpose of a cooperative is not to make a profit for itself, but to improve each member's situation. However, members of certain types of cooperatives do make a profit by selling their product and/or service to customers who are not co-op members.

Cooperatives can take many forms. For example, a group of single parents may decide to band together to provide a child-care facility so they will have reliable day care for their children. Each parent contributes a certain amount of money and/or time, and in exchange they all have a safe place to leave their children. A credit union is also a type of cooperative. The purpose of a credit union is not to make a profit for itself, but to help each member be more financially secure. By creating their own financial institution, members can receive a higher interest rate on the money they have placed in savings and receive a lower interest rate on loans. Retailers have also started establishing co-ops. Ace Hardware, for example, is a co-op of independent hardware store owners. By banding together, the hardware owners can share advertising costs and receive discounts for bulk ordering of materials and supplies. Sharing costs and discounts allows small hardware stores to compete with large chain hardware stores.

While cooperatives can be found in many different areas of the economy, they are most commonly found in the agricultural area. A group of farmers may band together to allow themselves to be more competitive and to achieve more economic power. Agricultural cooperatives allow members to save money on materials needed to produce and market their product, which means a larger profit margin for all members. Ocean Spray Cranberries, Inc., for example, is a cooperative of several hundred cranberry and citrus growers from all over the country. Other well known cooperatives include Blue Diamond, Sunkist, IGA (Independent Grocers Association), and Land-O-Lakes.

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MARCY SATTERWHITE

COOPERATIVE ADVERTISING

(SEE: *Advertising*)

IGA employees. The Independent Grocers Association is one example of a cooperative business group.

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The *Berne Convention* was a convention for the protection of literacy and artistic materials and the *Universal Copyright Convention* is a convention to provide for the adequate and effective protection of the rights of authors and other copyright proprietors in literary, scientific, and artistic materials, which includes writings; musical, dramatic, and cinematographic materials; and paintings, engravings, and sculpture. As a result, international guidelines for identifying materials that were subject to copyright protection were established, and those guidelines included an administrative process for redress if an author believed material to be reproduced without permission. Not only were the materials subject to copyright protection expanded from written materials to audiovisual materials; pictorial, graphic, or sculptural materials; architectural materials; collective materials; and compilation materials; but reproduction of materials was refined to include performing or displaying material as well as transmitting the work without the author's permission. The United States joined the Berne Convention for the Protection of Literary and Artistic Materials in 1989.

The federal agency charged with administering the act is the Copyright Office of the Library of Congress. As previously mentioned, materials are subject to copyright protection with or without copyright notice attached to the material. To obtain a copyright for an original work, an application for copyright registration should be filed with the Register of Copyrights in the Copyright Office of the Library of Congress. The application requests the following information: (1) the name and address of the author of the material; (2) in the case of materials other than anonymous of pseudonymous work, the name and nationality or domicile of the author or authors and, if one of more of the authors is deceased, the dates of their deaths; (3) if the work is anonymous or pseudonymous, the nationality or domicile of the author or authors; (4) in the case of material made for hire, a statement to that effect; (5) if the copyright claimant is not the author, a brief statement of how the claimant obtained ownership of the copyright; (6) the title of the work, together with any previous or alternative titles under which the material may be identified; (7) the year in which creation of the work was completed; (8) if the work has been published, the date and nation of its first publication; (9) in the case of a compilation or derivative material, an identification of any preexisting material(s) that it is based upon, and a brief, general statement of the additional materials covered by the copyright claim being registered; and (10) in the case of published documents containing materials manufactured in the United States, the names of the individuals or organizations who performed the manufacturing process and the location where the manufacturing process was performed. Simply, an author of an original work must file the required information and form to register the copyright with the Register of Copyrights in the Copyright Office of the Library of Congress. The appropriate fee must accompany the form to register the copyright. In addition, the Copyright Office of the Library of Congress has been charged with overseeing the copyright process and reviewing any reported violations. While this office has the major responsibility for adjudicating any alleged copyright violations, the U.S. Supreme Court and the U.S. Circuit Courts of Appeals have both rendered decisions affecting copyrights.

RANDY L. JOYNER

CORPORATE EDUCATION

Civilization has entered the Information Age, where business is knowledge-driven. Industries whose product lines either provide knowledge (e.g., software, information technology, and biotechnology) or process knowledge (e.g., telecommunications, banking, and advertising) place an increasing emphasis on speed, flexibility, technical expertise, and innovation. Consequently, it is imperative to the survival of any business organization to continually upgrade the knowledge base and skill levels of its work force in order to keep up with the ever-changing demands of the global marketplace and advances in technology.

A corporation's future is determined largely by its involvement in the development of its intellectual resources. Enterprises are growing and

A corporate outdoor training session in progress.

expanding the education segment of their business activity, realizing that without this input, they will quickly lose their competitive edge in a highly competitive global economy. Not only is continuing education vital to the future success of any organization; it is of equal importance that employees remain adaptable and agile learners in order to profit personally and professionally from available opportunities generated by this new economy. Investing in the right program, for the right people, at the right time will continue to be a challenge for businesses as they strategically attempt to capitalize on the vast opportunities available to them in the twenty-first century.

Another important reason for the continuing growth of corporate education is that many highly competitive businesses are abandoning the multilayered hierarchical organization in pursuit of a structure that empowers front-line workers with the authority to solve problems and make decisions in areas that affect their realms of expertise. Corporate restructuring, as well as high-speed technological advances, gives employees broader responsibilities that require more skills and training for self-managed, cross-functional teams (Atkinson and Court, 1999).

TYPES OF CORPORATE EDUCATION

Independent Study Independent study is a growing trend in corporate education geared toward providing employees with interactive Web-based training, also known as virtual classrooms, from the comfort of their own desks. The Web reduces time and company costs by 50 percent over classroom training (Roberts, 1998). Employees are provided with the flexibility to learn at their convenience, at their own pace, and from most locations. This method is beneficial for those who lack the time to attend a regularly scheduled class and for those who are uncomfortable in traditional classroom situations where they would be expected to grasp concepts at the same rate as fellow classmates.

The value of an independent-study program is enhanced when used in conjunction with electronic mail, live chatroom discussions, and desktop videoconferencing. These additional tools and resources allow employees to participate in electronic discussion groups that serve to reinforce learning objectives. On-line learning via the virtual classroom relies more on students' learning from collaborative discussions and team projects than from lectures. As high-speed forms of communication media become available, CEOs of many large corporations are encouraging the training of their work force in on-line skills (Roberts, 1998). In terms of public image, these industries project awareness and competency in leading-edge technology, winning the confidence of customers and associates as well as commanding respect from rivals.

Apprenticeships and On-the-Job Training Apprenticeships are a form of on-the-job training whereby individuals with little or no knowledge of certain trades are prepared for occupations in skilled crafts and earn hourly wages as they learn. Experienced workers train employees to become, for example, accomplished electricians, machinists, operating engineers, and tool-and-die makers. Such programs incorporate a certain prescribed number of hours of related classroom instruction. Examples of coursework include safety, mathematics, schematic reading, and technical courses related to particular job requirements. "Statistics show that program graduates earn higher wages, have more stable work records, and are promoted more often than workers who have not been trained through apprenticeship programs" (Texas Workforce Commission, 1999).

Other on-the-job training programs are customized for participants who have some job-related skills but need to become more knowledgeable and proficient in a particular trade. As with apprenticeships, employees benefit because they are paid to learn. In addition, employers benefit from hosting on-the-job training programs because they have the full-time services of motivated individuals who are training to fulfill specific company needs. Participants also include long-time employees who need to adapt to new technologies and procedures, "skills essential to the full and adequate performance of the job" (Texas Workforce Commission, 1999).

Traditional Classroom Instruction "Most organizations equate employee development with classroom training. Billions are spent providing classes—mostly classroom-based lectures—to employees at all levels. The material taught is mostly concepts, theories, approaches used by other organizations, and analysis of past events" (Wheeler, 1999). Traditional classroom instruction, however, is becoming obsolete. Whether classes are held in an on-site conference room or at an off-site facility, participants must attend regularly scheduled sessions that frequently interfere with work and personal obligations. In addition, the time spent in the classroom is often unproductive. Individuals who arrive at the specified time may spend several minutes waiting for the others in the class before the session commences. If the instructor is the only active participant, the training objective of the course eludes those required to attend. The lack of interactive learning causes students to lose their focus on the course content, become passive, daydream, and watch the clock.

Corporations with frequent employee turnover, such as the hotel and resort industry, find traditional classroom education to be inefficient, expensive, and pointless. This type of industry must train its staff in order to properly and uniformly satisfy customer service requirements; however, employees are usually seasonal workers, making repeat training an exhausting necessity. Also, tight budgets limit the number of corporate trainers available, creating additional problems for international chains. Lack of proper training prevents workers from doing their jobs well, which negatively impacts the business.

For the reasons explained above and many more, organizations are shifting from traditional classroom instruction to Web-based interactive training that actively involves students in the learning process. These programs are always accessible from designated worldwide locations and are easily modified to reflect cultural and language differences. Students may participate frequently and at their own convenience.

Unconventional Training Programs Regardless of the method used, the training and education department of an organization should be designed to "maintain tighter ownership of learning outcomes in order to better meet corporate priorities" (Meister, 1999). Educational priorities are not always focused on implementing physical applications. Sometimes the purpose of training is to modify employee attitudes and work ethics, thereby transforming the internal corporate culture into one that is compatible with the corporation's external image and direction. Among the multitude of programs that may be appropriate for this type of application are leadership development, team building, and conflict resolution.

Corporate outdoor training, less conventional than the traditional classroom approach, is gaining in popularity with many international businesses as an informal yet meaningful method of conveying corporate values across a diverse range of cultures. "The outdoors provides a unique learning environment for individual challenge, personal development, and promoting beneficial team behaviors" (Brooks, 2000). Activities include ones such as canoeing, rafting, and climbing that incorporate initiative and problem-solving skills. "Teams provide a vehicle for people to become involved, learn from each other, and work toward constant improvement. Learning is most effective when it involves active participation" (Corporate Outdoor Training, 2000).

Another unconventional type of corporate education program emphasizes the usefulness of humor in the workplace. This program encourages employees, starting with upper management, to laugh and have fun, making work more enjoyable for everyone. The motivation behind this type of training is to create an atmosphere in which employees want to work, are proud of their contributions, and enjoy the company of co-workers. Participating organizations benefit from a reduction in stress-related absenteeism and an increase in work-force creativity and innovation. Many corporations have become successful because they realized in the early stages of their development that a happy team is a winning team and that "work can be play, and play can be extremely productive" (LeBrun, 2000).

ONGOING VALUE OF EDUCATING WORKERS

Corporations cannot afford to become complacent in the belief that they possess an abundance of educated employees who are sufficiently familiar with existing technologies. As demonstrated throughout the last century, continuous technological developments altered the course of business from a process standpoint, outdating tools and business practices that were once considered useful, even state-of-the-art. As the world begins its journey through the increasingly competitive global economy of the twenty-first century, continuous employee education remains a critical component in determining an industry's ability to survive. Evolving information systems and peripheral equipment will further facilitate worldwide business communications and transactions, allowing instant access to many types of data from a variety of locations. Speed and proficiency in the use of these systems, which are attained mainly through continuous work-force education, will determine an industry's status within the business community.

It is unlikely that this trend will reverse. The human race is becoming accustomed to information-on-demand and, in the long run, technology is cost-efficient. According to Ken Bryant, Senior Business Specialist for Genicom Corporation, a Virginia-based printer manufacturer and network integration company, "With the growth of technology based businesses, especially within the burgeoning Internet marketplace, it is corporate suicide not to actively encourage and promote ongoing corporate training among staff. Technology companies have revolutionized marketing, customer service and many other facets of business, changing corporate culture and mandating an increasing level of competence. Lack of training, whether through traditional classes, continuing education venues, or informal work (help) groups, puts companies at a distinct disadvantage in global commerce" (personal communication, January 27, 2000). The most important goal of any corporation is to increase profits. Without an ongoing commitment to work-force education, businesses set themselves up for failure. Complacency insures that organizational goals will never be attained.

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Diane M. Clevesy

CORPORATIONS

A business corporation is a legal entity permitted by law in every state to exist for the purpose of engaging in lawful activities of a business nature. It is an artificial person created by law, with many of the same rights and responsibilities possessed by humans. Corporations are widely prevalent in the United States; today, virtually every large enterprise is a corporation.

RIGHTS AND PRIVILEGES OF A CORPORATION

Within legal guidelines, corporations may issue stock, declare dividends, and provide owners with limited liability.

Stocks A corporation can issue and attempt to sell stock. Every share of stock owned represents a share of the corporation's ownership.

From the standpoint of stock sale, there are two kinds of corporations: public and private. With a public corporation, anyone can buy shares of stock, which may very well be traded on a stock exchange. With a private corporation, however, sale of stock may be limited to stipulated persons, such as members of the principal stockholder's family.

A corporation can own "treasury stock"; that is, it may repurchase its own stock that it had previously issued and sold.

A corporation may even give its stock away for any reason; for example, as a donation to a charity, or as a reward to employees for industrious service.

Dividends A corporate board of directors has the authority to declare and pay dividends in the form of cash or stock. Cash dividends are ordinarily payable from current net income, although net income "kept" from previous years may also be used. A common name for net income kept is "retained earnings." Recipients of stock dividends receive shares of stock in the corporation, thereby increasing the total number of shares they own. Stock dividends are declared from capital stock that has been authorized but not issued.

Rules exist regarding eligibility for receipt of a dividend. For example, assume that a cash dividend is declared on August 15, payable on September 15. If Stockholder A owns the stock on August 15, he or she receives the dividend on September 15. If Stockholder A sells the stock on August 27, Purchaser B buys it "ex-rights," meaning that on September 15 the dividend still goes to Stockholder A. Purchaser B would not receive a dividend until the next one is declared, perhaps on November 15.

Recipients of cash dividends pay income tax as of the year the dividends are received. Income tax on stock dividends, however, is postponed until the recipients sell the stock.

Occasionally, corporations split their stock. However, this does not change the value of the shareholder's shares on the corporation records or the corporation's net worth.

A stock split is often a good sign as it is often done to reduce the price of a stock that has risen to a point at which its marketability is impaired.

Limited Liability If a corporation suffers large financial losses or even terminates its existence, the shareholders might lose part or all of their total investment. However, that is ordinarily the extent of their loss. Creditors cannot satisfy their claims by looking to the personal assets of corporate shareholders as they can with a sole proprietorship or an ordinary partnership.

Limited liability can be advantageous because it encourages investment in the corporation. With personal assets of $1.1 million, a potential investor might willingly invest $50,000 in a corporation knowing that no risks exist beyond the $50,000.

The limited liability advantage, however, can be lost if the owners directly engage in the company's management and play an influential role in causing corporate losses.

Additional Rights of a Corporation Corporations have the basic right to conduct a business in which they sell products or services and to engage in either a profit-seeking or a non-profit-seeking enterprise.

Corporations have the right to own, sell, rent, or lease real or personal property.

Corporations may sue other business entities, such as another corporation, a partnership, or a sole proprietorship.

Corporations may merge with other corporations.

Example of Stock Split

2 for 1 Stock Split	Smith, A Shareholder Owns	Value of Smith's Shares on Corporation Records	
		Per Share	Total Value
Before	100 shares	$80	$8,000
After	200 shares	$40	$8,000

Corporations may make contracts with either another business or a person.

Corporations may hire or discharge employees of any rank, from entry-level employees to the chief executive officer (CEO).

Corporations may borrow money, and they often do so by issuing corporate bonds. Owning a corporate bond does not grant the bondholder any form of ownership in the company. Instead, corporate bondholders have actually loaned money to the corporation, virtually always with a stated interest rate and with terms regarding dates and methods of repayment. Bondholders may ordinarily sell their bonds to other persons, most often through stockbrokers.

In addition to issuing bonds, corporations may borrow directly from any loan source, such as banks. On occasion, corporations raise needed cash by authorizing and selling additional stock.

Corporations may make any lawful investment. They often invest in the stock and/or bonds of other corporations, personal or real property, mutual funds, money market accounts, certificates of deposit, and government securities.

REQUIREMENTS OR LIMITATIONS OF A CORPORATION

Corporations are subject to risk, to suits, and to income tax liabilities.

Risk By engaging in business activities, corporations are at risk, great or small. Profit-seeking corporations may very well find the large profits they seek. But they risk huge economic losses and even bankruptcy.

Suits Corporations may be sued by any business, including other corporations. And they may be sued by individuals or groups of persons.

Income Tax Corporations must pay federal and state income taxes on the net profit they make during a calendar or fiscal year. People who receive cash dividends must also pay income tax for the year they are received. Thus it is often said that corporation profits are subject to double taxation. Corporations receive no deduction for any cash dividends that they pay. Recipients of stock dividends, however, postpone payment of income tax on stock dividends until they sell the stock.

REGULATION OF CORPORATIONS

Corporations are subject to two kinds of regulation: (1) regulation by the state in which they are incorporated and (2) regulation by the individual corporation's articles of incorporation and bylaws.

State Regulation Corporations are regulated by business corporation laws that exist in all fifty states. Although the statutes prescribe what corporations may and may not do, they are written in broad and general language. In essence, then, the states permit articles of incorporation to be written in a manner that permits corporations to engage in business for almost any legal purpose.

Articles of incorporation are filed publicly and are available to the public. They are subject to amendment. Bylaws are not filed publicly. Consequently, they tend be more detailed than articles of incorporation.

Board of Directors Members of the board of directors make the major decisions of the corporation. When corporations are formed, they draw up Articles of Incorporation, usually for approval by shareholders. The board of directors also draws up the initial and ensuing bylaws.

Board members are most often shareholders and officers of the corporation. They are elected by the shareholders. They may be "internal" directors or, for reasons of good public relations or of obtaining of expertise, may work on the "outside" and be selected on the basis of their prominent role in the community.

Policies made by the board of directors are carried out by the corporation's executives, who direct the work of employees under their jurisdiction.

CLASSES OF STOCK

Corporations ordinarily have two classes of stock: (1) common and (2) preferred. The two classes differ in many respects but both also share a number of common characteristics. There is no limit to how many classes of stock a corporation may have.

Common Stock Common stockholders participate more in the governance of a corporation than do preferred stockholders. This is accomplished by giving common stockholders the right to vote for members of the board of directors as well as on major decisions (e.g., a merger with another corporation). Common stock, however, can be issued without voting rights.

Cumulative voting, which permits shareholders to cast one vote for each share of common stock owned in any combination, is prevalent. In an election for members of the board of directors, for example, a shareholder owning 2000 shares of common stock could cast all 2000 votes for one candidate or divide them in any way among candidates (e.g., 400 votes each for five candidates). Cumulative voting offers some protection for smaller stockholders.

The market value of common stock tends to fluctuate more than that of preferred stock.

Preferred Stock Preferred stockholders are not ordinarily granted the voting rights given to common stockholders. They cannot participate in elections for members of the board of directors or in major decisions of the corporation.

However, preferred stockholders are almost always given prior rights over common stockholders in the matter of dividends.

Dividends for preferred stockholders are often stated in advance and do not tend to fluctuate as much as those for common stock. Preferred dividends may be stated as a percentage of par value or as a dollar amount per share.

However, preferred dividends are not guaranteed in the same sense as is bond interest. Neither preferred nor common stock dividends can be paid without approval of the board of directors. And boards may "skip" declaring dividends if the directors feel the financial situation so warrants.

Preferred stock is often "cumulative." With this provision, a preferred stock dividend that is not declared or paid is considered to be "owed." As long as the preferred dividend is "owed," no common stock dividend may ordinarily be declared or paid. But even if the preferred stock is not cumulative, a frequently applied policy is that common stock dividends cannot be declared as long as the preferred dividends are "in arrears."

Sometimes preferred stock is "convertible." Shareholders who own convertible preferred stock may, at a price announced when the stock is purchased, turn in their preferred stock and receive common stock in its place. Assume, for example, that an investor purchases preferred stock at $36.50 per share. The stock is convertible four years from its issuance at a ratio of 3:1; that is, three shares of preferred stock can be traded at the shareholder's option for one share of common stock. At the 3:l ratio, after discounting any related transfer costs, the preferred stockholder would find it profitable to convert if the common stock value rises above $109.50 per share ($36.50 × 3).

Preferred stock may be "callable." At the option of the corporation, callable preferred stock may be surrendered to the corporation, usually at a price a little above par value (or a stated value). If the stated value is $50, the callable price on or after a specified date might be $51.25. If the stock's market value rises to, say, $55, it might be profitable for the corporation to call for its surrender.

Occasionally preferred stock is given the right to "participate" with common stock in being granted dividends above a stated value. For example, assume the board of directors declares a regular preferred stock dividend at $3 per share and a common stock dividend at $13 per share. With participating rights, it would have been stipulated that preferred stockholders would receive $1 per share more for every additional $5 given to common stockholders.

If a corporation closes down its operation, preferred stockholders have prior claim over common stockholders upon dissolution of the assets. A sufficient amount of the corporation's assets would need to be turned over to the preferred stockholders before common stockholders could claim any part of the assets. In practice, however, assets of a closed-down corporation are rarely sufficient to pay off the preferred shareholders in full.

RELATED FORMS OF BUSINESS OWNERSHIP

Five types of business entities have regulations similar to those of corporations.

Professional Corporations Professional corporations, organized under corporation laws of their respective states, involve incorporation by persons engaged in professional practice, such as medical doctors, lawyers, and architects. They are granted limited liability against claims from their clients, except for malpractice.

Not-for-Profit Corporations Not-for-profit corporations, formed under the nonprofit laws of their respective states, have members instead of stockholders. Any income made cannot be distributed to the members.

Some apply to the Internal Revenue Service for tax-exempt status, becoming "501(c)(3)" organizations, which permits donor gifts to be declared tax-deductible.

Closed Corporations Closed corporations, not permitted by statute in all states, limit shareholders to fifty. They permit the firm to operate informally either by eliminating the board of directors or curtailing its authority. Closed corporations also restrict transferability of the owners' shares of stock.

Limited-Liability Companies Limited-liability companies enjoy the benefits of limited liability while being taxed like a general partnership.

Owners' net income is taxed at an individual personal rate rather than at the rate of a corporation (taxation of both corporate net income and dividends).

Not all states permit formation of limited-liability companies. They are neither a partnership nor a corporation. They generally have a limited life span. Management must be by a small group. States do not restrict the number or the type of members. Unlimited transferability of ownership is not permitted.

S Corporations S corporations' major benefit is that they are taxed like partnerships. The owners' income tax is based on their share of the firm's total net income, whether or not it is distributed to them. The second huge benefit is limited liability.

However, an S corporation is limited to thirty-five shareholders, none of whom can be nonresident aliens. Only one class of stock may be issued or outstanding. The S corporation may own only 80 percent of a subsidiary business firm.

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G. W. MAXWELL

COST ACCOUNTING

(SEE: *Accounting*)

COST ALLOCATION

A cost is generally understood to be that sacrifice incurred in an economic activity to achieve a specific objective, such as to consume, exchange, or produce. All types of organizations—businesses, not-for-profits, governmental—incur costs. To achieve missions and objectives, an organization acquires resources, transforms them in some manner, and delivers units of product or service to its customers or clients. Costs are incurred to perform these activities. For planning and control, decisions are made about areas such as pricing, program evaluation, product costing, outsourcing, and investment. Different costs are needed for different purposes. In each instance, costs are determined to help management make better decisions.

When incurred, costs are initially reviewed and accumulated by some classification system. Costs with one or more characteristics in common may be accumulated into cost pools. Costs are then reassigned, differently for specified purposes, from these cost pools to one or more cost objects. A cost object is an activity, a unit of product or service, a customer, another cost pool, or a segment of an organization for which management needs a separate measurement and accumulation of costs. Costs assigned to a cost object are either direct or indirect. A direct cost can be traced and assigned to the cost object in an unbiased, cost-effective manner. The incurrence of an indirect cost cannot be so easily traced. Without such a direct relationship to the cost object, an indirect cost requires an in-between activity to help establish a formula relationship. When the indirect cost is assigned through the use of this formula, the cost is considered allocated. The activity used to establish the in-between linkage is called the basis of allocation.

TYPES OF ALLOCATIONS

Cost allocations can be made both within and across time periods. If two or more cost objects share a common facility or program, the cost pool of the shared unit is a common cost to the users and must be divided or allocated to them. Bases of allocation typically are based on one of the following criteria: cause-and-effect, benefits derived, fairness, or ability to bear. The selection of a criterion can affect the selection of a basis. For example, the allocation of the costs of a common service activity across product lines or programs based on relative amounts of revenue is an ability to bear basis, whereas the same allocation based on the relative number of service units consumed by each product line or program would reflect either the benefits derived or the cause-and-effect criteria. Cost allocation then is the assignment of an indirect cost to one or more cost objects according to some formula. Because this process is not a direct assignment and results in different amounts allocated depending on either the basis of allocation or the method (formula) selected, some consider cost allocation to be of an arbitrary nature, to some extent.

Costs of long-lived assets are allocated and reclassified as an expense across two or more time periods. For anything other than land, which is not allocated, the reclassification of tangible assets is called depreciation (for anything other than natural resources) or depletion (for natural resources) expense. The bases for these allocations are normally either time or volume of activity. Different methods of depreciation and depletion are available. The costs of long-lived intangible assets, such as patents, are allocated across time periods and reclassified as amortization expense. The basis for these allocations is normally time.

Cost allocations within a time period are typically across either organizational segments known as responsibility centers or across units of product or service or programs for which a full cost is needed. Allocations may differ depending on whether a product or program is being costed for financial reporting, government contract reimbursement, reporting to governmental agencies, target pricing or costing, or life-cycle profitability analysis. Allocations to responsibility centers are made to motivate the centers' managers to be more goal-congruent in their decisions and to assign to each center an amount of cost reflective of all the sacrifices made by the overall organization on behalf of the center. These allocations can be part of a price or transfers of cost pools from one department to another.

ETHICAL CONSIDERATIONS

Allocations can involve ethical issues. Often the federal government issues contracts to the private sector on a cost-plus basis; that is, all the actual costs incurred to complete a contract plus a percentage of profit is reimbursed to the contractor performing the contract. A contractor completing both governmental and private-sector contracts may select a formula that tends to allocate more indirect costs to governmental contracts than to nongovernmental ones. A contractor may also try to include in reimbursement requests costs that are not allowable by the governmental agency. A contractor may even try to double-count a cost item by including it as a direct cost of the contract and as a part of an indirect cost pool allocated to the contract. Lastly, a contractor may attempt to have a reimbursement cover some of the costs of unused capacity. Audits are made of costs of government contracts to identify inappropriate costs.

SERVICE FIRMS, NOT-FOR-PROFIT ORGANIZATIONS, AND MERCHANDISERS

Service and not-for-profit organizations allocate costs, too. The cost object can be a unit of service, an individual client, or a cluster (category) of clients. The costs of a service firm are typically professional labor and indirect costs in support of the labor. The basis for allocating these indirect costs is often professional labor hours (either billable or total) or the cost of such, reflective of either cause-and-effect or benefits-received criteria. For not-for-profit organizations, the proportions to be allocated are best figured in terms of units of the resource on hand, such as the number of full-time equivalents, amount of square footage, or number of telephone lines. An important point to remember is that the principles of allocation are the same for for-profit and not-for-profit organizations. The only difference is that the cost objects will be dissimilar.

Merchandisers, unlike most service and not-for-profit organizations, have inventory that must be costed for external and internal reporting purposes. In these cases, the cost object is a unit of inventory. Incidental costs associated with the acquisition and carrying of the inventory are mostly direct costs easily traceable clearly assignable to the entire inventory, if not to individual units.

MANUFACTURERS

Manufacturers need to cost the resources required to complete their products. In costing a unit of product for inventory valuation, costs of production are assigned. With the unit of product as the cost object, production costs are either direct costs (traceable usage of materials and labor) or indirect costs (all of the other production costs, referred to as overhead). The indirect production costs are allocated. Traditionally, manufacturers using labor-intensive technologies used a single basis of allocation based on labor, either in hours or in cost, associated with a single indirect cost pool. A manufacturer using a more capital intensive technology might use a nonlabor basis such as machine hours. Today many firms produce a varied set of products, using varied technologies with many levels of complexity. Such firms need a more refined cost assignment system that uses multiple bases of allocation with multiple indirect cost pools, such as activity based costing.

While for product costing a unit of output remains the final cost object, the technology a producer uses can require a cost assignment to an intermediate cost pool (object) prior to an assignment to a unit of output. For instance, a batch technology has a cost assignment first to an individual job order (batch); the total cost assigned to the job order is then unitized over the units in the batch to determine cost of one unit of output. Alternatively, for a given period in a process technology, costs are accumulated by (assigned to) each production process; the total cost assigned is then unitized across the total number of (equivalent) units produced by that process to cost-out a unit of output.

Manufacturers also incur service department costs (such as computer center costs) in support of production departments. These service department costs are indirect to a unit of production and for full costing must be allocated, first to respective production areas and then to the units of output. Such allocations are called service department allocations, and the basis of allocation is normally an activity reflective of the nature of demands made on the service department by other departments, both service and production.

JOINT PRODUCTION ALLOCATIONS

Allocations are also required in a joint production process. When two or more separately identifiable final products initially share a common joint production process, the products are called joint products. The point at which they become separately identifiable is referred to as the split-off point. Manufacturing costs incurred prior to this split-off point are referred to as joint costs and need to be allocated across the different joint products for product costing purposes. The bases for allocating the joint costs typically include (1) relative sales value at split-off, (2) net realizable value at split-off (as an approximation of the sales value at split-off), (3) final sales value at the completion of the production process, and (4) the number of physical units of the joint products at split-off.

Many would consider this list of bases to be in an order of descending preference of use. Normally there are additional production costs beyond the split-off point. These additional costs are incurred in order to complete each joint product. For a given joint product, the net realizable value at split-off is calculated by subtracting the additional costs to complete from the final sales value of the finished joint product.

SERVICE DEPARTMENT (RE)ALLOCATIONS

There are three basic methods to allocate service department costs to production departments or programs in a not-for-profit: (1) the direct method; (2) the step method; and (3) the reciprocal method. The basis for allocation of service area costs should ideally be causally related to the demands made on that area by other areas. Both cause-and-effect and benefits-received criteria are taken into account. If the service areas provide service to each other (referred to as reciprocal services), the reciprocal method is the most accurate, the step method next, and the direct method the least accurate. With different service and production departments as cost objects, costs are initially accumulated on a department-by-department basis. Departments working directly on programs or units of product or service are production departments. The other departments are service departments. The allocation problem then is to reassign service department costs to production departments or programs for both performance evaluation and product or program costing. Within a production department, these allocated service costs are then reallocated to units of service or product according to the bases of allocation that each respective production department uses for its indirect costs.

The direct method ignores reciprocal services. A service department's costs are allocated to the production departments according to the extent to which each production department uses (or, for budgeting purposes, intends to use) the services of the service department. This "extent" is determined on a percentage basis by either the amount of services actually provided by the service department to all the production departments or by the amount of services the service department is capable of providing at normal or full capacity. Variable and fixed costs may be allocated separately, resulting in a dual allocation process (for example, variable costs based on actual usage and fixed costs based on budgeted usage).

The step method partially takes reciprocal services into account by allocating service department costs to production departments on a sequential basis. The service department that provides the greatest amount of service to the other service departments is allocated first; the one providing the second greatest amount of service to the other service departments is allocated second; and so forth. The absolute dollar amounts of costs incurred within service departments can be used to break a tie in usage, the larger amount allocated first. Once a service department has been allocated, it is ignored for all subsequent allocations.

The reciprocal method takes into account all the reciprocal services by setting up a set of simultaneous equations, one equation per service department. For any given service department, its equation is: Total allocable cost = direct costs of the service department + costs allocated from each of the other service departments based on this department's use of the other service departments. Once these equations are solved, the resultant allocable cost (sometimes referred to as the reciprocal or artificial cost) is reallocated across all the other departments, service and production, according to the original percentage usages.

Two additional issues, fairness and acquiring the service from the inside or from the outside, concern the allocation of a common cost. The amount of common service cost allocated to a using department may be greater that what it would cost that department to obtain the same service from the outside. A variation of the reciprocal method provides an analysis to help the manager of a using department decide whether to obtain the service from another department within the organization or to contract outside for the service from another organization. The amount of a particular service department's cost allocated to a using department may be dependent on the extent to which other departments also use this service department. This does not seem to be fair.

(SEE ALSO: *Accounting*; *Costs*)

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LAWRENCE A. KLEIN
CLIFFORD BROWN

COST-BENEFIT ANALYSIS

Cost-benefit analysis is used for determining which alternative is likely to provide the greatest return for a proposed investment. Sometimes referred to as cost-effectiveness analysis, it is relevant to businesses as well as to not-for-profit entities and governmental units.

A business might find it helpful to use cost-benefit analysis to determine if additional funds should be invested in a facility in the home country or in another country. A community not-for-profit organization that provides a variety of programs for children might use cost-benefit analysis to assist management in determining which activities will provide the most services for the costs specified. A federal governmental agency might use cost-benefit analysis to determine which of several projects planned for the national parks is likely to be most used, given the costs, by interested citizens.

Because resources such as money and time are limited, an organization usually cannot undertake every project proposed. To decide whether to undertake a project, decision makers weigh the benefits from the project against the cost of the resources it requires, normally approving a project when its benefits exceed its costs. Cost-benefit analysis provides the structure and support for making such decisions.

Benefits increase the welfare of the organization. Some benefits are monetary benefits, such as the dollar amount of cash inflows from additional sales of a product or the saving in cash outflows that a project enables. Other benefits are important but harder to quantify. For example, a project may increase customer satisfaction; increased customer satisfaction may increase future sales, but the exact relationship between sales and satisfaction is often hard to specify.

Costs are the outlays or expenditures made in order to obtain a benefit. Many costs are measured monetarily, such as the cost of buying a new machine or of hiring an additional employee.

COST-BENEFIT ANALYSIS IN BUSINESS

A cost-benefit analysis is straightforward when all costs and benefits are measurable in monetary terms. Assume that Company A must decide whether to rent an ice cream machine for the summer for $900. The ice cream machine will produce additional cash inflows of $1,000 during the summer. The benefit of additional cash inflows ($1,000) exceeds the additional cost ($900), so the project should be undertaken. Not all cost-benefit analyses are this simple, however. If the benefits and costs occur in different time periods, it may be necessary to discount the future cash flows to their equivalent worth today.

In another example, cost savings is a benefit. Assume that Company B makes about 100,000 photocopies a year. Company B does not have its own copy machine and currently pays 4 cents per copy, or $4,000 a year, to Copycat Copiers. Company B can lease a copy machine for $2,500 a year. It must also pay 2 cents per page for paper for the leased machine, or $2,000. In this example, the cost of leasing the machine and buying paper ($2,500 + $2,000 = $4,500) exceeds the benefit of saving the $4,000 normally paid to Copycat Copiers. Company B should continue to use Copycat Copiers for its photocopies. However, Company B must have a pretty good estimate of the number of copies it needs to be comfortable with its decision. If Company B needs 150,000 copies this year instead of 100,000, the cost of the leasing the machine and buying paper ($2,500 + $3,000 = $5,500) is cheaper than the $6,000 (150,000 × $0.04) savings in fees to Copycat Copiers.

A third example involves a project with benefits that are difficult to quantify. Assume that Company C is deciding whether to give a picnic costing $50,000 for its employees. Company C would receive the benefit of increased employee morale from the picnic. Better employee morale might cause employees to work harder, increasing profits. However, the link between increased morale and increased monetary profits is tenuous. The decision maker must use his or her judgment to compare the nonmonetary benefit to the monetary cost, possibly deciding that increased employee morale is worth the $50,000 cost but would not be worth a $100,000 cost.

In the preceding examples, cost-benefit analysis provided a framework for decision making. The range of objectivity related to measurement of the factors is typical. Techniques used in business as a basis for determining costs and benefits, such as return on investment, are generally quantifiable and thus appear to be objective. However, it is not uncommon for qualitative factors to enter into the decision-making process. For example, providing a product that individuals with limited incomes will be able to purchase may not provide the highest monetary return on investment in the short run, but might prove to be a successful long-term investment. Careful decision makers attempt to deal with a difficult-to-quantify factor in as objective a manner as possible. However, cost-benefit analysis in most situations continues to introduce measurement problems.

COST-BENEFIT ANALYSIS IN NONBUSINESS ENTITIES

Cost-benefit analyses are also common in nonbusiness entities. Boards of not-for-profit organizations establish priorities for their programs, and such priorities often specify desired program outputs. For example, assume a not-for-profit organization is interested in reducing the level of illiteracy among the citizens of a rural community in a state that has one of the lowest per-capita incomes in the United States. As alternative programs for those who need to learn to read are considered, there will be cost-benefit analyses that focus on a number of factors, including the extent to which a particular program can attract those who are illiterate. A program in the downtown area of a small town might be considered because a facility is available there at low cost—and that low cost is appealing. Focus on cost is not sufficient, however. When benefits are considered, it might become clear that those who are eager for such a program do not have cars and that there is no public transportation from where they reside to the center of the small town. Further consideration of relevant factors and of alternatives, undertaken in good faith, should result in cost-benefit analyses that provide valuable information as the agency makes decisions.

At all levels of government in the United States, cost-benefit analyses are used as a basis for allocating resources for the public good to those programs, projects, and services that will meet the expectations of citizens. For example, decision makers at the federal level who have policy responsibility for environmental standards, air-quality rules, or services to the elderly often find information from cost-benefit analyses to be critical to the decision-making task.

CONTINUING EFFORTS TO QUANTIFY COST-BENEFIT FACTORS

As possibilities for the use of funds increase, there is motivation for better measurement of both costs and benefits as well as for speedier ways of accomplishing analyses for alternatives that are appealing. All types of entities—businesses, not-for-profit organizations, and governmental units—strive to improve the measurments used in cost-benefit analyses. The capabilities of electronic equipment provide promising assistance in accumulating data relevant for analyses. Wise use of resources is an important goal in every organization; cost-benefit analyses make a key contribution to this goal. Therefore, attention is given to improving both the effectiveness and efficiency of such analyses.

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MARY MICHEL
MARY ELLEN OLIVERIO

COST OF LIVING INDEX

(SEE ALSO: *Consumer Price Index*)

COSTS

The word *cost* appears in many terms, some with subtle distinctions in meaning, used in accounting, economics, and business. The single word *cost* rarely has a clear meaning. (Neither does the word *value* have a clear meaning. Avoid using *value* without a modifying adjective, such as *market* or *present* or *book*.) The word *cost*, without modifying adjectives, typically means the sacrifice, measured by the price paid or required to be paid, to acquire goods or services. Hence, the single word *cost* often carries the meaning more precisely represented by the following.

> *acquisition cost. historical cost.* Net price plus all expenditures to ready an item for its intended use at the time the firm acquired the item. The other expenditures might include legal fees, transportation charges, and installation costs.

Accountants can easily measure acquisition cost, but economists and managers often find it less useful in making decisions. Economists and managers more often care about some measure of current costs, which accountants find harder to measure.

> *current cost.* Replacement cost or net realizable value.
>
> *replacement cost.* Acquisition cost at the date of measurement, typically the present, in contrast to the earlier date of acquisition.
>
> *net realizable value.* The amount a firm can collect in cash by selling an item, less the costs (such as commissions and delivery costs) of disposition.

When accountants use a notion of current cost, they most often refer to *fair value.*

> *fair value.* Price negotiated at arm's length between willing buyers and willing sellers, each acting rationally in their own self-interest. Sometimes measured as the present value of expected cash flows. [See the entry **Time value of money**.]

Accountants often contrast (actual) historical cost with *standard cost.*

> *standard cost.* An estimate of how much cost a firm should incur to produce a good or service. This measurement plays a role in cost accounting, in situations where management needs an estimate of costs incurred before sufficient time has elapsed for computation of actual costs incurred.

The following terms desegregate historical cost into components.

> *variable cost.* Costs that change as activity levels change. (The term *cost driver* refers to the activity that causes cost to change.) Strictly speaking, variable costs are zero when the activity level is zero. Careful writers use the term *semivariable costs* to mean costs that increase strictly linearly with activity but have a positive value at zero activity level. Royalty fees of 2 percent of sales are variable; royalty fees of $1,000 per year plus 2 percent of sales are semivariable.
>
> *fixed cost.* A cost that does not change as activity levels change, at least for some time period. In the long run, all costs can vary.

In accounting for the costs of product or services or segments of a business, accountants sometimes desegregate total costs into those that benefit a specific product and those that benefit all products jointly produced.

> *traceable cost. direct cost.* A cost the firm can identify with a specific product, such as the cost of a computer chip installed in a given personal computer, or with some activity.
>
> *common cost. joint cost. indirect cost.* A cost incurred to benefit more than one product or activity, such as the cost of rent of a

factory building in which the firm makes several different kinds of personal computers or the cost of a steer from which the firm manufactures leather and hamburger. Some restrict the term *common cost* to situations such as the first, where the firm chooses to produce products together, while restricting *joint costs* to situations, such as the second, where the firm must incur the cost simultaneously. The major problem in cost accounting is allocation of common and joint costs to individual products. Managers and regulators (e.g., the Securities and Exchange Commission and the IRS) often insist on such allocations, while economists and some accountants recognize that such allocations do not aid decision making.

Virtually all costs recorded by accountants require a cash outlay at some time. Analysts sometimes need to distinguish between costs associated with current or future cash expenditures and those where the expenditure already occurred.

out-of-pocket cost. outlay cost. cash cost. An item requiring a current or future cash expenditure.

book cost. sunk cost. A cost incurrence where the cash expenditure has already occurred, such as the cost of depreciation for a machine purchased several years ago. (In accounting, depreciation is an allocation of a previous expenditure, while in economics depreciation represents a decline in current value.)

In decision making, the cost concepts above often get further refined, as follows.

incremental cost. marginal cost. differential cost. avoidable cost. The firm will incur (save) incremental costs if it carries out (or stops) a project. These four terms tend to have the same meaning, except that the economist restricts the term *marginal cost* to the cost of producing one more unit. Thus the next unit has a marginal cost; the next week's output has an incremental cost. If a firm produces and sells a new product, the related new costs would properly be called *incremental*, not *marginal*. If a factory is closed, the costs saved are incremental, not marginal.

unavoidable cost. inescapable cost. sunk cost. Unavoidable costs will occur whether the decision is made to go ahead or not, because the firm has already spent, or committed to spend, the cash. Not all unavoidable costs are book costs; consider a salary promised, but not yet earned, that the firm will pay if it makes a no-go decision. *Sunk costs* are past costs that current and future decisions cannot affect and, hence, are irrelevant for decision making (aside from income tax effects). For example, the acquisition cost of machinery is irrelevant to a decision of whether to scrap the machinery. In making such a decision, one should consider only the sacrifice of continuing to own it and the cost of, say, the electricity to run the machine, both incremental costs. Sunk costs become relevant for decision making when the analysis requires taking income taxes (gain or loss on disposal of asset) into account, since the cash payment for income taxes depends on the tax basis of the asset. Avoid using the ambiguous term *sunk costs*. Consider, for example, a machine costing $100,000 with current salvage value of $20,000. Some would say that $100,000 is "sunk"; others would say that only $80,000 is "sunk." Those who say $100,000 have in mind a gross cost, while those who say $80,000 have in mind a net cost—original amount reduced by current opportunity cost.

In deciding which employees to reward, management often cares about desegregating actual costs into those that are *controllable* and those not controllable by a given employee or division. All costs can be affected by someone in the firm; those who design incentive schemes attempt to hold a person responsible for a cost only if that person can influence the amount of the cost.

A firm incurs costs because it perceives that it will realize benefits. Careful usage of cost terms distinguishes between incurrences where the firm will enjoy the benefits in the future from those where the firm has already enjoyed the benefits. Accounting distinguishes costs that have future benefits by calling them *assets* and contrasting them with costs whose benefits the firm has already consumed, by calling them *expenses.* Other pairs of terms involving this distinction are *unexpired cost* versus *expired cost* and *product cost* versus *period cost.*

Economists, managers, and regulators make further distinctions between cost concepts, as follows.

fully absorbed cost versus *variable cost.* Fully absorbed costs refer to costs where the firm has allocated fixed manufacturing costs to products produced or divisions within the firm as required by generally accepted accounting principles. Variable costs, in contrast, may be more relevant for making decisions, such as in setting prices or deciding whether a firm has priced below cost for antitrust purposes.

fully absorbed cost versus *full cost.* In full costing, the analysis allocates all costs, manufacturing costs as well as central corporate expenses (including financing expenses), to products or to divisions. In full absorption costing, the firm allocates only manufacturing costs to product. Only in full costing will revenues, expenses, and income summed over all products or divisions equal corporate revenues, expenses, and income.

opportunity cost versus *outlay cost.* Opportunity cost refers to the economic benefit forgone by using a resource for one purpose rather than another. If the firm can sell a machine for $200,000, then the opportunity cost of using that machine in operations is $200,000 independent of its outlay cost or its book cost or its historical cost.

future cost versus *past cost.* Effective decision making analyzes only present and future outlay costs, or out-of-pocket costs. Optimal decisions result from using future costs, whereas financial reporting uses past costs.

short-run cost versus *long-run cost.* For a given configuration of plant and equipment, short-run costs vary as output varies. The firm can incur long-run costs to change that configuration. This pair of terms is the economist's analogy of the accounting pair, above, variable and fixed costs. The analogy is inexact because some short-run costs are fixed, such as property taxes on the factory.

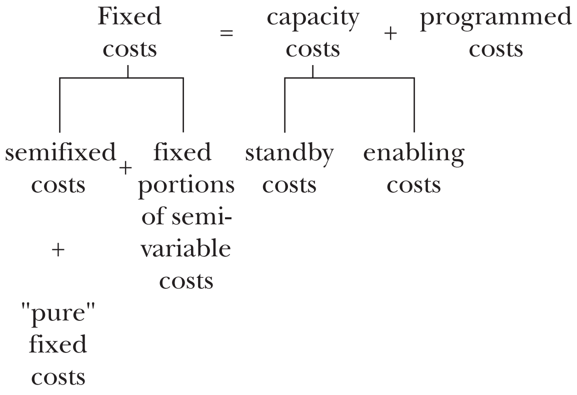
imputed cost versus *book cost.* Imputed costs do not appear in the historical cost accounting records for financial reporting. The actual cost incurred is recorder and is called a *book cost.* Some regulators calculate the cost of owners' equity capital, for various purposes; these are imputed costs. Opportunity costs are imputed costs and are relevant for decision making.

average cost versus *marginal cost.* This is the economic distinction equivalent to fully absorbed cost of product and variable cost of product. Average cost is total cost divided by number of units. Marginal cost is the cost to produce the next unit (or the last unit).

differential cost versus *variable cost.* Whether a cost changes or remains fixed depends on the activity basis being considered. Typically, but not invariably, analysts term costs as *variable*, or *fixed*, with respect to an activity basis such as changes in production levels. Typically, but not invariably, analysts term costs as *incremental*, or not, with respect to an activity basis, such as the undertaking of some new venture. Consider the decision to undertake the production of food processors, rather than

> food blenders, which the manufacturer has been making. To produce processors requires the acquisition of a new machine tool. The cost of the new machine tool is incremental with respect to a decision to produce food processors instead of food blenders, but, once acquired, becomes a fixed cost of producing food processors. Consider a firm that will incur costs of direct labor for the production of food processors or food blenders, whichever the firm produces. Assume the firm cannot produce both. Such labor is variable with respect to production measured in units, but not incremental with respect to the decision to produce processors rather than blenders. This distinction often blurs in practice, so a careful understanding of the activity basis being considered is necessary for understanding of the concepts being used in a particular application.

Analysis of operating and manufacturing activities uses the following subdivisions of fixed (historical) costs. Fixed costs have the following components:



Capacity costs (committed costs) give a firm the capability to produce or to sell, while *programmed costs (managed costs, discretionary costs)*, such as for advertising or research, may be nonessential, but once the firm has decided to incur them, they become fixed costs. The firm will incur *standby costs* even if it does not use existing capacity; examples include property taxes and depreciation on a building. The firm can avoid *enabling costs*, such as for a security force, if it does not use capacity. A cost fixed over a wide range but that can change is a *semifixed cost* or "step cost." An example is the cost of rail lines from the factory to the main rail line, where fixed cost depends on whether there are one or two parallel lines but are independent of the number of trains run per day. *Semivariable costs* combine a strictly fixed component cost plus a variable component. Telephone charges usually have a fixed monthly component plus a charge related to usage.

(SEE ALSO: *Cost Allocation*; *Cost-Benefit Analysis*)

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ROMAN L. WEIL

COST-VOLUME-PROFIT ANALYSIS

Cost-volume-profit analysis (CVP), or break-even analysis, is used to compute the volume level at which total revenues are equal to total costs. When total costs and total revenues are equal, the business organization is said to be "breaking even." The analysis is based on a set of linear equations for a straight line and the separation of variable and fixed costs.

Total variable costs are considered to be those costs that vary as the production volume changes. In a factory, production volume is considered to be the number of units produced, but in a governmental organization with no assembly process, the units produced might refer, for example, to the number of welfare cases processed. There are a number of costs that vary or change, but if the variation is not due to volume changes, it is not considered to be a variable cost. Examples of variable costs are direct materials and direct labor. Total fixed costs do not vary as volume levels change within the relevant range. Examples of fixed costs are straight-line depreciation and annual insurance charges. Total variable costs can be viewed as a 45° line and total fixed costs as a straight line. In the break-even chart shown in Figure 1, the upward slope of line DFC represents the change in variable costs. Variable costs sit on top of fixed costs, line DE. Point F represents the breakeven point. This is where the total cost (costs below the line DFC) crosses and is equal to total revenues (line AFB).

All the lines in the chart are straight lines: Linearity is an underlying assumption of CVP analysis. Although no one can be certain that costs are linear over the entire range of output or production, this is an assumption of CVP. To help alleviate the limitations of this assumption, it is also assumed that the linear relationships hold only within the relevant range of production. The relevant range is represented by the high and low output points that have been previously reached with past production. CVP analysis is best viewed within the relevant range, that is, within our previous actual experience. Outside of that range, costs may vary in a nonlinear manner. The straight-line equation for total cost is:

$$\text{Total cost} = \text{total fixed cost} + \text{total variable cost}$$

Total variable cost is calculated by multiplying the cost of a unit, which remains constant on a per-unit basis, by the number of units produced. Therefore the total cost equation could be expanded as:

$$\text{Total cost} = \text{total fixed cost} + (\text{variable cost per unit} \times \text{number of units})$$

Total fixed costs do not change.

A final version of the equation is:

$$Y = a + bx$$

where *a* is the fixed cost, *b* is the variable cost per unit, *x* is the level of activity, and *Y* is the total cost. Assume that the fixed costs are $5,000, the volume of units produced is 1,000, and the per-unit variable cost is $2. In that case the total cost would be computed as follows:

$$Y = \$5{,}000 + (\$2 \times 1{,}000)\ Y = \$7{,}000$$

It can be seen that it is important to separate variable and fixed costs. Another reason it is important to separate these costs is because variable costs are used to determine the contribution margin, and the contribution margin is used to determine the break-even point. The contribution margin is the difference between the per-unit variable cost and the selling price per unit. For example, if the per-unit variable cost is $15 and selling price per unit is $20, then the contribution margin is equal to $5. The contribution margin may provide a $5 *contribution* toward the reduction of fixed costs or a $5 contribution to profits. If the business is operating at a volume above the break-even point volume (above point F), then the $5 is a contribution (on a per-unit basis) to additional profits. If the business is operating at a volume below the break-even point (below point F), then the $5 provides for a reduction in fixed costs and continues to do so until the break-even point is passed.

Once the contribution margin is determined, it can be used to calculate the break-even point in volume of units or in total sales dollars. When a per-unit contribution margin occurs below a firm's break-even point, it is a contribution to the reduction of fixed costs. Therefore, it is logical to divide fixed costs by the contribution margin to determine how many units must be produced to reach the break-even point:

$$\begin{array}{l}\text{Break-even}\\ \text{in units}\end{array} = \frac{\text{total fixed costs}}{\text{contribution margin per unit}}$$

Assume that the contribution margin is the same as in the previous example, $5. In this example, assume that the total fixed costs are increased to $8,000. Using the equation, we determine that the break-even point in units:

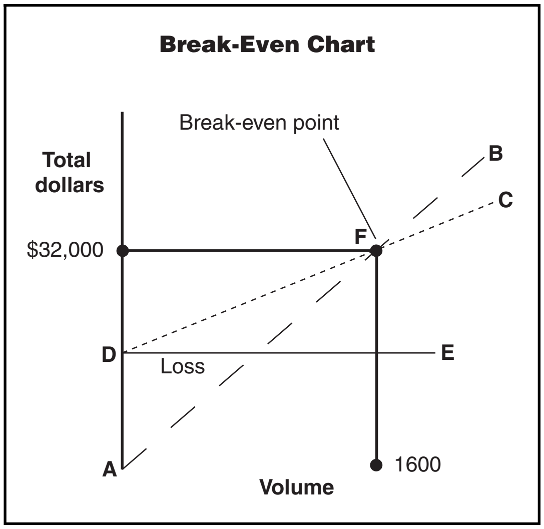

Figure 1

$$\text{Break-even point in units} = \frac{\$8{,}000}{\$5}$$
$$= 1{,}600 \text{ units}$$

In Figure 1, the break-even point is shown as a vertical line from the x-axis to point F. Now, if we want to determine the break-even point in total sales dollars (total revenue), we could multiply 1600 units by the assumed selling price of $20 and arrive at $32,000. Or we could use another equation to compute the break-even point in total sales directly. In that case, we would first have to compute the contribution margin ratio. This ratio is determined by dividing the contribution margin by selling price. Referring to our example, the calculation of the ratio involves two steps:

$20	(selling price)
−15	(variable cost)
$ 5	(contribution margin)

$$\text{Contribution margin ratio} = \frac{\text{contribution margin}}{\text{selling price}}$$
$$= \frac{5}{20}$$
$$= 25\%$$

Going back to the break-even equation and replacing the per-unit contribution margin with the contribution margin ratio results in the following formula and calculation:

$$\text{Break-even in total sales} = \frac{\text{total fixed costs}}{\text{contribution margin ratio}}$$
$$= \frac{\$8{,}000}{.25}$$
$$= \$32{,}000$$

Figure 1 shows this break-even point, at $32,000 in sales, as a horizontal line from point F to the y-axis. Total sales at the break-even point are illustrated on the y-axis and total units on the x-axis. Also notice that the losses are represented by the DFA triangle and profits in the FBC triangle.

The financial information required for CVP analysis is for internal use and is usually available only to managers inside the firm; information about variable and fixed costs is not available to the general public. CVP analysis is good as a general guide for one product within the relevant range. If the company has more than one product, then the contribution margins from all products must be averaged together. But, any cost-averaging process reduces the level of accuracy as compared to working with cost data from a single product. Furthermore, some organizations, such as nonprofit organizations, do not incur a significant level of variable costs. In these cases, standard CVP assumptions can lead to misleading results and decisions.

(SEE ALSO: *Accounting*; *Costs*)

G. STEVENSON SMITH

COTTAGE INDUSTRIES

"Cottage industries" is a term that was used prevalently during the eighteenth and nineteenth and centuries to describe the home-based system of manufacturing. This term is also used today to refer to goods or services that are produced at home. Sewing, craft production, sales and mar-

Women working in a cottage industry at the beginning of the twentieth century.

keting, typing, bookkeeping, and auto repair are just a few examples of home-based employment.

HISTORY

Rural families were some of the first to become involved in the cottage industry. They added to their agricultural income by making products at home. Merchants provided the raw materials to the families, collected and marketed the finished product, and then paid the family a percentage of the price charged to the end consumer. Some of the items made by these at-home workers were cloth and clothing, shoes, cigars, and hand-decorated items.

Cottage industries developed in cities around 1870, resulting in the harsh tenement housing system. Immigrant families lived and worked in these crowded, unsafe apartment buildings. They worked for extremely low wages, usually making garments. This system lasted until around 1920, when better management of factories made home-produced goods less competitive.

Hand-decorating of items, sewing, and other highly specialized activities still operate as cottage industries today. Economists point to the rise of a new type of cottage industry whereby people can stay at home to perform work on their computers that formerly had to be done at the office. "Telecommuters" is another term used more frequently today to refer to home-based employment. Many jobs that used to require workers' physical presence in the office can now be performed from home. Running a business from home today requires only a couple of phone lines with call forwarding and call waiting, a computer with e-mail and a modem, a fax machine, a copier, and office supplies. For executives on the go, a cell phone and laptop computer can keep them up and running from just about any location.

HOME EMPLOYMENT BENEFITS

There are many reasons that people choose to work from their homes. They can be experienced or inexperienced, young or elderly, healthy or physically challenged, single or married, with or without children.

Many mothers and/or fathers of young children find it more productive, more cost-effective, and safer to keep their children with them while they work at home. They can have the flexibility of arranging their job around their family's needs. Many parents enjoy being able to spend time with their children during the day. Parents maintain responsibility for the safety of their own children and can keep abreast of how much they are learning, know who they are playing with, and save money on day-care expenses at the same time.

Another reason people choose to work from home is that they don't have to commute to and from their workplace. By not commuting to work, they can save on wear and tear of their vehicle, get lower insurance rates, and spend less money on gas.

Working from home also saves money that would normally be spent on a workplace wardrobe. Much more informal clothing can be worn when working at home. Not spending money on uniforms, suits, and/or dresses provides more money for other expenses.

Home employment gives control of one's life to oneself. There is freedom and flexibility in setting work schedules. Parents can be home for their children, there are no commuting hassles, and no one looks over shoulders or determines break time. The individual, not the employer, determines the work schedule. A parent has the flexibility of scheduling work flow around school activities such as field trips and sports activities.

DECISIONS TO MAKE

Despite all the benefits listed above, home employment is not for everyone. For example, those who start their own business must be able to generate work. There are advertising costs involved in getting the company name out to the general public. Careful consideration should be given to the possible advertising avenues to use. Advertising can be very expensive and may not generate enough business if it does not reach potential customers. People who do good work but cannot get others to recognize this or cannot do well in promoting themselves may be spending more than they are earning.

Detailed record keeping is a must for the self-employed as well as the work-at-home person. Some deductions are available only if the business is making a profit, while others are used yearly to determine expenses. Depending on the type of business a person wishes to become involved in, start-up costs need to be considered and information gathered on the best equipment/tools necessary. Some businesses may require a starting inventory, while others do not. When considering start-up costs, one should shop wisely and consider purchasing used equipment and supplies. This will save money for other expenses, and the depreciation on these items will be more reasonable. Advertising, mileage expenses, cost of supplies, phone, electricity, and entertainment are just some of the expenses for which records must be maintained. Tax laws can and do change frequently. The person who is unsure about what records need to be kept should contact a tax adviser for detailed and up-to-date information.

Another factor to consider before deciding to work from home is motivation. One must be able to set one's own schedule and follow through on it. If a person is used to working for someone else and having supervision and direction provided, it can be very easy to let work slide. Setting goals and following through on them is a necessity when working for oneself.

Finally, one should check local authorities before starting a home-based business as towns vary greatly in their local ordinances. They will explain any rules the town has established regarding home-based businesses and give guidance in the necessary paperwork or approval process.

HOME EMPLOYMENT RESOURCES

For those people who wish to become self-employed and work out of their home, there are several organizations available to help get started.

One major resource for the self-employed is an association called SCORE (Service Corps of

Retired Executives). SCORE is a nonprofit group sponsored by the U.S. Small Business Administration that has provided successful, free business counseling since 1964. SCORE matches volunteer counselors with clients needing their expert advice. It also maintains a national skills roster to help identify the best counselor for a particular client. SCORE is made up of more than 13,000 retired or active executives and has more than 400 chapters nationwide. These executives volunteer their time, skills, and experience to help the self-employed get started in their own business or help those who are already in business when they have problems or need advice. SCORE also offers many seminars and workshops and posts this information at its local chapters. Since its inception, SCORE has advised, counseled, and mentored more than 300,000 small businesses, helping nearly 4 million Americans with face-to-face counseling, e-mail counseling, and training. For more information on SCORE, contact a local chapter personally or visit its Web site at http://www.score.org/.

Home Employment Resource is an organization dedicated to helping people who want to work at home. It provides information on companies nationwide that hire people to work from home. A partial listing of jobs that have been available to the home-employed include typists, graphic artists, auto appraisers, editors, reporters, financial analysts, cartoonists, claims processors, photographers, proofreaders, recruiters, and writers. There are many jobs available for home-based workers if one knows where to look. This organization assists in contacting the companies that hire work-at-home people. The Web site for Home Employment Resource is http://www.home-employment.com/.

The Independent Homeworkers Alliance (IHA) is an organization dedicated to helping people who want to work from home. The IHA offers its members valuable benefits that are designed specifically for the work-at-home person. Included in its database are more than 43,000 job listings. Membership and maintenance fees that are charged to members are applied directly to the organization itself to improve, enhance, and add to the existing services provided to its members, who number more than 27,000. More information about Independent Homeworkers Alliance is available through their Web site at http://www.homeworkers.org/.

There are also home study schools that offer training in fields such as medical billing and claims processing, medical transcription, bookkeeping, and paralegal work. For more information on home-study schooling, contact At-Home Profession . . . America's First Home Study School for Work-at-Home Careers, 2001 Lowe Street, Fort Collins, CO 80525.

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JULIE A. WATKINS

COUPONS

(SEE: *Promotion*)

CREDIT/DEBIT/TRAVEL CARDS

Until the 1920's, consumer purchases in the United States were made primarily in one of two ways: cash or personal check. But in that decade, a new means of payment was introduced—the credit account. While credit transactions had been common for a long time in business to business dealings, they were new to the consumer market. The credit account allowed a consumer to defer payment on a purchase made today to some time in the future: thus, the expression "buy now, pay later" was born. Evidence of the credit account typically took the form of a card—the credit card.

Since the 1920's, different types of credit cards have emerged. In addition, related types of cards have also appeared on the consumer scene: the debit card, as well as the ATM card and the smart card, and the travel card and charge card. Each type of card will be defined and explained in this entry.

CREDIT CARDS

A **credit card** is a pocket size, plastic card that allows the holder to make a purchase on a credit account that will be repaid at some time in the future. Repayment may be in a single amount or in a series of amounts. At a minimum, the credit card will include identification of the user by name, account number, and signature.

The earliest issuance of credit cards in the United States was by gasoline companies and retail stores. Thus, it was quite common in the first half of the twentieth century to carry a credit card from Esso, Sears, and/or a local department store. These early cards were issued by the private company itself based on the credit policy of that company. Many of the accounts were expected to be paid in the month following purchase. Others were revolving charge accounts in which partial payment was expected every month, with a charge for interest on amounts not paid promptly.

If the balances of the credit accounts were not paid, the issuing firm took the loss. Thus, deciding to issue a credit card was a thoughtful process on the part of the firm. Often, the three C's of credit were applied to a credit applicant: character, capacity, and capital. Character referred to the record of the applicant in paying previous accounts—his or her credit history. Capacity meant the earnings potential (salary) of the applicant. Capital referred to the net assets (assets minus liabilities) of the person. Obtaining a credit card was far from an automatic process.

Major changes in the nature and types of credit cards occurred in the 1950's. Two types of credit cards emerged in that decade: the charge card and the bank credit card. The charge card is discussed as a travel card later in this entry.

The bank credit card expanded the idea of a credit card company to a much broader usage—virtually every merchant and service provider worldwide. The 1959 BankAmericard from the Bank of America in California is today the VISA card. The 1970's saw the birth of Master Charge, today's MasterCard. These cards are issued by banks, so one applies to a bank for the credit card. A preset credit limit is assigned to the card user. After an item is charged at a firm, the firm receives payment from the bank. The bank charges a fee to the firm, pays the firm the net amount, and then collects from the consumer. The consumer usually pays an annual fee to the bank and is charged interest on the unpaid balance at the end of each month. Credit cards may also be used to make a cash advance from the bank. However, it should be remembered that interest rates on cash advances using a credit card can be much higher than the rates for credit card purchases. Thus, the cash advance feature should be used wisely.

While at one time it was difficult to earn credit, the process is far easier at the present time. Banks compete for customers for their credit cards and often solicit college students with limited capital and offer them credit cards. Telemarketing of credit cards is frequent. Low credit limits are relatively easy to obtain at present. Demonstrating a solid payment record and growth in earnings then leads to higher limits.

Managing one's credit becomes important to the consumer. It is critical never to get into a position in which one has so many credit cards and so many high balances that the credit bills never get paid off. For example, if you have a bank credit card with a balance of $1,000 and an interest rate of 18% a year or 1 ½% a month (18% divided by 12 months), the interest for the current month will be $15 ($1,000 × .015). If the payment made on the account this month is only $25, then the first $15 is for interest; the remaining $10 ($25-$15) reduces the principal of $1,000 to $990 for the next month. In other words, more has been paid for interest than for what was purchased; the situation in the following month will change very little. At this rate of payment, it could be several years before the balance is reduced to zero. In the meantime, if the card has been used for more purchases, the cycle of remaining in debt continues. Credit card management is critical to a consumer. In fact, one who has difficulty in dealing with credit cards might be better off with debit cards.

DEBIT CARDS

A **debit card** is also issued by a bank and looks like a credit card, but it works very differently. When one uses a debit card, the amount spent is deducted immediately from the user's bank account. It is as if one is paying by check without having to write a check. There will be no unpaid future bills, for the payment is made at the time of the expenditure. For example, many people today purchase groceries with the debit card by running it through the card reader at the grocery store check out counter. In addition, people often get extra cash while paying for the groceries with that debit card.

It is helpful to know how a bank account works from the bank's point of view to fully understand the debit card. When an amount is added to a bank account, such as by a deposit, the individual's account is "credited;" when an amount is subtracted from that bank account, such as by writing a check, the account is "debited." Thus, the term debit card states what happens to the bank account when the card is used—an immediate subtraction.

A common function of the debit card is as an ATM card. ATM stands for the Automated Teller Machine that so many use today. ATMs allow for 24-hour banking. The card holder is able to make deposits, find out bank balances, transfer money from account to account, and make a loan payment. The ATM/debit card can also be used to obtain cash; the amount withdrawn is subtracted immediately from the bank account; thus it is another use of a debit card.

The user of the debit card must take particular care in keeping records of expenditures with the debit card. Unlike the check that usually is recorded at the time of payment, the debit card expense has its record in the form of a sales slip, a register receipt, or a record of an ATM withdrawal or deposit. Debit card expenditures must be deducted from the bank account balance by the user in a regular accurate manner to avoid losing track of the account balance.

A variation on the debit card is the **smart card**. While the debit card uses a magnetic strip, the smart card typically uses an embedded semiconductor to store and maintain information. Smart cards have many uses, but in general are used for prepayment of an expense, such as when a phone card is purchased. The phone card has so many dollars in it that have been paid for in advance of use. As the card is used, money value is deducted. Other applications of the smart card are for the payment of tolls and for the purchase of gasoline. In both cases, the card can be waved at a reader that will record the toll or the purchase of gasoline. Food plans at colleges and transit cards on subway systems are other uses of the smart card. Using a smart card saves that sudden search for change to pay a toll or to make a phone call.

TRAVEL CARDS

Travel cards, also called travel and entertainment cards, fall into two categories. The first is the charge card mentioned earlier. A **charge card** is issued by a firm whose main product is credit granting in order to purchase a service. The first two companies in this field were Diners' Club, Inc. and American Express Company. In both cases, one is issued a card based on a credit check and then uses the card at designated establishments and with designated types of firms to pay for services or products. Payment is made not to a store nor to a bank, but rather to Diners' Club or to American Express. Diners' Club cards are used primarily at eating establishments. American Express cards are used for airlines, hotels, and other travel-related activities. No credit limits are established for charge cards, but payment is expected in full within the next billing period to maintain one's credit record. However, a current change in the approach to the charge card has been made by American Express to allow monthly payments, just as if it were a bank credit card account.

A second type of travel card is issued by airlines or hotel chains. This card does not have direct money use, but serves instead as an upgraded service provider. Thus, included in this category are such cards as frequent flyer cards, with which airline mileage is accumulated, to be later used for upgraded or free flights. In addition, services are provided to the cardholder such as early boarding of flights and/or other amenities. Also included in this category are hotel chain cards that accumulate services at hotels in that chain. Room upgrades, speedy check in and check out, and help with reservations are among the benefits of this type of card. Furthermore, many hotels are partners with airlines, so money spent at a hotel can result in additional miles on the airline mileage account.

A growing trend among the airlines is the issuance of airline MasterCards or VISA cards. The airlines work with a bank to issue standard bank credit cards with one modification: every dollar spent using that credit card is turned into airline mileage. Thus, the benefit of the bank credit card is joined with the value of the airline travel card.

SUMMARY

From a time when what was bought was paid for on the spot, "plastic" has changed the way that consumers do business and handle personal financial functions. Credit cards allow a purchase now with payment in the future. Debit cards result in an immediate deduction from a bank account without writing a check. Smart cards allow for prepayment of expenses to aid in convenience when the expense needs to be paid. Travel cards permit charging of travel related expenses and the accumulation of travel services and benefits. All of these items are part of what seems to be arriving in the fairly near future—a paperless financial society accessed by cards of various types. In fact, it is possible that the day of cards will at some point end and another means will be found to connect the individual with those purchases needed for functioning. Until then, given the many ways to purchase, wise consumerism is needed to result in the correct choice of cards for an individual.

Burton S. Kaliski

CREDIT UNIONS

(SEE: *Financial Institutions*)

CRIME AND FRAUD

Both individuals and businesses commit many criminal activities that cost businesses, consumers, government agencies, and stockholders considerable sums of money each year. Business crime is not new; in fact, fraudulent activities have been a common part of business operations for thousands of years. For instance, in 360 B.C. in Syracuse, Sicily (then a Greek colony), Xenothemis and a shipowner, Hegestratos, persuaded a customer to advance cash by claiming that a vessel was fully laden with corn. Maritime trade was at that time very risky, and many vessels were subsequently lost at sea. Hegestratos intended to exploit this risk of loss at sea three days after the ship sailed from port by sinking it. When the other passengers discovered Hegestratos' plot, he panicked, jumped overboard, and drowned. This early example illustrates that criminal, and especially fraudulent, activities have existed within the world of business for some time and, unfortunately, will probably continue to do so.

Under modern law, for a crime to have occurred, an illegal act must have been committed *and* intent to commit the act must be shown. A crime is a violation of local, state, or federal law and is punishable by the appropriate government authority. Criminal activities are usually defined as applying to a specific type of behavior or action. Embezzlement and fraud are two common business-related crimes. Embezzlement occurs when a person has the right to possess business property or money but then converts that property or money to personal possession or use. Fraud is often thought of as intentional deception of another person in order to deprive that person of property or to injure that person in some other way. Criminal activities can be committed by individuals against a business as well as by businesses through the actions of their employees against consumers, the general public, and/or stockholders.

INDIVIDUAL CRIMES AGAINST BUSINESS

Business-related individual criminal activities are normally broken down into two categories: internal and external.

Internal Crimes Internal crime occurs when an employee steals from or commits some other offense against the business. For example, depending on their jobs, employees may have access to business files, records, or sensitive financial information. The dishonest employee could then use this information to commit a crime against the business. Generally, the higher in the business the employee, the greater the potential for serious criminal activities against the firm.

A number of internal crimes are frequently committed against a business. Among the most common are abuse of power, accounting embezzlement, misuse of business time, computer and electronic information manipulation, intellectual property theft, supply and equipment pilferage, travel expense abuse, and vandalism and sabotage.

Abuse of Power. One form of employee criminal activity is making inappropriate financial decisions on behalf of the business that are really intended to benefit the employee. An example of this activity may be seen when an employee is empowered to sign purchase contracts on behalf of the employer with the objective of getting the lowest price available from outside vendors. Instead of doing this, an employee could sign contracts with more expensive outside vendors and receive a kickback in return. Acceptance of kickbacks is an abuse of power and, depending on the size of the contracts, may cost a business a considerable amount of money.

Accounting Embezzlement. One of the most common internal criminal activities is the manipulating of accounting records to steal business funds. An employee who is well trained in accounting techniques may be able to devise sophisticated schemes to cover his or her connection to the stolen business funds. Such criminal accounting violations have and can go on for years and end up costing a business many thousands of dollars. These criminal accounting practices can be detected through a variety of methods, such as changes in accounting procedures, co-worker concerns, and regular internal and/or external audits.

Accounting crimes are very serious matters that have adverse consequences for a business. The stealing of funds hurts the business's profit margin and, in turn, stockholders. Stock value is hurt because of the reduced profits showing on the books, which, in turn, can cost a business the lost value of its securities. Such internal accounting crimes must be reported to the appropriate law enforcement agencies, making the embezzlement part of the business's public record. Thus the business faces the embarrassment associated with having been a victim of accounting crimes, possibly weakening its image and public confidence in it. An employee who gets caught committing such crimes faces severe penalties if convicted. Depending on the amount of funds stolen, an employee could be charged with and convicted of a felony and face a long prison sentence. In addition, once convicted of such a crime, it will be next to impossible for a person to get another job in the business world.

Misuse of Business Time. Employees who perform non-work-related functions while at work are involved in fraudulent activities because they are getting paid to do work for the business but in reality are not performing those functions. An example of this practice is an employee who surfs the Internet for several hours a day for personal reasons, depriving the business of employee production during that time. A few hours of lost time here and there may not seem like much to an employee, but the aggregate loss of work time in the business as a whole can add up to a sizable loss.

Computer and Electronic Information Manipulation. The advent of modern technology has provided more opportunities for employees to commit computer or electronic fraud. One of the most common forms of embezzlement involves the electronic manipulation of business funds so as to deposit them into personal or other third-party accounts. Once the rerouted business funds are deposited into such an account, the employee is free to withdraw and spend them at will. Initially, such electronic fraud might seem easy to carry out, but computers leave behind clues that will lead auditors to the final destination of the funds and to the dishonest employee.

Intellectual Property Theft. One of the fastest-growing areas of business-related criminal activity is the theft of cutting-edge technology by a worker from the employing business. Typically, the dishonest employee will sell the stolen technological knowledge to a competing firm. Criminal activity in this area can be extremely damaging to any business. One reason is that most businesses invest considerable sums of money in research and development to improve or create new technology. The theft and resale of this information to competitors could easily cost a business many thousands of dollars in lost profits. Another is that the business's competitors can stay competitive for only a fraction of the price and thus reap even larger profits. In response to this serious issue, businesses have tightened security and have asked law enforcement to vigorously prosecute anyone involved with this type of criminal behavior.

Supply and Equipment Pilferage. Another example of internal employee criminal activity is the theft of business supplies and office equipment. Businesses are concerned with employees who steal supplies and office equipment, such as laptop computers, paper, paper clips, pens, printers, and so forth. The theft of such business property reduces business profits and, if its stock is publicly traded, earnings for its stockholders. The consequences for dishonest employees who are caught engaging in these activities include job termination and criminal prosecution.

Travel Expense Abuse. Employees who travel for a business as part of their jobs often commit fraud by putting personal items on the firm's expense account. For example, employees may include higher amounts on their expense voucher than were actually paid. This practice is common when reporting the amount paid in the form of a tip, as usually no receipt is involved. Individually, the funds embezzled by one employee in this way might not add up to much, but collectively this type of crime could cost a business many thousands of dollars each year.

Vandalism and Sabotage. Another type of internal crime is an employee's intentional destruction of business property or equipment. The employee does not receive any monetary benefit from destroying business property; rather, it is done to get back at a business or a supervisor for a myriad of reasons, such as being passed over for promotion, a pending layoff, or a poor performance evaluation. Traditional employee vandalism involves destruction of physical property, including computer equipment, office furniture, business vehicles, or other business property. Physical destruction of business property can be deterred by the use of surveillance equipment and the visible presence of adequate security staff.

The real threat to modern businesses is the effort to sabotage computer systems. An employee with extensive knowledge of a business's computer system could create a computer virus or some other highly technical method to incapacitate some or all of the business's computer system. The destruction or failure of a business's computer system would cause enormous trouble for the business. In addition, if business files were to be damaged or erased, it could cost the business a considerable amount of time and resources to fix them, not to mention the lost sales or poor customer service that might occur as a result. Since the computer security issue is so important, businesses normally discontinue computer access for employees who are going to be separated from the firm. In addition, business security typically monitors employees who have exhibited strong negative feelings toward the business or a supervisor.

External Crimes Among the more common external crimes committed against a business are burglary, robbery, shoplifting, and walk-in office/factory thefts.

Burglary. While burglary has been described in many ways, it is usually thought of as breaking into a place of business with the intent of committing a felony or simply stealing something. Although any business may be burglarized, individuals who commit burglary tend to target those firms where they are likely to receive a high monetary return for their efforts. Financial institutions, such as banks, are often targeted because they normally have large amounts of cash or valuable securities on hand. Almost every major financial business uses a variety of elaborate antiburglary devices to deter potential burglaries. Financial institutions also use extensive networks of electronic equipment to notify law enforcement when burglaries do occur. Most major businesses now employ a wide variety of antiburglary strategies in order to provide maximum security to their offices and employees.

Robbery. Robbery is committed when a criminal attempts to steal from a business by use of force or threat of force—usually with a weapon, such as a gun or knife—during its normal operating hours. Robberies are very serious because of their potential to inflict bodily injury on employees and/or customers who are on the premises at the time of the robbery. Moreover, any property or money that is stolen also hurts the business from a profit-and-loss point of view. The most common example of a robbery would be a criminal attempting to steal money from a store during business hours.

Shoplifting. One of the most prominent threats to any retail business is shoplifting, which costs businesses millions of dollars in lost sales and stolen merchandise each year. Unfortunately, the cost associated with this type of criminal activity is passed on to honest consumers in the form of higher prices. Because of the high costs associated with shoplifting, many retail businesses use sophisticated electronic surveillance systems in order to deter shoplifting and to catch those who commit the crime. In fact, most retailers have adopted a zero-tolerance policy relative to shoplifting and prosecute anyone caught stealing regardless of the amount. The combination of strong antitheft measures and vigorous prosecution of those caught has resulted in fewer numbers of shoplifting cases.

Walk-In Office/Factory Thefts. Some individuals commit thefts by simply walking into an office and attempting to steal something of value. The criminal then walks out of the office or factory with the item and tries to resell the product. Individuals who commit such crimes normally use a disguise (i.e., a delivery person) in order to get past business security.

CRIMES COMMITTED BY BUSINESS

Occasionally, businesses are sources of crime against consumers, the general public, government, and/or stockholders. Examples of crimes committed by businesses include fraudulent reporting, price fixing, and product misrepresentation.

Fraudulent Reporting A business might partake in fraudulent activities by manipulating or misrepresenting business accounting records, profit information, sales data, or other pertinent financial information. This type of behavior is usually on attempt to hide serious financial problems in order to prevent the general public, regulatory agencies, or stockholders from getting poor status reports. Unfavorable financial information can be devastating to a business's stock value, which, in turn, will likely cause the business to lose a considerable amount of money in business equity. For example, business X might intentionally misreport higher profits than were actually accrued to maintain the stock price and value of the business. If the actual lower profits had been reported, then the stock would almost surely go down, causing a decrease in the value of the business. Another reason a business might report inaccurate financial data is because most corporate officers have some form of stock options, and a serious drop in the stock price might be very costly on a personal basis. This type of fraud is usually carried out at the top levels of the business.

When this type of crime is committed by a business through its officers, serious consequences accrue to both. Once the crime is uncovered, regulatory and law enforcement agencies at both the federal and state levels may begin an investigation of the alleged fraudulent activities. If the criminal activities are substantiated and convictions occur, the business, at a minimum, faces large fines, while the officers face long prison terms. In addition, the business faces a humiliating defeat in the arena of public opinion that will, in turn, hurt future sales.

Price Fixing Businesses may engage in another type of crime known as "price fixing," or conspiring with competitors to charge a minimum price for their products. This practice forces consumers to pay more for a particular product than would be charged in a "non-price fixing" competitive environment. Businesses are rewarded with higher profit margins because this practice does not force them to conform to market forces. Price fixing is a violation of the Sherman Anti-Trust Act of 1890, which was passed to ensure that a competitive free market exists, which results in competitive pricing. The Federal Trade Commission (FTC) and the United States Department of Justice have primary jurisdiction over businesses that engage in violations of the Sherman Anti-Trust Act. When a business and its officers are prosecuted for price fixing, the business often faces large fines while individual officers usually go to prison.

Product Misrepresentation When a business knowingly produces a defective or substandard product and sells it to the public anyway, the firm has committed product fraud. Product fraud is extremely serious because consumers depend on safe products in every aspect of daily life. Defective or unsafe products can cause serious harm to both the individual consumer and the general public. An example of product fraud would be when an automobile manufacturer produces and markets a vehicle that has shown, in presale trials, to be unsafe. For instance, a vehicle may be unsafe when hit from behind or from the side, causing the gas tank to explode because of design flaws. The obvious results of such flaws in vehicle design are the severe injury and/or death of people. Naturally, responses to product fraud include numerous lawsuits and lack of public trust in businesses that knowingly release defective or poorly designed products.

SUMMARY

Business-related criminal activity is not new. In fact, crimes in business, such as fraud, can be traced by thousands of years. Crimes can be committed both by and against a business. Common crimes that influence the health of businesses and their customers include burglary, embezzlement, fraud, robbery, and shoplifting. Since crimes, both by and against businesses, are so costly, elaborate measures have been put in place to decrease the likelihood of their occurrence.

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ALLEN D. TRUELL
MICHAEL MILBIER

Money traders at work.

CURRENCY EXCHANGE

Money is any medium that is universally accepted in an economy by sellers of goods and services as payment and by creditors as payment for debts. Money serves as a medium of exchange; indeed, without money, we would have to resort to barter in doing business. *Barter* is simply a direct exchange of goods and services for other goods and services. For instance, a wheat farmer who wants a pair of eyeglasses must find an optician who, at exactly the same time, wants a dozen bushels of wheat; that is, there must be a double coincidence of wants, and the elements of the desired trade must be of equal value. If there isn't a double coincidence of wants, the wheat farmer must go through several trades in order to obtain the desired eyeglasses; for example, this might involve trading wheat for a computer, then the computer for several lamps, then the lamps for the desired eyeglasses.

The existence of money means that individuals do not need to hold a diverse collection of goods as an exchange inventory. Money allows them to specialize in any area in which they have a comparative advantage and to receive money payments for their labor. Money can then be exchanged for the fruits of other people's labor. The use of money as a medium of exchange permits individuals to specialize and promotes the economic efficiencies that result from specialization.

In the same way that money facilitates exchange in a single economy, exchange of currencies facilitates the exchange of goods and services across the boundaries of countries. For instance, when you buy a foreign product, such as a Japanese car, you have dollars with which to pay the Japanese carmaker. The Japanese carmaker, however, cannot pay workers in dollars. The workers are Japanese, they live in Japan, and they need Japanese yen to buy goods and services in that country. There must be some way of exchanging dollars for the yen that the carmaker will accept in order to facilitate trade. That exchange occurs in a *foreign-exchange market*, which in this case specializes in exchanging yen for dollars.

The particular exchange rate between yen and dollars that would prevail depends on the current demand for and supply of yen and dollars (see Figure 1). If one cent per yen is the equilibrium price of yen, then that is the foreign-exchange rate determined by the current demand for and supply of yen in the foreign-exchange market. A person going to the foreign-exchange market would need one hundred yen (1/.01) to buy one dollar or one dollar to buy one hundred yen.

SUPPLY AND DEMAND FOR FOREIGN CURRENCY

Suppose you want to buy a Japanese car. To do so, you must have Japanese yen. You go to the foreign-exchange market (or your American bank). Your desire to purchase the Japanese car causes you to offer (*supply*) dollars to the foreign-exchange market. Your *demand* for Japanese yen is equivalent to your supply of U.S. dollars to the foreign-exchange market. Indeed, every U.S. import leads to a supply of dollars and a demand for some foreign currency. Likewise, every U.S. export leads to a demand for dollars and a supply of some foreign currency by the purchaser.

For the moment assume that only two goods are being traded—Japanese cars and U.S. steel. Thus, the U.S. demand for Japanese cars creates a supply of dollars and a demand for Japanese yen in the foreign-exchange market. Similarly, the Japanese demand for U.S. steel creates a supply of yen and a demand for dollars in the foreign-exchange market. The equilibrium exchange rate will tell us how many yen a dollar can be exchanged for (the dollar price of yen) or how many dollars a yen can be exchanged for (the yen price of dollars).

The demand for and supply of foreign-exchange determine the *equilibrium* foreign exchange rate. For the moment, ignore any speculative aspects of foreign exchange; that is, assume that there are no individuals who wish to buy yen simply because they think that the price of yen will go up in the future.

The idea of an exchange rate is similar to the idea of paying a market-determined price for something you want to buy. If you like soda, you know you have to pay about fifty cents a can. If the price went up to one dollar, you would probably buy fewer sodas. If the price went down to twenty-five cents, you might buy more. In other words, the demand curve for soda, expressed in terms of dollars, slopes downward, following the law of demand.

The demand curve for Japanese yen also slopes downward. Suppose it costs you one cent to buy one yen—this would be the exchange rate between dollars and yen. If tomorrow you had to pay two cents for a yen, then the exchange rate would have changed. Looking at such an increase with respect to the yen, we would say that there has been an *appreciation* in the value of the yen in the foreign-exchange market. But this increase in the value of the yen means that there has been a *depreciation* in the value of the dollar in the foreign-exchange market. When one currency appreciates, the other currency depreciates.

DETERMINANTS OF THE VALUE OF FOREIGN EXCHANGE

Supply and demand in the foreign-exchange market are determined by changes in many market variables, including relative price levels, real interest rates, productivity, product preferences, and perceptions of economic stability.

Different countries have different rates of inflation, which are an important factor in determining exchange rates. *Purchasing power parity* (PPP) is one widely used theory of the determination of exchange rates. PPP exists between any two currencies whenever changes in the exchange rate exactly reflect relative changes in price levels in two countries. In the long run, the average value of exchange rates depends on their purchasing power parity because in that way the relative prices in the two countries will stay the same (when measured in a common currency). That is, changes in the relative values of the two

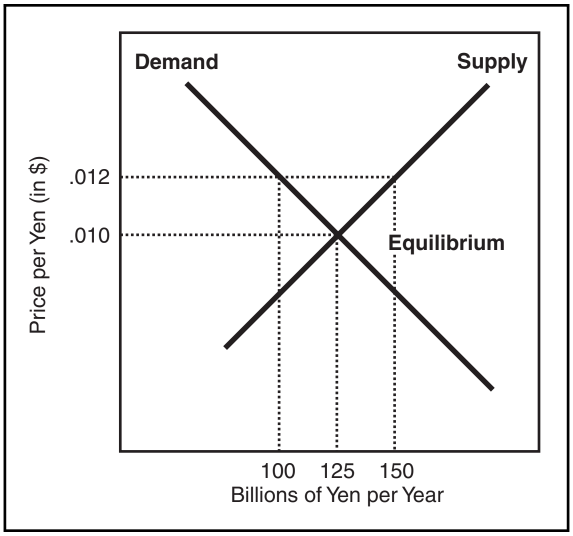

Figure 1

currencies compensate exactly for differences in national exchange rates. The PPP theory seems to work well in the long run when the differences in inflation rates between two countries are relatively large. When differences in inflation rates are relatively small, other market-oriented forces may dominate and often distort the picture.

A factor that may affect equilibrium currency prices is the interest rate of a country. If the U.S. interest rate, corrected for people's expectations of inflation, abruptly increased relative to interest rates in the rest of the world, international investors elsewhere would increase their demand for dollar-denominated assets, thereby increasing the demand for dollars in foreign-exchange markets. An increased demand in foreign-exchange markets, other things held constant, would cause the dollar to appreciate and other currencies to depreciate.

Another factor affecting equilibrium is a change in relative productivity. If one country's productivity increased relative to another's, the former country would become more competitive in world markets. The demand for its exports would increase, and so would the demand for its currency.

Changes in consumers' tastes also affect the equilibrium prices of currencies. If Japan's citizens suddenly developed a taste for a U.S. product, such as video games, this would increase the demand for U.S. dollars in foreign-exchange markets.

Finally, economic and political stability affect the supply of and demand for a currency, and therefore the equilibrium price of that currency. If the United States looked economically and politically more stable than other countries, more foreigners would want to put their savings into U.S. assets than in assets of another country. This would increase the demand for dollars.

FIXED- VERSUS FLEXIBLE-EXCHANGE-RATE SYSTEMS

Under the *flexible-exchange-rate system* described above, the equilibrium exchange rate reflects the supply and demand for the currency. Under a *fixed-exchange-rate system* a country's central bank intervenes by buying or selling its currency to keep its foreign-exchange rates from changing. As with most systems in which the price of a good or service is fixed, the only way that it can remain so is for the government to intervene. Consider the two-country example above. Suppose that there were an increase in the prices of all goods and services made in the United States, including steel. The Japanese yen would now buy less steel than before. The Japanese would supply fewer yen to the foreign-exchange market and demand fewer dollars at the fixed exchange rate. But suppose Americans continued to demand Japanese cars. In fact, they would demand more Japanese cars because, at the fixed exchange rate, the relative price of Japanese cars would fall. Americans would now supply more dollars to the foreign-exchange market and demand more yen. In the absence of intervention by a central bank, the exchange rate would change. In order to maintain the foreign-exchange price of the yen, the Japanese central bank would buy (demand) dollars and sell (supply) yen.

If the central bank didn't act to support the stated foreign-exchange rate, then too much or too little of one currency would be supplied or demanded. This lack of balance (i.e., disequilibrium) in the foreign-exchange market would impede trade between the two countries and could potentially result in a black market (i.e., underground market or illegal trade) in the two currencies.

CURRENCY CRISES

The only way for the United States to support the price of the dollar is to buy up excess dollars with foreign reserves—in our case, with Japanese yen. But the United States might eventually run out of Japanese yen. If this happened, it would no longer be able to stabilize the price of the dollar, and a currency crisis would result. A currency crisis occurs when a country can no longer support the price of its currency in foreign-exchange markets under a fixed-exchange-rate system. Many such crises have occurred in the past several decades when countries have attempted to maintain a fixed exchange rate that was in disequilibrium.

One alternative to a currency crisis or to continuing to try to support a fixed exchange rate is to devalue unilaterally. Currency devaluation is equivalent to currency depreciation, except that it occurs under a fixed-exchange-rate regime. The country officially lowers the price of its currency in foreign-exchange markets; this is a deliberate public action by a government following a fixed-exchange-rate policy. Revaluation is the opposite of devaluation. This occurs when, under a fixed-exchange-rate regime, there is pressure on a country's currency to rise in value in foreign-exchange markets. Unilaterally, that country can declare that the value of its currency in foreign-exchange markets is higher than it has been in the past. Currency revaluation is the equivalent of currency appreciation, except that it occurs under a fixed exchange rate regime and is mandated by the government. Managed exchange rates, sometimes referred to as dirty float, occur when a central bank or several central banks intervene in a system of flexible exchange to keep the exchange rate from undergoing extreme changes.

SUMMARY

Thus, a well-functioning foreign-exchange market is vital for worldwide trade. In a flexible-exchange-rate system, supply of and demand for a currency determine the exchange rate. In a fixed-exchange rate system, a government imposes the exchange rate; given the mandated exchange rate, consumers determine how much of the currency they wish to supply or demand. In a managed-exchange-rate system, the exchange rate is determined through the markets, but the central bank will intervene by buying and selling the currency in order to influence the price.

DENISE WOODBURY

CUSTOMER SERVICE

A growing number of organizations are giving increased attention to customer service. Financial institutions, hospitals, public utilities, airlines, retail stores, restaurants, manufacturers, and wholesalers face the problem of gaining and retaining the patronage of customers. Building long-term relationships with customers has been given a high priority by the majority of America's most successful enterprises. These companies realize that customer satisfaction is an important key to success. *Customer service* can be defined as those activities that enhance or facilitate the purchase and use of the product. Today's emphasis on customer satisfaction can be traced to a managerial philosophy that has been described as the marketing concept.

EVOLUTION OF THE MARKETING CONCEPT

What is the "marketing concept"? When a business firm moves from a product orientation to a customer orientation, we say it has adopted the *marketing concept.* This concept springs from the belief that the firm should dedicate all its policies, planning, and operation to the satisfaction of the customer.

The marketing era in the United States began in the 1950s. J. B. McKitterick, a General Electric executive, is credited with making one of the earliest formal statements indicating corporate interest in the marketing concept. In a paper written in 1957 he observed that the principal marketing function of a company is to determine what the customer wants and then develop the appropriate product or service. This view contrasted with the prevailing practice of that period, which was to develop products and then build customer interest in those products.

The foundation for the marketing concept is a business philosophy that leaves no doubt in the mind of every employee that customer satisfaction is of primary importance. All energies are directed toward satisfying the consumer. L. L. Bean, the Freeport, Maine, mail-order firm, provides a good example of a company that has embraced the marketing concept. This well-known supplier of outdoor products offers the customer an unconditional guarantee of satisfaction that has been in place since the company was founded in 1912. If you are unhappy with an L. L. Bean product, simply request replacement or a refund (Comarow, 1999).

We have entered the age of boundless competition, triggered in large part by an expanding global economy. Multinational competition has increased dramatically in recent years, and this means a one-world market exists for products ranging from cars to computers. To compete successfully in markets where products are the same or very similar, and prices are basically the same, service is often the only competitive advantage available.

WINNING CUSTOMER SERVICE STRATEGIES

According to the marketing concept, an organization must determine what customers want and use this information to create satisfying products and services (Pride and Ferrell, 1997). Federal Express redefined mail service by providing overnight, door-to-door delivery of packages and letters. The company discovered a need for speed, reliability, and courteous service by well-trained employees. The marketing concept is a management philosophy guiding all the organizational activities, including production, personnel, finance, distribution, and marketing.

Excellent customer service is achieved by a three-dimensional process (see Figure 1) that includes a well-conceived service strategy, customer-driven systems, and customer-friendly people (Albrecht and Zemke, 1985). Each dimension must reflect the important needs and wants of the customer. The "service triangle" can be developed for any type of business. Each piece of the triangle is explained in the following sections.

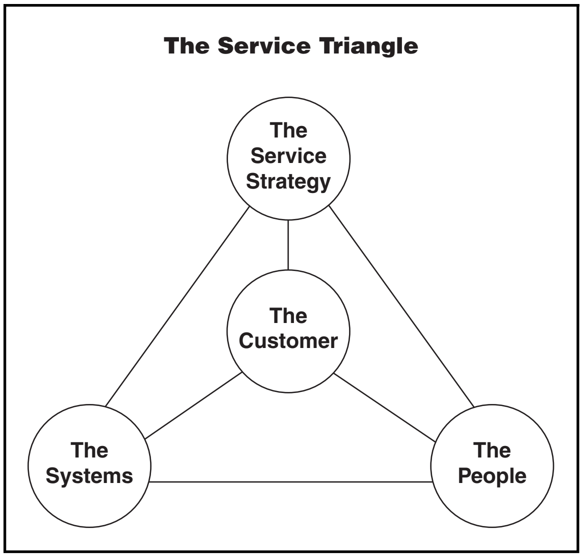

Figure 1

SERVICE STRATEGY

A well-conceived service strategy includes three important elements: market research to discover the customers' needs and wants; a clear vision of the firm's "reason for being"; and clearly stated beliefs and values that guide the enterprise (Albrecht and Zemke, 1985).

Many organizations are creating a written vision or mission statement that directs the energies of the company and inspires employees to achieve greater heights. Ortho Biotech, based in Raritan, New Jersey, begins its vision statement with a bold prediction: "We will be the best in our business by providing customers with innovative solutions to significant medical problems through biotechnology and related science" (quoted in Lee, 1993, p. 27). Senior managers must serve as "cheerleaders" to unify employees behind the vision.

The creation of a sound set of beliefs and values can give stability to an organization. Customer service priorities also become clearer. Ben

Edwards, chairman of A.G. Edwards and Sons, Inc., the seventh-largest securities firm in the nation, says following the Golden Rule is still the best way to achieve success in business (Kegley, 1990). This attitude has had a positive influence on the company's 7400 employees.

CUSTOMER-FRIENDLY SYSTEMS

Service systems are made up of all the various practices and procedures that personnel can use to meet customer needs. When you check into the Hyatt Regency Crown Center in Kansas City, Missouri, you are given a card that says, "Call 50 for a response to any concern within five minutes" (Manning and Reece, 1998). MBNA, a Wilmington, Delaware, financial services company wants every phone call answered within two rings. Employees achieve this goal nearly 100 percent of the time (Reece and Brandt, 1999). If you have a problem with your Dell computer, you can check the detailed troubleshooting guide provided by the company or get help from a member of the technical support staff. These examples are typical of the steps being taken by companies that want to meet, and in some cases exceed, the expectations of their customers.

Customer-friendly systems are designed to make things easy for customers. Complaints should be handled in a timely fashion. Returning or exchanging products should not be difficult. Requests for assistance should be handled in a courteous and efficient manner. Customer-friendly systems add value and build customer loyalty.

CUSTOMER-FRIENDLY FRONTLINE PEOPLE

In many cases, the customer's first impression of an organization comes during contact with frontline people. The cashier at the supermarket, the receptionist at the doctor's office, and the front-desk clerk at the hotel often have the first opportunity to serve the customer. Unfortunately, too often these employees earn low pay, receive little formal training, and are given little recognition for the important duties they perform. The best frontline employees are both competent and caring. They have a certain level of maturity and possess the social skills needed to build customer loyalty.

SUMMARY

The ultimate purpose of every business should be to satisfy the customer. Increased levels of competition require a greater commitment to customer service. Firms that invest the time, energy, and money needed to achieve excellent customer service will be the ones that thrive and grow.

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BARRY L. REECE

D

DATABASES

With the rise of business data-processing systems on a very large scale during the 1960s and 1970s came the development of databases and database management systems. *Databases* are large collections of interrelated data stored on computer disk systems from which they can be immediately accessed and revised. *Database management systems* are large computer programs that "manage" or control the databases.

Data is normally defined as "facts" from which *information* can be derived. For example, "Janene Clouse lives at 1411 Sycamore Avenue" is a fact. A database may contain millions of such facts. From these facts the database management system can derive information in the form of answers to questions such as "How many people live on Sycamore Avenue?" The popularity of databases in business is a direct result of the power of database management systems in deriving valuable business information from large collections of data.

RELATIONAL DATABASES

Most modern databases are *relational,* meaning that data are stored in tables, consisting of rows and columns, and that data in different tables are related by the meanings of certain common columns. (The tables in a database are sometimes called "files," the rows are called "records," and the columns are called "fields." However, this is an older terminology, left over from the early days of business computer systems.) The following is an example of a simple relational database consisting of three tables—one for customers, one for products, and one for sales:

Customers

Customer_no	name	address	phone
1001	Jones	320 Main	555-8811
1002	Smith	401 Oak	555-8822
1003	Brown	211 Elm	555-8833
1004	Green	899 Maple	555-8844

Products

product_no	description	price
25	Ring	3.25
33	Gasket	1.23
45	Shaft	4.55

Sales

sale_no	date	customer_no	product_no
841	3/11	1002	45
842	3/12	1001	25
843	3/12	1002	45
844	3/13	1004	33
845	3/14	1003	25
846	3/15	1002	33

Suppose we want to know the customer's name for sale number 845. We look in the customer number column of the Sales table, and we see that it was customer 1003. Next, we refer to the Customers table and find customer 1003. Here we see the customer's name is Brown. So, Brown was the customer for sale number 845.

STRUCTURED QUERY LANGUAGE

The foregoing is a simple example of a database query. In a modern database, queries are expressed in a query language, which requires a particular format that can be recognized and interpreted by the database management system (DBMS). The standard query language for relational databases, as adopted by the American National Standards Institute (ANSI), is SQL, which is generally understood to be an abbreviation for "Structured Query Language." Let us look at a few examples of queries expressed in SQL.

Query: Which products have a price over $2?

SQL Solution:

```
Select product_no, description
From Products
Where price > 2.00
```

Result:

product_no	description
	Ring
	Shaft

This query's SQL solution illustrates the SQL format. In general, SQL "statements" have a Select "clause," a From "clause," and a Where "clause." The Select clause lists the columns that are to be shown in the result, the From clause lists the database tables from which data is to be taken, and the Where clause gives the condition to be applied to each row in the table. If a row satisfies the condition, then it is selected, and the values in that row for the columns listed in the Select clause are included in the result.

Query: When have we sold product number 45 to customer 1002?

SQL Solution:

```
Select date
From Sales
Where product_no = 45
and customer_no = 1002
```

Result:

date
3/11
3/12

In this example you can see that the condition in the Where clause includes the connector "and," which indicates that both conditions (product_no = 45 and customer_no = 1002) must be fulfilled. In our sample database there are two rows that satisfy this condition, and the query's result yields the dates from those two rows.

Our next query gives the SQL solution to the original query we discussed above.

Query: What is the customer's name for sale number 845?

SQL Solution:

```
Select name
From Customers, Sales
Where sale_no = 845 and
      Sales.customer_no =
      Customers.customer.no
```

This query illustrates how we can query more than one table at once in SQL. First, we list all tables needed to answer the query. In this case then, we list the Customers and the Sales tables. Then in the Where clause we give two conditions:

```
sale_no = 845 and
Sales.customer_no =
Customers.customer_no
```

The first condition indicates that the sale_no column must have a value of 845. Since there is only one row in the Sales table having that value, we have limited our query to that single row. The second condition indicates that we want only that row in the Customers table which has the same value for its customer_no column as the Sales row has for its customer_no column. This condition then limits our result to the joining together of one row from the Sales table and one row from the Customers table. Finally, the Select clause,

```
Select name
```

tells us that we should give the value from the name column as our result. As we showed before, the resulting customer name is "Brown."

Queries can also be used to perform calculations:

Query: What is the average price of our products?

SQL Solution:	Select Avg (price) From Products
Result:	3.01

SQL also provides statements that can be used to make changes to data in the database. For example, let's suppose we want to increase the price of our products by 3 percent. Then we can use the following statement:

```
Update Products
Set price = 1.03 * price
```

This statement will cause the price of every product in our Products table to be increased by 3 percent. Note that it doesn't matter whether we have 3 products, as shown in our sample database, or 300,000 products. A single statement will update the prices of all products. Of course, if we only want to change the prices of selected products we can do that, too:

```
Update Products
Set price = 1.03 * price
Where product_no = 33
```

This statement will only change the price of product number 33. SQL also provides statements to Insert new rows into tables and to Delete rows from tables.

These queries show only a very small number of the capabilities of SQL. The Where clause can be used to select rows based on where names are in the alphabet, whether dates are before or after certain other dates, based on averages, and based on many other conditions.

SMALL AND LARGE DATABASES

Databases can be *single-user* or *multi-user*. A single-user database exists on a single computer and is accessible only from that computer. Many single-user databases exist, and there are a number of commercial DBMSs that address this market. A multi-user database may exist on a single machine, such as a mainframe or other powerful computer, or it may be *distributed* and exist on multiple computers. Multi-user databases are accessible from multiple computers simultaneously. With the rise of the Internet, many databases are publicly accessible. For example, the holdings of university libraries are maintained on databases that can be browsed from remote locations. A person interested in locating a book in a library can enter the book's title, author, or subject, and a database query will be automatically performed. Information on the desired book or list of books will be returned to the person's computer.

SELECTING A DATABASE SYSTEM

A person or business seeking to purchase a database management system for use in managing a database should consider the following factors:

Relational: Virtually all major commercial database management systems are relational, since the desirability of relational databases is well-accepted in the database community.

SQL: In addition, since the American National Standards Institute has adopted SQL as it standard for relational databases, the desired DBMS should support SQL.

Capacity: As noted above, database management systems are designed for a variety of environments. Some are designed to be single-user systems, others are designed for medium-sized businesses, while still others are designed for large businesses. The system chosen should naturally be one that has been shown to be successful in and appropriate for the environment it is chosen for.

Disaster recovery capability: More sophisticated systems are more capable of recovering from power outages, computer hardware failure, and the like than are the single-user systems. They use sophisticated *logging* and database *locking* facilities that make such recovery possible. Often, these facilities are unnecessary for single-user systems.

SUMMARY

Databases and database management systems are central to modern business information systems. Relational databases using the SQL language provide substantial logical power to help businesses make informed decisions based on their own data. Database systems can be small and handled by a single user, or they can be large and available to multiple users. They are even publicly available through the Internet. Database management systems can be sophisticated and expensive, and consequently their purchase requires careful, informed consideration.

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Gary Hansen

DECA

DECA is a national student organization for individuals preparing for marketing, management, and entrepreneurship careers. With 180,000 members, DECA serves as the companion to marketing education programs within secondary and post-secondary schools across all fifty states of the United States, its territories, and Canada. As a co-curricular organization, DECA is an integral part of classroom instruction—a vehicle through which students learn marketing and management, and are motivated to succeed.

In partnership with businesses throughout the country, DECA offers learning experiences that contribute to the integration of academic and career-focused instruction, resulting in heightened student achievement and student recognition. For example, each year more than 60,000 student members participate in a competitive events program, culminating in state and national secondary and post-secondary Career Development Conferences that allow members to demonstrate academic and marketing excellence.

Organized in 1946, DECA meets the needs of marketing (then, distributive) education students seeking professional and personal growth. The association is governed by a board of directors. Until July 1991, DECA was referred to as the Distributive Education Clubs of America. Although that continues to be the legal name, the organization uses the commonly recognized acronym, DECA, along with the tag line, An Association of Marketing Students." The official logo of DECA is a diamond, whose four points emphasize civic consciousness, leadership development, vocational understanding, and social intelligence. DECA is advised by a national advisory board, consisting of business representatives, and a congressional advisory board, comprised of federal legislators.

The official publications of DECA are the *DECA Advisor*, *Dimensions*, *Chi Connection*, *Highwired.Net*, and the *DECA Guide*. Such scholarships as the Harry A. Applegate, J. C. Penney, and Sears Scholarships are available to support the academic endeavors of members. More information is available from DECA at 1908 Association Dr., Reston, Virginia 20191; (703)860-5000: or http://www.deca.org.

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Jewel E. Hairston
Robert G. Berns

DECISION MAKING

Decision making, also referred to as problem solving, is the process of recognizing a problem or opportunity and finding a solution to it. Decisions are made by everyone involved in the business world, but managers typically face the most decisions on a daily basis. Many of these decisions are relatively simple and routine, such as ordering production supplies, choosing the discount rate for an order, or deciding the annual raise of an employee. These routine types of decisions are known as *programmed decisions*, because the decision maker already knows what the solution and outcome will be. However, managers are also faced with decisions that can drastically affect the future outcomes of the business. These types of decisions are known as *nonprogrammed decisions*, because neither the appropriate solution nor the potential outcome is known. Examples of nonprogrammed decisions include merging with another company, creating a new product, or expanding production facilities.

Decision making typically follows a six-step process:

1. Identify the problem or opportunity
2. Gather relevant information
3. Develop as many alternatives as possible
4. Evaluate alternatives to decide which is best
5. Decide on and implement the best alternative
6. Follow-up on the decision

In *step 1*, the decision maker must be sure he or she has an accurate grasp of the situation. The need to make a decision has occurred because there is a difference between the desired outcome and what is actually occurring. Before proceeding to step 2, it is important to pinpoint the actual cause of the situation, which may not always be obviously apparent.

In *step 2*, the decision maker gathers as much information as possible because having all the facts gives the decision maker a much better chance of making the appropriate decision. When an uninformed decision is made, the outcome is usually not very positive, so it is important to have all the facts before proceeding.

In *step 3*, the decision maker attempts to come up with as many alternatives as possible. A technique known as "brainstorming," whereby group members offer any and all ideas even if they sound totally ridiculous, is often used in this step.

In *step 4*, the alternatives are evaluated and the best one is selected. The process of evaluating the alternatives usually starts by narrowing the choices down to two or three and then choosing the best one. This step is usually the most difficult, because there are often many variables to consider. The decision maker must attempt to select the alternative that will be the most effective given the available amount of information, the legal obstacles, the public relations issues, the financial implications, and the time constraints on making the decision. Often the decision maker is faced with a problem for which there is no apparent good solution at the moment. When this happens, the decision maker must make the best choice available at the time but continue to look for a better option in the future.

Once the decision has been made, *step 5* is performed. Implementation often requires some additional planning time as well as the understanding and cooperation of the people involved. Communication is very important in the implementation step, because most people are resistant to change simply because they do not understand why it is necessary. In order to ensure smooth implementation of the decision, the decision maker should communicate the reasons behind the decision to the people involved.

In *step 6*, after the decision has been implemented, the decision maker must follow-up on the decision to see if it is working successfully. If the decision that was implemented has corrected the difference between the actual and desired outcome, the decision is considered successful. However, if the implemented decision has not produced the desired result, once again a decision must be made. The decision maker can decide to give the decision more time to work, choose another of the generated alternatives, or start the whole process over from the beginning.

STRATEGIC, TACTICAL, AND OPERATIONAL DECISIONS

People at different levels in a company have different types of decision-making responsibilities. *Strategic decisions*, which affect the long-term direction of the entire company, are typically made by top managers. Examples of strategic decisions might be to focus efforts on a new product or to increase production output. These types of decisions are often complex and the outcomes uncertain, because available information is often limited. Managers at this level must often depend on past experiences and their instincts when making strategic decisions.

Tactical decisions, which focus on more intermediate-term issues, are typically made by middle managers. The purpose of decisions made at this level is to help move the company closer to reaching the strategic goal. Examples of tactical decisions might be to pick an advertising agency to promote a new product or to provide an incentive plan to employees to encourage increased production.

Operational decisions focus on day-to-day activities within the company and are typically made by lower-level managers. Decisions made at this level help to ensure that daily activities proceed smoothly and therefore help to move the company toward reaching the strategic goal. Examples of operational decisions include scheduling employees, handling employee conflicts, and purchasing raw materials needed for production.

It should be noted that in many "flatter" organizations, where the middle management level has been eliminated, both tactical and operational decisions are made by lower-level management and/or teams of employees.

GROUP DECISIONS

Group decision making has many benefits as well as some disadvantages. The obvious benefit is that there is more input and therefore more possible solutions to the situation can be generated. Another advantage is that there is shared responsibility for the decision and its outcome, so one person does not have total responsibility for making a decision. The disadvantages are that it often takes a long time to reach a group consensus and that group members may have to compromise in order to reach a consensus. Many businesses have created problem-solving teams whose purpose is to find ways to improve specific work activities.

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MARCY SATTERWHITE

DEFLATION

(SEE: *Economic Cycles*)

DELEGATION

(SEE: *Mangement: Authority and Responsibility*)

DEMAND

(SEE: *Supply and Demand*)

DEMAND CURVES

(SEE: *Supply and Demand*)

DEPARTMENTALIZATION

(SEE: *Organizational Structure*)

DEPRESSION

(SEE: *Economic Cycles*)

DEREGULATION

Most societies rely on competitive markets to handle the allocation of scarce resources to their highest and best uses. Yet markets are not without their shortcomings. For this reason, governments sometime institute regulatory control. In 1887, the first regulatory agency, the Interstate Commerce Commission, was created to regulate monopolistic pricing policies of railroads.

When private firms gain monopoly power, usually because of economies of scale, they are in a position to restrict production and raise price with little worry of competition; these are known as natural monopolies. The government may permit a single producer (e.g., of natural gas or electricity) to exist in order to gain lower production costs but simultaneously empower a regulatory agency to set the firm's prices.

A second reason for regulation stems from the fact that society declares certain activities illegal. Prostitution, gambling, and certain drugs are either not permitted or allowed only under certain conditions. Through a licensing system, government agencies control who enters such industries, their prices, and their methods of operation.

Another reason for government regulation arises because society establishes standards for particular professions, such as medicine, law, accounting, and real estate. The government guarantees compliance with these standards by imposing tests and other requirements. Those failing to meet these standards are not permitted to engage in that business. Hundreds of agencies administer tests and police the professions, all done ostensibly in the interest of protecting the consumer. Interestingly, license holders often push for even higher licensing requirements, often grandfathering in all current license holders, because higher salaries are possible when the number of competitors is restricted.

Many government regulations are designed to protect people from the negative consequences (i.e., externalities) of buyers and sellers who have little incentive to look out for the welfare of third parties. For example, slaughterhouses may have the freedom to kill animals for sale to their customers in grocery stores without taking into account obnoxious odors or sounds emanating from the slaughterhouse. Neighborhood residents, however, incur externality costs. Through agencies such as the Environmental Protection Agency (EPA), the government controls what slaughterhouses can and cannot do in order to lessen the negative effects on the population.

Although government regulation is pervasive for the reasons presented above, it is apparent that regulation may not achieve the lofty goals set out in the initial effort to regulate. Governments can also fail, and government failure often aggravates the problems it sets out to solve. Public choice economists have identified several specific causes of government failure. Voters are often rationally ignorant about many things, and they vote for political candidates who are uninformed or misinformed. Also, politicians are often indebted to their financial supporters, some of whom are regulated industries, and will often enact laws favorable to their supporters regardless of the negative impact on the public. Politicians may even be willing to sacrifice the future for the sake of short-term benefits for their financial supporters. Recognition of such limitations to government regulation has caused Congress to rethink regulation, especially as it relates to certain industries.

Beginning in the mid-1970s, increased dissatisfaction with the burdens of regulation, especially the costs imposed on consumers, led to the *deregulation* of a number of industries, including

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STOP INFLATION STOP BIG OIL
COWBOY REAGAN
BIG OIL, DECONTROL & REAGANOMICS
STANDARD
THE RICH GET RICHER
N.C.O.
IT DES OUR TBOOKS

Protesters at a deregulation rally.

the airlines (Airline Deregulation Act of 1978), natural gas (Natural Gas Policy Act of 1978), trucking (Motor Carrier Act of 1980), and banking (Depository Institutions Deregulation and Monetary Control Act of 1980).

In 1997 some states began deregulating the production and sale of electricity. New technologies now permit small companies to produce electricity at reduced costs. Under the new system (much like the system in the telephone industry), local utilities must permit competitors to use their electric lines for a fee.

Benefits from deregulation include reduced prices and increased choices for consumers. Competition among long-distance telephone suppliers is keen, no longer requiring government regulation, and is demonstrated by the fact that from 1985 to 1998 prices declined by 72 percent. Expanded service and reduced prices have occurred in both airlines and trucking. Eleven thousand new trucking lines started up within three years of deregulation, and savings may be as high as $50 billion per year.

Some concerns have arisen about deregulation, however. The airline industry has become more concentrated since deregulation. In 1978 eleven carriers handled 87 percent of the traffic, while in 1995 seven carriers handled 93 percent of the traffic. Although some feared reduced safety, that has not materialized. Some of the bank failures in the 1980s were attributed to deregulation; yet depositors receive higher interest. On balance, deregulation effects have been positive.

A significant change in direction has also taken place with regard to government regulation of industries producing externalities. Many externalities arise because of the lack of property rights; consequently there is greater emphasis on establishing clearly defined property rights, which allows the market to automatically internalize the cost to buyers and sellers, making government regulation costly and unnecessary.

The EPA now depends less heavily on its command-and-control approach and more heavily on tradable permits, reducing the overall level of pollution and allowing firms to avoid pollution in a more cost-effective way.

Although Congress has deregulated specific industries, *social* regulation designed to "protect" consumers has expanded. Through such agencies as the Occupational Safety and Health Administration, the Consumer Product Safety Commission, the Food and Drug Administration, the Equal Employment Opportunity Commission, and the EPA, the government is attempting to provide safer products, better health care, fairer employment practices, and a cleaner environment. Government at federal, state, and local levels has also continued to increase license requirements for numerous occupations and professions.

Many economists wonder if the benefits are high enough to warrant the cost of regulation. In addition to regulatory-imposed limits on consumer freedom, product prices rise, administrative costs are high, and some firms are driven out of business, thereby reducing competition. To further complicate things, many special-interest groups use such laws to increase their wealth at the expense of others. It has been estimated that federal regulation costs each household $6000 per year. Clearly the issues surrounding regulation/deregulation will continue to be discussed into the twenty-first century.

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JAMES R. RINEHART
JEFFREY J. POMPE

DERIVATIVES

Derivative instruments are used as financial management tools to enhance investment returns and to manage such risks relative to interest rates, exchange rates, and financial instrument and commodity prices. Several local and international banks, businesses, municipalities, and others have experienced significant losses with the use of derivatives. However, their use has increased as efforts to control risk in complex situations are perceived to be wise strategic decisions.

SFAS 133'S DEFINITION OF A DERIVATIVE INSTRUMENT

In 1998, the Financial Accounting Standards Board (FASB) issued Statement on Financial Accounting Standards No. 133 (SFAS 133), *Accounting for Derivative Instruments and Hedging Activities*, which is effective for companies with fiscal years beginning after June 15, 2000. SFAS 133 establishes new accounting and reporting rules for derivative instruments, including derivatives embedded in other contracts, and for hedging activities. Derivatives must now be reported at their fair values in financial statements. Gains and losses from derivative transactions must be reported currently in income, except from those transactions that qualify as effective hedges.

According to Statement on Financial Accounting Standards (SFAS) 133, a derivative instrument is defined as a financial instrument or other contract that represents rights or obligations of assets or liabilities with all three of the following characteristics:

- It has (1) one or more underlyings and (2) one or more notional amounts or payment provisions or both. Those terms determine the settlement amount of the derivative. An *underlying* is a variable (i.e., stock price) or index (i.e., bond index) whose market movements cause the fair value market or cash flows of a derivative to change. The *notional amount* is the fixed amount or quantity that determines the size of the change caused by the change in the underlying; possibly a number of currency units, shares, bushels, pounds, or other units specified in the contract. A *payment provision* specifies a fixed or determinable settlement to be made if the underlying behaves in a specified manner.

- It requires no initial net investment or an initial net investment that is smaller than would be required for other types of similar instruments.
- Its terms require or permit net settlement. [SFAS 133, paragraph 6]

USERS OF DERIVATIVES

The derivatives market serves the needs of several groups of users, including those parties who wish to hedge, those who wish to speculate, and arbitrageurs.

- A *hedger* enters the market to reduce risk. Hedging usually involves taking a position in a derivative financial instrument, which has opposite return characteristics of the item being hedged, to offset losses or gains.
- A *speculator* enters the derivatives market in search of profits, and is willing to accept risk. A speculator takes an open position in a derivative product (i.e. there is no offsetting cash flow exposure to offset losses on the position taken in the derivative product).
- An *arbitrageur* is a speculator who attempts to lock in near riskless profit from price differences by simultaneously entering into the purchase and sale of substantially identical financial instruments.

Other participants include clearinghouses or clearing corporations, brokers, commodity futures trading commission, commodity pool operators, commodity trading advisors, financial institutions and banks, futures exchange, and futures commission merchants.

TYPES OF DERIVATIVE INSTRUMENTS

Derivative instruments are classified as:

- Forward Contracts
- Futures Contracts
- Options
- Swaps

Derivatives can also be classified as either forward-based (e.g., futures, forward contracts, and swap contracts), option-based (e.g., call or put option), or combinations of the two. A forward-based contract obligates one party to buy and a counterparty to sell an underlying asset, such as foreign currency or a commodity, with equal risk at a future date at an agreed-on price. Option-based contracts (e.g., call options, put options, caps and floors) provide the holder with a right, but not an obligation to buy or sell an underlying financial instrument, foreign currency, or commodity at an agreed-on price during a specified time period or at a specified date.

Forward Contracts Forward contracts are negotiated between two parties, with no formal regulation or exchange, to purchase (long position) and sell (short position) a specific quantity of a specific quantity of a commodity (i.e., corn and gold), foreign currency, or financial instrument (i.e., bonds and stock) at a specified price (delivery price), with delivery or settlement at a specified future date (maturity date). The price of the underlying asset for immediate delivery is known as the spot price.

Forward contracts may be entered into through an agreement without a cash payment, provided the forward rate is equal to the current market rate. Forward contracts are often used to hedge the entire price changed of a commodity, a foreign currency, or a financial instrument. irrespective of a price increase or decrease.

Futures Contracts Futures are standardized contracts traded on a regulated exchange to make or take delivery of a specified quantity of a commodity, a foreign currency, or a financial instrument at a specified price, with delivery or settlement at a specified future date. Futures contracts involve U.S. Treasury bonds, agricultural commodities, stock indices, interest-earning assets, and foreign currency.

A futures contract is entered into through an organized exchange, using banks and brokers. These organized exchanges have clearinghouses, which may be financial institutions or part of the futures exchange. They interpose themselves between the buyer and the seller, guarantee obligations, and make futures liquid with low credit risk. Although no payment is made upon entering into a futures contract, since the underlying (i.e. interest rate, share price, or commodity price) is at-the-market, subsequent value changes require daily mark-to-marking by cash settlement (i.e. disbursed gains and daily collected losses). Similarly, margin requirements involve deposits from both parties to ensure any financial liabilities.

Futures contracts are used to hedge the entire price change of a commodity, a foreign currency, or a financial instrument since the contract value and underlying price change symmetrically.

Options Options are rights to buy or sell. For example, the purchaser of an option has the right, but not the obligation, to buy or sell a specified quantity of a particular commodity, a foreign currency, or a financial instrument, at a specified price, during a specified period of time (American option) or on a specified date (European option). An option may be settled by taking delivery of the underlying or by cash settlement, with risk limited to the premium.

The two main types of option contracts are call options and put options, while some others include stock (or equity) options, foreign currency options, options on futures, caps, floors, collars, and swaptions.

- *American call options* provide the holder with the right to acquire an underlying product (e.g., stock) at an exercise or strike price, throughout the option term. The holder pays a premium for the right to benefit from the appreciation in the underlying.
- *American put options* provide the holder with the right to sell the underlying product (e.g., stock) at a certain exercise or strike price, throughout the option term. The holder gains as the market price of the underlying (stock price) falls below the exercise price.
- An *interest rate cap* is an option that allows a cap purchaser to limit exposure to increasing interest rates on its variable-rate debt instruments.
- An *interest rate floor* is an option that allows a floor purchaser to limit exposure to decreasing interest rates on its variable-rate investments.

Generally, option contracts are used to hedge a one-directional movement in the underlying commodity, foreign currency, or financial instrument.

Swaps A swap is a flexible, private, forward-based contract or agreement, generally between two counterparties to exchange streams of cash flows based on an agreed-on (or notional) principal amount over a specified period of time in the future.

Swaps are usually entered into at-the-money (i.e. with minimal initial cash payments because fair value is zero), through brokers or dealers who take an up-front cash payment or who adjust the rate to bear default risk. The two most prevalent swaps are interest rate swaps and foreign currency swaps, while others include equity swaps, commodity swaps, and swaptions.

- *Swaptions* are options on swaps that provide the holder with the right to enter into a swap at a specified future date at specified terms (stand-alone option in a swap) or to extend or terminate the life of an existing swap (embedded option on a swap).

Swap contracts are used to hedge entire price changes (symmetrically) related to an identified hedged risk, such as interest rate or foreign currency risk, since both counterparties gain or lose equally.

RISK CHARACTERISTICS OF DERIVATIVES

The main types of risk characteristics associated with derivatives are:

- Basis Risk This is the spot (cash) price of the underlying asset being hedged, less the price of the derivative contract used to hedge the asset.
- Credit Risk Credit risk or default risk evolves from the possibility that one of the parties to a derivative contract will not satisfy its financial obligations under the derivative contract.

- Market Risk This is the potential financial loss due to adverse changes in the fair value of a derivative. Market risk encompasses legal risk, control risk, and accounting risk.

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PATRICK CASABONA

DESKTOP PUBLISHING

Desktop publishing, or *DTP*, is the term applied to the process of creating and publishing professional-looking documents using microcomputers. DTP systems can produce many types of documents, from simple to sophisticated, including business cards, letterhead stationery, brochures, newsletters, flyers, maps, coupons, posters, invitations, business graphics, annual reports, proposals, and magazines. For such projects, a company would need photography equipment, photo-editing software, illustration software, and page-layout software.

For example, creating a brochure would require photographs of people or products. Photo-editing software would be used to edit, combine, and give special treatment to the photographs. Illustration software would be needed to create line drawings or other special effects. And page-layout software would be needed to arrange all the text and graphic elements. The following sections review the history, system components, design process and guidelines, features, and management guidelines pertaining to DTP.

HISTORY

Historically, the creation and publication of professionally designed documents involved a variety of separate processes and people. To create a brochure, for example, a designer would develop the overall idea and create a drawing of the finished document. A writer would create the text, a typesetter would type the text in the desired fonts, an illustrator would draw needed line art, a photographer would shoot photos, and a service bureau would develop the film and create color separations from the photos for color work. The designer would then create the final comprehensive, pasting text, illustrations, and other elements on a board for filming. The comprehensive would be photographed, after which photo negatives would be cut out and placed on a sheet from which printing plates would be made. The plates would then be mounted on a printer, and the final document would be printed, cropped, folded, and bound as necessary.

Today's DTP technology automates many of these steps and enables just one person with a computer and DTP software to become a standalone publishing business. Photos can be taken with digital cameras, bypassing the film-development stage required of traditional film-type photography. Photo-editing software enables photos to be cropped, scaled, and edited. Word-processing software is used to capture and process text, and illustration software is used to create drawings. Finally, page-layout software is used to assemble all the components and print output from which printing plates are made. The final document is then printed on a computer printer or on a large commercial press. Alternately, electronic documents can be published on the Internet, making them available to a worldwide audience.

SYSTEM COMPONENTS

DTP system hardware requires a fast computer with a high-capacity hard disk, scanner, high-resolution printer, modem or other connection to the Internet, large amount of random-access memory (RAM), and digital camera. In addition, the system must have word-processing software, illustration software, photo-editing software, page-layout software, Internet-publishing software, clip art, and multiple type fonts. DTP periodicals can be helpful in selecting appropriate hardware and software.

DESIGN PROCESS AND GUIDELINES

Being successful at desktop publishing requires more than just learning how to operate all the DTP hardware and software. One must first develop a design, which requires creativity and knowledge of design principles, and then use the hardware and software to make the design a reality. The first phase of document creation involves planning. This phase focuses on identifying the goals of the publication. For example, to design a business card, the designer will want to give the customer the information needed to contact the business and to make a good impression on the customer.

The second step is to analyze the audience, the people who will be using and reading the document. If a newsletter focuses on mountain biking, for example, the audience might be primarily younger outdoor enthusiasts. Additional audience research would provide additional information about mountain biker characteristics.

The third step is to develop a strategy, or theme. A total communication line for a mountain biking retail business might include an Internet Web site, brochures, business cards, letterhead and envelopes, forms, and information sheets. To achieve unity, a carefully selected concept or theme should be carried throughout all these items. For example, all the documents might carry a common theme of a knobby bicycle wheel as the company logo, the same typeface for text and headings, and the same color scheme. Repetition of document characteristics and elements is a key characteristic of effective documents.

The final step in the planning phase is to develop a prototype of documents to be developed. Designers usually create numerous sketches and then gradually refine the more preferred sketches until a final selection is made. The final design must include appropriate empty space, called *white space*, so the document does not look too crowded. Obviously, the greatest requirement of the final design is that it will appeal to and persuade the intended audience.

After the planning phase, the document is created. Creation requires writing appropriate text, called *copy*, and choosing the appropriate fonts (typefaces, type styles, and type sizes) for the various parts of the text. To achieve a harmonious appearance, the fonts must complement the graphic styles. The text must be skillfully organized for easy reading, and the wording must be understandable and meaningful to the intended audience.

Graphics also have to be obtained, either illustrations or photographs. Professional artists can be hired to create needed illustrations, and photographers can be hired to shoot the desired photographs. Alternately, a person can take a photograph with a digital camera or with a regular camera, and afterward use a scanner to insert the image into the DTP software. Illustrations of many types can be created using illustration software, or commercially prepared clip art and clip photos can be purchased for use in business documents. As allowed by software-licensing agreements, graphic software can be used to manipulate or combine these graphics to produce the final desired graphic.

The graphics and text must then be assembled on the page, using page-layout software, so that all elements contribute to a pleasing and effective product. Principles of color, size, position, shape, pattern, and other contrast techniques must be applied so that documents will attract readers' attention. Documents should also be attractively balanced on the left and right sides of a page. *Symmetrical balance* means that the left and right sides of the page are visually similar. *Asymmetrical balance* means that the left and right sides are visually different. Asymmetrical balance is less formal and usually attracts readers' attention better; symmetrically balanced documents convey a message of formality and stability.

Elements of the document should be appropriately aligned with other parts of the document, rather than being randomly positioned. For example, a block of text and its related graphic could be aligned by the top, bottom, left, or right sides. Using a page *grid* (guidelines dividing a page into rectangular rows and columns) will help to achieve a good layout.

In addition to alignment, related items should be grouped and placed more closely together, while unrelated items should be separated. Extra white space or borders can be used to divide or frame elements.

After the document is designed and created, it can then be published. Publishing can include desktop printers, photocopy machines, or large commercial presses. If commercial printers are used, document designers should confer with the press personnel regarding special procedures and file formats required in creating the document. In addition to being published as paper documents, documents can also be electronically published on the Internet for viewing by a worldwide audience.

FEATURES

The features typically found in page-layout software include the following:

Alignment guidelines: places nonprinting alignment lines on the computer screen for easy alignment of graphics and text

Automatic threading: links various parts of related text segments throughout multipage publications, such as magazines, and connects them with appropriate text, such as "continued on page x" and "continued from page x"

Color separation printing: enables the printing of different printing plates required in color offset printing

Frames: creates rectangular or circular boxes to contain graphics or text

Graphic cropping: provides the ability to cut, or *crop*, unwanted portions of photographs

Grid lines: displays multiple borders on the screen for consistent positioning of text and graphics

Imposition: arranges long publications, like booklets, books, and magazines, for printing and subsequent folding into the proper page sequence

Independent text and graphic placement: enables the placement of text and graphic objects anywhere on the page without having nearby text and graphics affect them

Indexing: provides automatic generation of indexes and tables of contents

Layers: provides the ability to stack text or graphics on top of one another

Master pages: provides automatic layout, pagination, headers and footers, and graphic elements for multiple pages

Object grouping: enables various graphic and text objects to be combined so they can be moved as a single object

Page-size flexibility: gives the ability to create documents in a wide variety of page sizes

Printer's marks: prints crop marks and registration marks needed by commercial printers when running color jobs

Spacing: manipulates the amount of white space on a page, including leading, kerning, tracking, margins, indentations, and column and paragraph borders

Spell checking: provides automatic spell checking for text

Styles: automatically adds appropriate typographical and layout attributes to text and graphics

Text curving and rotation: enables text to be angled or curved

Typography: manipulates all aspects of type, such as typeface, height, width, color, and dropped capitals

MANAGEMENT GUIDELINES

Not every organization needs to have a fully equipped DTP system. The decision regarding what elements to purchase should be based on a realistic needs analysis. Several questions should be answered in making this decision, such as (1) what documents are being planned for the organization? (2) can existing word-processing software be used to create most of the documents the company needs? (3) does the organization have trained personnel to design and create professional documents? and (4) how much will an outside agency charge to produce the documents the firm is wants to publish?

After a careful needs and resource analysis, a firm might decide to develop in-house DTP design and software expertise. If such a decision is made, the firm can hire someone who is already trained in DTP, or the organization can send current employees to DTP seminars or enroll them in formal classes at a local college. Also, high-quality periodicals provide useful design guidelines as well as information on cutting-edge technology and product comparisons. In addition, helpful Web sites give useful learning tips, and numerous DTP books offer additional assistance in document design.

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William H. Baker

DIRECT MAIL ADVERTISING

(SEE: *Advertising*)

DISCOUNT STORES

A discount store is a departmentalized retail operation that sells at prices substantially lower than conventional retailers. To offset the lower prices, expenses are kept down by minimizing free customer services, maximizing the use of self-service, and using inexpensive fixtures, decorations, and displays. In addition, improvement of operational efficiency is continually sought to control costs. Modern discount stores typically sell a mix of hard goods (e.g., refrigerators, televisions) and soft goods (e.g., apparel) and other general merchandise.

Discount stores evolved from a series of retailing changes that began in the United States in the late nineteenth century. Following the Civil War, the development of mass-production processes and a mass-distribution system, along with population increases, paved the way for a new approach to retailing—mass merchandising. The first type of mass-merchandising operation was the department store. The second was the chain store, which included variety stores and "junior department stores." The third was the mail-order house. These patterns for mass merchandising remained relatively constant through the 1920s.

The Great Depression of the 1930s and the accompanying economic hardships set the stage for another retailing change and the beginning of discount operations. Grocery supermarkets, the fourth type of mass-merchandising operation, appeared in 1930. Supermarkets were comprehensive grocery stores that were designed for self-service and consumer accessibility. Their size and low-cost facilities enabled them to operate on low margins and sell below the competition. Their inventories were quickly expanded to include nonprescription drugs. Drugstores, in turn, added variety merchandise, and variety stores expanded their mix while keeping prices relatively low. The starting point for the fifth type of mass merchandising, discount stores, is often traced to the opening of a radio and appliance store by the Masters brothers in Manhattan in 1937.

Price competition among supermarket, drug, and variety chains in the 1930s also brought about legislative constraints in several states to protect small retailers. These resale-price-maintenance, or "fair-trade," laws provided that manufacturers could establish retail prices for products that carried their brand name, thus legally fixing prices. In 1937, these laws were strengthened by the Miller-Tydings federal legislation. Even though the laws were difficult to enforce, they would present a major challenge to discount merchandisers over the years to come.

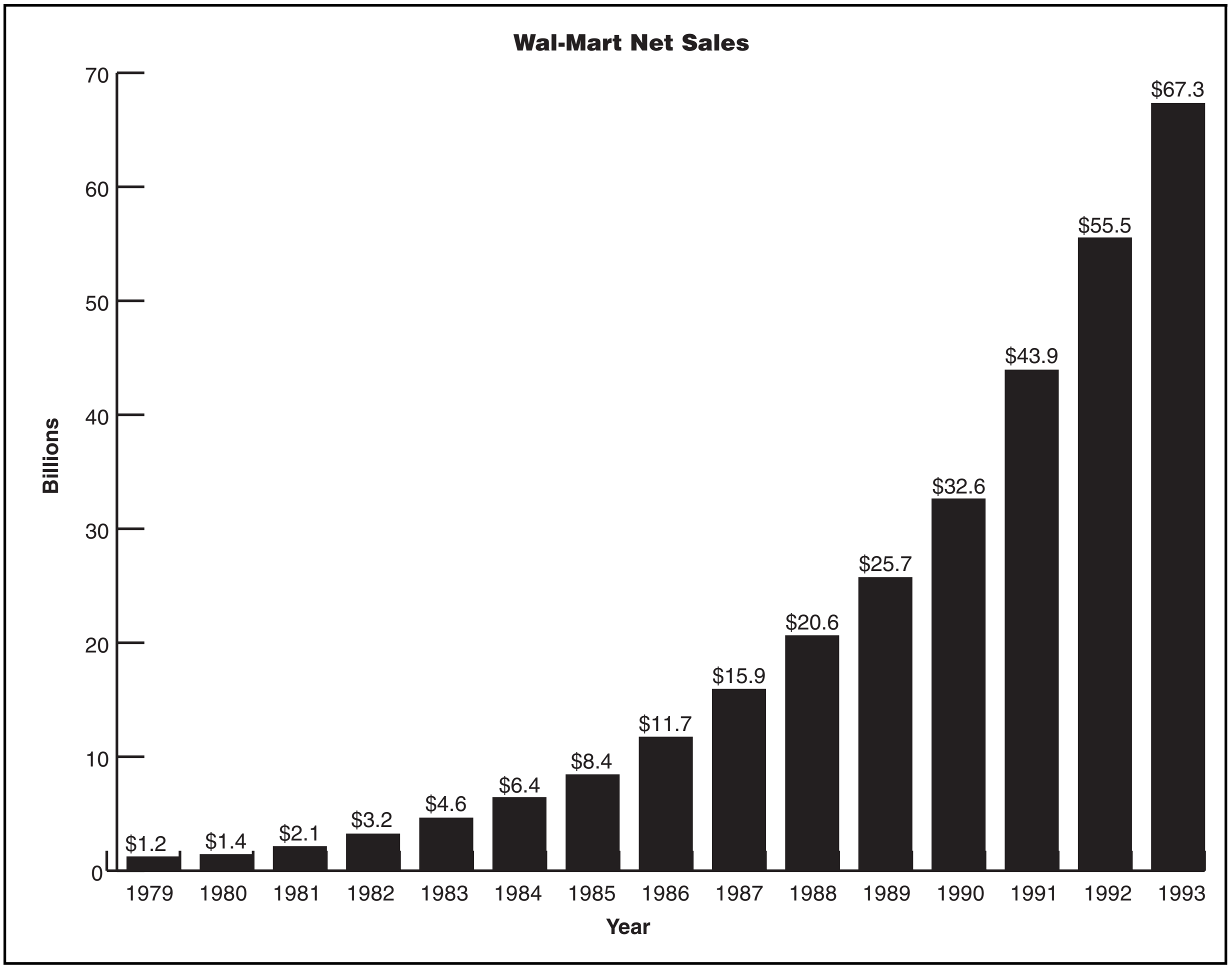

Figure 1

SOURCE: Stone, Kenneth E. (1995). *Competing with the Retail Giants: How to Survive in the New Retail Landscape.* New York: Wiley.

By the early 1940s, a significant number of retail operations called *discount houses* had been established in several major cities. These discounters carried nationally advertised hard goods such as cameras and appliances. They targeted specific groups, such as teachers and labor unions, and sold from catalogues or samples. They were able to offer goods at exceptionally low prices because they bought directly from manufacturers and kept expenses down through low inventories, low-cost facilities (often in office buildings), and no credit/no delivery policies.

After World War II, discount merchandising grew rapidly. This explosion in growth was fueled by consumer bargain-hunting in the face of rising prices, the pent-up demand for goods created by wartime shortages, and the establishment of homes and families by returning GIs. Discount stores sprang up across the country to satisfy the demand for consumer goods, including television sets and other new products. Many of these new discounters sold their merchandise out of other existing businesses or set up in low-cost facilities such as abandoned factories and lofts. Despite these often makeshift origins, the modern discount industry was beginning to take shape.

Sparked by increased consumer confidence in discount stores and increased availability of goods from manufacturers, discounting contin-

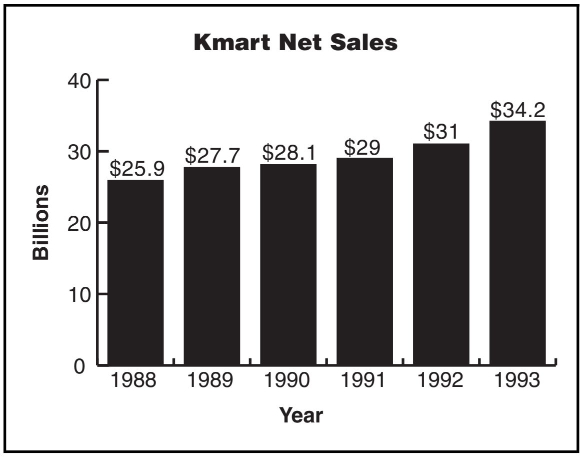

Figure 2

SOURCE: Stone, Kenneth E. (1995). *Competing with the Retail Giants: How to Survive in the New Retail Landscape.* New York: Wiley.

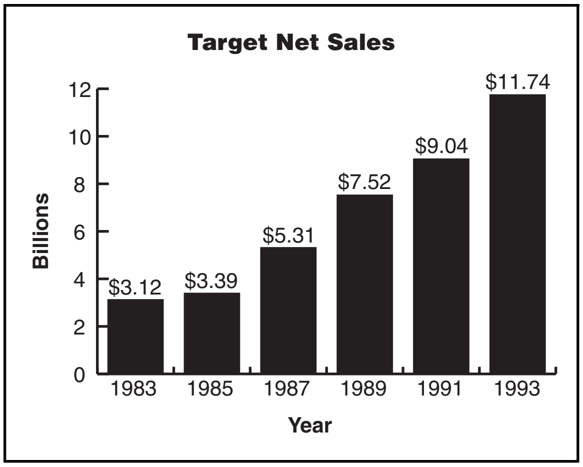

Figure 3

SOURCE: Stone, Kenneth E. (1995). *Competing with the Retail Giants: How to Survive in the New Retail Landscape.* New York: Wiley.

ued to grow rapidly during the 1950s and became an important part of the retail landscape. New chains were drawn to the field, and established chains opened new outlets. Variety stores, specialty retailers, traditional department stores, and supermarkets were looking into discounting and, in some cases, launching ventures.

The look of discount stores also began to change in the 1950s as leading discounters (e.g., Masters, Two Guys, Korvettes) took on a department store-like appearance by adding household goods, apparel, and other soft goods. ''Mill store'' discount operations further contributed to this change as they began to surface with their base of soft goods.

In addition to the national and regional chains that entered the industry in the 1950s, several others opened their doors in the early 1960s. Many of the new additions were inexperienced and underfinanced, but among the new entries were four that would become the giants of the industry—K-Mart, Woolco, Target, and Wal-Mart. All four began their operation in 1962.

K-Mart was formed by Kresge, one of the nation's leading chain stores, in response to competition from drugstores, supermarkets, and the new discount stores. Kresge's new venture was unique in two respects. First, the marketing plan was based on the idea of offering quality merchandise—predominantly national brands—at discounted prices. Second, the location strategy was to ''surround'' cities with their stores.

Woolco was organized by Woolworth, another longtime leader among variety stores. Faced with the same problem as Kresge, they also responded by shifting their efforts to discounting. Their strategy was built around carrying department store merchandise, auto parts and accessories, and soft goods, all at discount prices.

Target was a spin-off of the Dayton Corporation, a Minneapolis-based regional department store chain. It was conceived as a chain of regional upscale discount stores designed to attract affluent suburbanites. The product lines were higher quality and higher priced, with an emphasis on furniture and household appliances.

Wal-Mart was started from scratch by Sam Walton, the owner of a group of Ben Franklin variety stores in the south-central states. Walton's strategy was to establish stores only in small and medium-size towns so that he could capture a substantial part of the total local market. His key policy was to sell at ''everyday low prices,'' rather than hold periodic sales.

In addition to their marketing innovations, these four industry leaders played a major role in setting the pattern for other aspects of the industry. In particular, they established large facilities with standardized layouts in or near shopping centers. Their merchandise lines included both hard and soft goods. And, once they were established, they reduced the number of leased departments to a minimum.

Many discount businesses failed in 1962 and 1963 because of the fierce competition brought on by the proliferation of new discounters and the experimentation of other retailers in discounting in the early 1960s. Many were marginal operators that had expanded too quickly; others were well-established chains.

In spite of the failures, the industry continued to expand in the mid-1960s, both in terms of number of stores and amount of sales. The larger chains, especially, were expanding through acquisition of closing operations as well as opening new units. By 1966, discount stores were attracting approximately 60 percent of the nation's shoppers (1969).

By the late 1960s, Woolco had opened ninety-two stores (1968), Target had eleven (1968), and Wal-Mart had reached thirteen (1969). At this time, K-Mart had grown to more than 300 stores.

The 1970s were a decade of expansion for the successful chains. Woolco and K-Mart focused on national expansion, and by 1974 K-Mart had become the first truly national chain with stores in the forty-eight contiguous states. Wal-Mart expanded into the Southeast and Midwest. And Target established a strong presence in the Midwest. Some chains were forced into bankruptcy by the recessions of the 1970s, but their stores were bought up by the major chains and others. The decade also witnessed the end of federal "fair-trade" laws and the adoption of retailing technologies such as computerized cash registers, point-of-sale (POS) checkout scanning, and satellite communications.

Acquisitions and failures were still common at the beginning of the 1980s, reaching a high point in 1982. Most notably, Woolco closed during that year, while several others filed Chapter 11 bankruptcy and closed shortly thereafter. Other well-known chains folded in the years that followed. As in the previous decades, these failures provided the opportunity for quick expansion by survivors.

Two distinct trends were underway as the discount industry entered the 1990s. One was the bankruptcy of several remaining discounters. The other was the spectacular growth of the (now) three major players: Target, K-Mart, and Wal-Mart. Target sales more than doubled between 1987 and 1993. K-Mart sales grew by more than $8.3 billion during the period 1988-1993. Meanwhile, in 1991, Wal-Mart passed Sears to become the nation's largest retailer. Their combined sales had increased by more than $46.7 billion during the period 1988-1993. As a result of these trends, the industry fragmented into four segments: the three major chains and a group of regional operators.

Along with the departure of large numbers of discounters and the acquisition of others by stronger chains, new kinds of discounters have emerged. They include membership warehouses, specialty discounters, factory mall outlets, and specialty mail-order houses.

Based on the trends of the 1990s, continued growth and consolidation as well as new applications are safe predictions for discounting at the beginning of the twenty-first century. In addition, deep discounting promises to provide strong competition for others in the industry. And all indications are that e-commerce discount retailing will grow, rapidly changing the shape of discounting and impacting the current industry members.

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EARL C. MEYER
WINIFRED L. GREEN

DISPLAYS

(SEE: *Promotion*)

DISPOSABLE INCOME

(SEE: *Income*)

DISTRIBUTION

(SEE: *Channels of Distribution*)

DIVERSITY IN THE WORKPLACE

Diversity in the workplace is a reality for all employers. Managing that diversity is an idea whose time has come. Employers of all kinds are awakening to the fact that a diverse work force is not a burden, but a potential strength.

OUR CHANGING FACE

One of the reasons for this awakening is the increasing diverse marketplace. Today, when you call many airlines to make flight reservations, the automated attendant asks if you would feel more comfortable talking to a Spanish-speaking customer service representative. Who can best understand and serve this changing market? It takes a diverse work force at all levels.

Changing demographics is an urgent reason for the increased interest in managing diversity in the workplace. The growing numbers in the U.S. labor force and its customer base will be composed largely of women, minorities, and immigrants. This group will constitute about 85 percent of the new entrants into the work force, according to the landmark Hudson Institute Study. With more diversity come varied expectations of service as well as language barriers. Customer service training consultants are adding diversity to their curriculum because customers have varied backgrounds and expect customized service. Employers realize they must attract, retain, and promote a full spectrum of people to be successful. So great is their need that advice on management of diversity has become a growth industry.

Progressive employers have developed specialized programs to deal with the work-force diversity issue. Some of these programs, known as "valuing differences programs," are geared to the individual and interpersonal level. Their objective is to enhance interpersonal relationships among employees and to minimize blatant expressions of racism and sexism. Often these programs focus on the ways that men and women or people of different races or cultures have unique values, attitudes, behavior styles, and ways of thinking. These educational sessions can vary in length from one day to several days or they can occur on an ongoing basis. They usually concentrate on one or several of the following general objectives:

- Fostering awareness and acceptance of human differences
- Fostering a greater understanding of the nature and dynamics of individual differences
- Helping participants understand their own feelings and attitudes about people who are different from themselves
- Exploring how differences might be tapped as assets in the workplace

HARASSMENT

The Equal Employment Opportunity Commission (EEOC) is the federal agency responsible for enforcing antidiscrimination efforts. The EEOC has identified what constitutes unlawful harassment: It is verbal or physical conduct that denigrates or shows hostility or aversion toward an individual because of his or her race, color, reli-

CORPORATE DIVERSITY
BUILDING ONE AMERICA

President Bill Clinton speaks to corporate leaders about diversity.

gion, gender, national origin, age, or disability or that of his or her friends, relatives, or associates. It must also create a hostile work environment, interfere with work performance, and affect one's employment opportunities. Some states, cities, and employers have also included sexual orientation in their antidiscrimination policies.

Examples of harassment include epithets, slurs, negative stereotyping, or threatening acts toward an identified person or group. Other examples include written or graphic material placed on walls, bulletin boards, or elsewhere on the employer's premises that denigrates or shows hostility or aversion toward an individual or group. Included in this definition are acts that purport to be pranks but in reality are hostile or demeaning.

To be illegal, harassment must be sufficiently severe or pervasive to alter the conditions of employment and create an intimidating or abusive work environment. Although courts do not usually hold employers liable for violations based on isolated derogatory remarks in the workplace, many recognize that in the right context one slur can effectively destroy a working relationship and can create a hostile environment, particularly if the comment is made by a supervisor.

At the organizational level, employers must be sensitive to a wide array of both state and federal regulations that address all types of discrimination in employment. With today's diverse workplace, the goal is to increase the chances of equal opportunity for all workers and mutual respect in the workplace.

EMPLOYER RESPONSIBILITIES

Providing a workplace free from harassment is one of the basic responsibilities of an employer. Although sexual harassment has received most of the public attention, harassment can take many forms. As employers add staff from a variety of ethnic, religious, age, and cultural groups, maintaining a harmonious workplace is critical. Given our increasing litigious society, it is inevitable that court decisions related to other forms of harassment will increase.

Senior citizens, immigrants, and employees with disabilities are being employed in all levels of positions. They might suffer from a hostile environment because of their differences. To avoid future litigation, prudent managers need to create a hospitable environment.

A major challenge for all employers is to assimilate a variety of employees into the mainstream of corporate life. Women and minorities are sometimes excluded from social activities or left out of informal communications networks. The result appears to be a sense of isolation, lower organizational commitment, and ultimately a decision to seek employment in a more welcoming environment. For example, a woman feeling left out may think that two much emphasis is placed on getting along with others in senior management: "As a woman, I do not fit into the group of males who go to lunch together and play golf together. These are the guys who get the promotions."

As work-force diversity increases, exclusion and isolation may disappear. In the meantime, a few organizations are encouraging women's support groups, black caucuses, and other ways to help subgroups tie into social and communications networks. More importantly, organizations are becoming more sensitive to sponsoring social activities that will allow full participation by all employees.

DISCRIMINATION

Making prejudgments is part of human nature because we cannot anticipate every event freshly in its own right. Although prejudgments help give order to our daily living, our minds have a habit of assimilating as much as they can into categories, which can cause irrational judgments. A person acts with prejudice because of his or her personality, which has been formed by family, school, and community environments.

Prejudice has been defined as an attitude, not an act—an opinion based partly on observation and partly on ignorance, fear, and cultural patterns, none of which have a rational basis. A prejudiced person tends to think of all members of a group as being the same, giving little consideration to individual differences. This kind of thinking gives rise to stereotypes. Stereotypes, like prejudices, are based partly on observation and partly on ignorance and tradition. For example, a person who assumes that all women are overly emotional is subscribing to a widely held but false stereotype of women.

Stereotypes are difficult to overcome because they usually develop over long periods of time. Some stereotypes are shared by many people, giving them an illusion of rationality. However, many people today are trying to rid themselves of stereotyped thinking about others. This effort reflects a growing consciousness that people are individuals and can and should be treated as such.

The basis of prejudice toward a subgroup of society is often found in economic or psychological factors. Most free-market countries have a diversity of social groups. The social mobility concept postulates that as one subgroup moves up in economic terms, it is replaced by a less fortunate subgroup that is seeking a better way of life.

Since the mid-1800s, various ethnic groups have immigrated to the United States in waves. Tension between subgroups is often a result of economic competition for jobs, shelter, and social status. When physical differences, religious beliefs, ethical values, and traditions differ, subgroups can feel threatened and can sometimes take inappropriate actions.

Unfortunately, there is macroeconomic gain for employers in aiding and abetting discrimination in the workplace. Competition for jobs among workers can help employers lower wages and neglect working conditions. Employers often threaten striking workers with the prospect of being replaced, since there are usually members of minority groups who are willing to take jobs that pay lower wages because they previously had little or no chance of being hired at all.

As the United States becomes more involved in international markets, business managers are becoming aware that discrimination can make a disastrous impression on potential buyers and sellers. When we preach democracy but practice discrimination, our credibility is lost. Establishing oil trade with African countries, for example, becomes more complex when Africans see the U.S. establishment discriminating against African Americans.

RACIAL PREJUDICE

From its beginnings, the United States was divided by racial tensions. White settlers drove out Native Americans and, in the South, set up a system of labor based on slavery. Racism toward blacks and Native Americans is still with us today.

Minority groups come from subcultures that often have their own norms and values, which are not always understood by the majority group. For example, African Americans' social relations are sometimes characterized by an outlook they describe as ecosystem distrust. Ecosystem distrust subsumes such phenomena as lower interpersonal trust and suspicion of authority figures. When this type of outlook is brought into a traditional white, middle-class work environment, there can be misunderstandings and mistrust. Lack of awareness of these phenomena can easily lead to false assumptions by management about the worker. Due to cultural differences, many employers are conducting cross-cultural training for employees from both majority and minority groups.

GENDER ISSUES

Many women have felt discriminated against in the workplace. Advancement into management positions for women has been difficult. In the past decade, more and more woman have not only entered the work force but also have been promoted into management positions. Some would argue that men and women influence the workplace differently. Women exercise leadership through strong interpersonal skills, producing positive results. Male leadership can be more direct, impersonal, and focused on results. Because of the individual strengths of both men and women, a diverse leadership team incorporating different styles of leadership will do more to help employers succeed in today's marketplace.

Traditionally, women have been discriminated against in terms of pay. The wage gap continues to narrow, however. For various reasons, women's pay is gaining parity with men's. For example, many high-paying manufacturing jobs have disappeared, forcing many men into jobs in lower-paying service industries.

Organizations that continue to exclude some segments of the population from their work force risk sending the subtle message that some employees and perhaps some customers are less valued, less important, and less welcome. This will have a negative effect on the bottom line.

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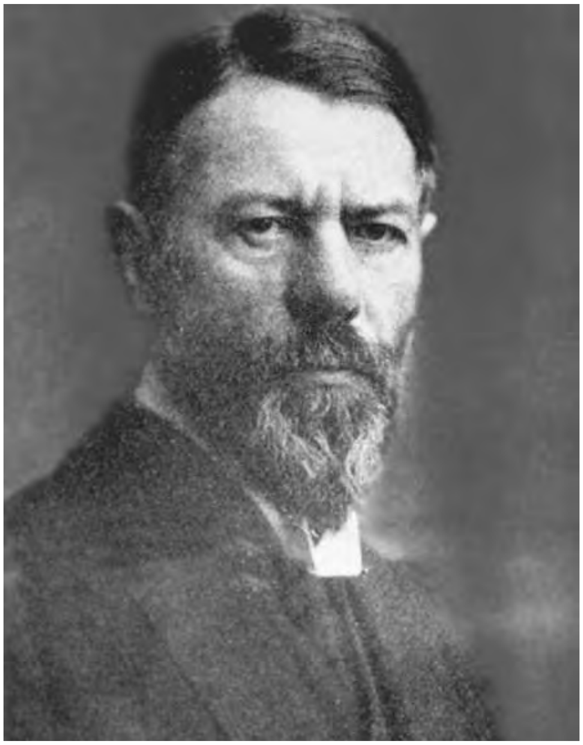
PATRICK J. HIGHLAND

DIVISION OF LABOR

In the early 1900s, Max Weber, one of the pioneers of modern sociology, designed a perfectly rational organizational form, called a bureaucracy. Among the characteristics of this "ideal" organization were specialization, division of labor, and a hierarchical organizational design.

Division of labor is a form of specialization in which the production of a product or service is divided into several separate tasks, each performed by one person. According to Weber's design, inherent within the specialization and division of labor is knowledge of the precise limit of each worker's "sphere of competence," and the authority to perform individual tasks without overlapping others.'



Sociology pioneer Max Weber.

Adam Smith, an early economist, suggested that productivity would rise significantly when the division of labor principle was used. Output per worker would be raised while costs per unit produced would be reduced. Division of labor was applied, for example, in manufacturing plants that incorporated mass production techniques. In organizations that used mass production, each worker specialized in completing one specialized task; the combined work of several specialized workers produced the final product. For example, in manufacturing an automobile, one worker would assemble the dashboard, another would assemble the wheels, and yet another would paint the exterior.

Since the time of Adam Smith, division of labor has been perceived as a central feature of economic progress. Two aspects of labor exist. First is the division of labor within firms; this concerns the range of tasks performed by workers within a particular firm. Second is the division of labor between firms; this concerns the range of products or services the firm produces.

CURRENT APPLICATION OF DIVISION OF LABOR

Fred Luthans (1998) describes the bureaucratic model proposed by Max Weber as an "historical starting point" for organizational analysis. Citing "complex, highly conflicting relationships, advanced information technology, and empowered employees," Luthans (p. 519) discusses the functional and dysfunctional consequences of specialization uncovered in several research studies. For example, although specialization has enhanced productivity and efficiency, it has also led to conflict between specialized units, hindering achievement of the overall goals of the organization. Further, specialization can impede communication among units, as highly specialized units tend to "withdraw into themselves and not fully communicate with other units above, below, or horizontal to it: (Luthans, p. 519). In addition, highly specialized jobs can lead to employee boredom and burnout.

Given these concerns, a significant change is under way in management of work in organizations. According to Richard Walton (1991), the work force can be managed in two ways, one based on control and the other based on commitment. Key factors that differ between the control and commitment approaches are job design principles, performance expectations, management organization (structure, systems, and style), compensation policies, employment assurances, employee input in policies, and labor-management relations (Walton, 1991).

The control-oriented approach is based on the classic bureaucratic principles of specialization and division of labor. In the control-oriented environment, worker commitment does not flourish. Division of labor can ultimately reduce productivity and increase costs to produce units. Several reasons are identified as causes for reduction in productivity. For example, productivity can suffer when workers become bored with the monstrous repetition of a task. Additionally, productivity can be affected when workers lose pride in their work because they are not producing an entire product they can identify as their own work. A breakdown in the mass production line can bring an entire production line to a standstill. And, with highly specialized jobs, worker training can be so narrowly focused that workers cannot move among alternate jobs easily. Consequently, productivity can suffer when one key worker is absent. Finally, discontent with control is increasing in today's work force, further hindering the long-term success of the classic bureaucratic application of specialization and division of labor.

In contrast to the control-oriented approach, the commitment-oriented approach proposes that employee commitment will lead to enhanced performance. Jobs are more broadly designed and job operations are upgraded to include more responsibility. Control and coordination depend on shared goals and expertise rather than on formal position. The control and commitment-oriented approaches are only one way to view the concepts of division of labor and specialization. These concepts influenced organizations in the late 1990s by a complex array of organizational dynamics.

In response to such complex organizational dynamics as intense competitive pressures, organizations were being restructured. Hierarchies were becoming flatter, meaning that fewer levels of management existed between the lowest level of worker and top management. In some organizations, web-like and network organizational structures were replacing traditional hierarchical organizations (Kerka, 1994). In these redesigned organizations, the shift was away from departments that focused on traditional organizational functions such as production, administration, finance, design, and marketing (Lindbeck and Snower, 1997).

In these redesigned organizations, the shift was away from highly-specialized jobs toward workers performing a multitude of tasks within relatively small autonomous customer-oriented teams. In these working groups, workers were given a broad task specification by management and within those loose constraints, the teams were allowed to organize, to allocate roles, to schedule tasks, and so forth (Bessant, 1991). With this design, traditional occupational barriers and clear-cut specialized job descriptions began evaporating as workers were empowered to define their own job tasks; this movement resulted in a decrease of the division of labor and specialization within firms.

As a consequence of these changes, during the 1990s, increased division of labor between firms was often accompanied by a reduction in the division of labor within firms. In other words, while firms were becoming more specialized in the products and services they offered, individual workers within firms were handling an increasing range and depth of job responsibilities. As mentioned earlier, this work was often completed in autonomous teams.

EFFECTS OF SIZE, COST, AND PERFORMANCE ON DIVISION OF LABOR

In some organizations, division of labor and the degree of specialization are being reduced, while in other organizations, division of labor and specialization are increasing. A number of factors can influence this discrepancy among organizations.

For example, the degree of specialization and division of labor can be related to the size of the organization; typically, small and mid-sized employers are not able to cost justify specialized division of labor. Lindbeck and Snower (1997) report that, as the costs of communication among workers declines, the degree of specialization, and consequently, division of labor within organizations, may rise. Some literature reports that, as the size of the market increases, it supports more division of labor. The degree of division of labor within firms can also depend on the degree to which performance on particular tasks is measurable, and the degree to which wages affect task performance. Implementation of technology can also have a profound influence on the division of labor in organizations.

EFFECTS OF TECHNOLOGY ON DIVISION OF LABOR

Computerization has enabled organizations to increase the variety of tasks performed by workers, consequently reducing specialization and division of labor. For example, information technology—flexible machine tools and programmable multipurpose equipment—can reduce the division of labor within firms as workers transfer their knowledge from task to task more easily. Information and manufacturing technology can also enable individual workers or work teams to combine different tasks more readily to meet a customer's needs while enhancing productivity. For example, customer information gained from production activities can be used to improve financial accounting practices, and employee information gained from training activities can be used to improve work practices.

Eric Alsene (1994) reported that increased integration of computer databases has the potential to profoundly alter task and functional assignments in organizations, consequently affecting division of labor and specialization. Originally, the purpose of integrating computers into organizations was to merge the various functions of labor. Computer integration was designed to restructure businesses around their core business processes, outsourcing some activities to specialized external organizations and strengthening partnerships with suppliers and subcontractors. In the new culture shaped by computer integration, every worker was to have a broader view of the organization. Workers were expected to work in teams with enhanced communication, participation, teamwork, and an enhanced sense of belonging and continuous learning. In this new organizational model enabled by technology, the classic bureaucratic mass production model in which workers performed functions separately and sequentially was eliminated.

The computer integration model was designed to ultimately lead to the dismantling of vertical and horizontal barriers while supervisory control concentrated increasingly on work methods rather than on final products (Child, 1987). In other words, the new design enabled organizations to focus on how products and services were delivered rather than on what products or services were delivered. This design facilitated continuous improvement in the organization. The new technologies assisted in blurring the boundaries among departments while information flowed freely throughout the organization, thereby disregarding the traditional bureaucratic hierarchy. As work groups and task forces were formed, units no longer worked in isolation.

The new model enabled by technology calls into question the traditional division of labor in organizations. For example, flexible manufacturing systems eliminate the barrier between maintenance and production. This increased automation supports the movement described earlier of work becoming more diversified, independent, intellectual, and collective.

SUMMARY

The classic principles of division of labor and specialization still exist; however, their application produces both functional and dysfunctional consequences in the increasingly complex organizations of the twenty-first century. A number of factors affect the modern application of division of labor. Along with other complex organizational and market dynamics, these factors include information technology, worker empowerment, human factors, communication systems, organizational size, competitive pressures, and organization structure.

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DONNA L. MCALISTER-KIZZIER

DOCUMENT PROCESSING

Document processing involves the equipment, software, and procedures for creating, formatting, editing, researching, retrieving, storing, and mailing documents. A document is any written, printed, or electronically prepared business communication that conveys information. The most common types of documents are those that comprise correspondence: letters, memos, reports, forms, statistical tables, and e-mail.

Document processing can be viewed as an integral part of information resource management (IRM), which includes the management of (1) a broad range of information resources, such as printed materials, electronic information, and microforms; (2) the various technologies and equipment that manipulate these resources; and (3) the people who generate, organize, and disseminate those resources. The overall purpose of IRM is to increase the usefulness of information to both internal users and external customers.

Information resource management is a philosophical and practical approach to managing information. Because information is a valuable resource to be managed like other resources, IRM contributes directly to accomplishing organizational goals and objectives. It provides an integrated approach to managing the entire life cycle of information—from creation, to dissemination, to archiving or destruction—so as to maximize the overall usefulness of information.

DOCUMENT ORIGINATION AND PREPARATION

The procedures for creating a document include formatting the layout of a document, inputting and editing it, and proofreading it.

SETTING FORMATS

In correspondence, formats are selected that are appropriate for the type of document (e.g., letter, memorandum, or report). Format settings include margins (left, right, top, and bottom of page), tab settings, page length, line spacing, header and footers, page numbering, type style (font typeface and size)

INPUTTING DOCUMENTS

Documents are most often keyed into a computer so that they can be stored, revised as needed, and updated and reused when appropriate. Sometimes voice-recognition software— which keys in words that appear on a computer monitor as one dictates material—is used.

EDITING DOCUMENTS

A document may be edited, or changed, several times before it is finished. Sometimes certain kinds of formatting are done after a document has been initially keyed in, including alignment (e.g., centering or justifying); and such formatting enhancements as bold face or italic type, underscoring, bulleted lists, and tables. Editing functions include copy and move, cut and paste, search and replace, insert and delete, merge, and save, among others.

PROOFREADING

After a document is keyed, checks are made for errors, such as keying errors, spelling errors, and grammatical errors. Many software packages have tools that check for spelling and grammar errors. These tools enhance, but do not replace, careful proofreading.

COMPOSITION OF BUSINESS CORRESPONDENCE

The essentials of effective communication are courtesy, clarity, completeness, and conciseness. Business correspondence includes memos, minutes of meanings, agendas, e-mail messages, and letters. Electronic technology has increased the use of written communications in the office, which often take the form of an interoffice memos or e-mail; employees of a large corporation may send hundreds of thousands of pieces of e-mail every month. Interoffice memos and e-mail can be in a more casual form than traditional letters.

Because many businesses have offices around the world, it is important to understand international business communications and to accommodate cultural differences. Customs, values, religion, decision-making processes, and manners, vary from country to country; international correspondence should reflect an understanding of these differences. International correspondence is often more formal than domestic correspondence.

Tone is an important part of a message because it reflects the attitude of the writer; a positive tone—which includes tact and courtesy—encourages a positive reaction from the reader. Letters should have a natural style, with short sentences and active verbs. Typical business communications include cover letters, reference letters, "good news" and "bad news" letters, reminders, acknowledgments, and letters of introduction. A variety of business reports, ranging from briefing reports to comprehensive research reports, are also typical business communications.

Business correspondence can also include forms, such as invoices, purchase requisitions, and purchase orders. Document processing also includes the creation, distribution, and use of such forms.

DESKTOP PUBLISHING

Desktop publishing is a method for using a computer, a laser printer, and various software programs to prepare and print documents ranging from a single page of text to flyers, advertisements, pamphlets, books, and magazines. Desktop publishing became possible for small businesses on a broad scale around 1985, with the introduction of the first relatively inexpensive laser printer able to produce "letter-quality" type and visuals when used with a personal computer.

A basic desktop publishing system, besides providing a variety of type fonts and sizes, can also create graphics as well as use art and photographs stored in sources inside the computer.

HISTORY OF DOCUMENT PROCESSING

Documents have been processed in business since the beginning of formal systems of writing. Prior to the invention of the typewriter, documents were handwritten, and the particular style of penmanship preferred by businesses was studied. The manual typewriter was introduced into businesses after its invention in the 1870s, followed by the electric typewriter. In the early 1960s, IBM introduced the Selectric typewriter, with a golf-ball type element that tilted and rotated to transfer characters onto paper. This innovation, by eliminating the movable carriage, allowed for faster document production. In 1964, IBM introduced the Magnetic Tape Selectric Typewriter (MT/ST). The magnetic tape stored keystrokes electronically, so that text could then be edited. The MT/ST is considered to be a "first-generation" automated document processor. Office equipment manufacturers then began to develop and market word-processing or document-processing hardware and software, which included the addition of a cathode-ray tube (CRT), to view text and provide additional flexibility in manipulation of the text copy and format prior to printing. The storage media was expanded to include not only magnetic tape and cards but also floppy disks, hard disks, and mainframe computers.

REPROGRAPHICS

Reprographics, which is the multiple reproduction of images, today involves the use of two primary types of equipment: copiers and duplicators. Copiers use an image-forming process similar to a camera to create copies directly from existing originals. Duplicators make copies from masters on specially prepared paper.

Copying, printing, and distributing information has been with us for thousands of years. For much of that time, it was a largely manual task performed by scribes. The first major success in automation was by Gutenberg's invention of movable type in the fifteenth century, a milestone in the history of printing, duplicating, and copying, methods. Reprographics can be traced through four basic historical periods: printing (letterpress; 1500 to present), duplicating (offset, spirit, and stencil; 1900 to present), copying (photochemical, thermofax, dye transfer, electrofax, xerography, and liquid toner transfer; 1940 to present), and electronic printing (intelligent copier/printers, ink jet, magnetography, thermography, and laser xerography; 1976 to present).

COMPUTERIZED RECORDS MANAGEMENT

The processing capabilities and storage capacity of computers have made electronic storage and retrieval of information a common practice in business. Computer-generated document management, records-management software, and imaging systems assist businesses with large volumes of records. Imaging systems convert all types of documents to digitized electronic data that can be easily stored and retrieved. These systems include scanners that convert paper documents to a digitized form, processors that compress the image, storage media that retain the image, retrieval mechanisms to convert the image for viewing on a monitor, and output devices that process the image into hard-copy format. Laser optical disks are well suited for high-volume record management because of their high capacity and durability.

Micrographics is the process of creating, using, and storing images and data in microform. The most common type of microform is microfilm. Images, reduced in size, are stored on reels, in cartridges, on cassettes, on aperture cards, on microfiche, and in jackets. Information stored in a computer can be converted to microfilm. Computer-output microfilm (COM) is imaged directly from magnetic media. The electrical impulses on the media are converted to visual images and stored on microfilm. Computer-input microfilm (CIM) can be converted to electrical impulses, stored on magnetic media, and used as input. CIM can be used to introduce information from a large microfilm file, such as census data, into a computer for processing. Computer-assisted retrieval (CAR) systems are used for high-speed microform indexing and retrieval.

For many businesses, however, manual records-management systems are still the norm. Businesses use one or more of the five basic filing methods—alphabetic, subject, numeric, geographic, and chronological—to store records in vertical and lateral files, open-shelf files, and rotary files. Good records-management practices include establishing complete archives, developing retention schedules, and using timelines for transferring records to permanent storage.

SEARCHING FOR INFORMATION ON THE INTERNET

The ease and availability of using the Internet to find information has added another dimension to document processing. A search engine is a software program that is used to find Web sites, Web pages, and Internet files. Examples include AltaVista, Excite, Yahoo!, HotBot, Lycos, and Infoseek. Single or multiple keywords can be entered into a search engine, which will search indices to return a list of hits, which can number from zero to more than a million. The hits are Web pages that contain information relevant to the search criteria. Users must beware that the quality of the sites may differ; some sites may be those of Fortune 500 companies, while others may be those of a 10-year-old child.

The Internet contains Web sites, composed of multiple related Web pages, connected by hyperlinks. A hyperlink, also called a link, is a built-in connection to another related Web page. These links allow information to be obtained in the order desired by the user, not necessarily in the linear fashion provided in books. Information found on the Web can be easily copied and pasted into other documents or used alone, with only minor editing.

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LINDA J. AUSTIN
DEBBIE HUGHES

DOUBLE-ENTRY ACCOUNTING

(SEE: *Accounting*)

DOW-JONES INDEX

(SEE: *Stock and Bond Issues*)

DURABLE GOODS

(SEE: *Goods and Services*; *Shopping*)

E

ECONOMIC ANALYSIS

Economic forces affect decisions made in personal business activities, as well as within business organizations, government entities, and nonprofit organizations. Changes in economic conditions affect and are affected by supply and demand, strength of buying power and the willingness to spend, and the intensity of competitive efforts. These changes propel fluctuations in the overall state of the economy and influence courses of action and the timeliness of actions. Nonprofit organizations, for example, may find that fund-raising efforts fueled by personal contributions are more successful during periods of economic prosperity. A first-time home buyer may be more inclined to purchase a house when interest rates are low and prices are likely to increase in future months. Since decision makers cannot control economic forces, a concerted effort should be made to monitor such forces. All business executives know that it is important to gain some idea of what general business conditions will be in the months or years ahead. Fortunately, certain economic indicators or indices enable decision makers to forecast oncoming changes in economic forces. Since both individuals and organizations operate in a dynamic economic environment, losing sight of what is going on can be disastrous for either.

THE BUSINESS CYCLE

Fluctuations in the economy tend to follow a general pattern that is commonly referred to as the business cycle. The business cycle, in the traditional view, consists of four stages—each of which may vary in terms of duration and intensity. The four stages are prosperity, recession, depression, and recovery.

Up-to-date charts, tabulations, and measures of relevant economic indicators are published by the Bureau of the Census in the monthly report, *Business Cycle Developments.* Economic indicators are predictors or gauges that signal cyclical movement of the economy within each stage of the business cycle or from one stage to another. A few examples of economic indicators include average workweek in manufacturing, new building permits for private housing, new orders for durable goods, and changes in consumer installment debt. While various government agencies collect and report monthly, quarterly, semi-annual, and annual measures of numerous economic indicators, economists representing various industries and other decision makers analyze and interpret the data.

Timing is everything when it comes to making good business cycle-sensitive decisions. Just as a truck driver starts braking before reaching an intersection with a flashing red light, decision makers need to make appropriate plans before the business cycle passes from one stage to the next. Prosperity, a period characterized by low unemployment and relatively high incomes, is followed by recession, a period during which unemployment rises and total buying power declines, leading to decreased spending by business firms and consumers. A production manager should make appropriate cutbacks prior to the onset of a recession. Failure to do so, in the face of decreasing sales, leads to bloated inventories and idle productive resources. On the other hand, when a period of recession (during which unemployment is extremely high and wages are very low), gives way to a period of recovery (characterized by increases in employment and income), a production manager should begin to plan for increased outputs. Just as the truck driver saw the red light and recognized it as a signal to start braking, decision makers must see changing economic conditions and make appropriate responses.

THE PROCESS OF CONDUCTING AN ECONOMIC ANALYSIS

Conducting an economic analysis requires the application of scientific methods to break down economic events into separate components that are easier to analyze. The remainder of this article discusses the steps included in this process.

Step 1—Identify Appropriate Economic Indicators The first step in the process of conducting an economic analysis is to identify appropriate economic indicators for specific economic forecasts or trends. While various indicators may be selected, they are usually classified as indicators that lead, lag, and/or are coincident with economic conditions. Measures of data derived from economic indicators yield valuable information for the identification of economic trends and the preparation of specific economic forecasts.

Step 2—Collect Economic Data Once the identification of indicators has been completed, the second step, which is the collection of economic data yielded by the indicators, can begin. Data collection is accomplished through observation and/or by reviewing measures of economic performance, such as unemployment rates, personal income and expenditures, interest rates, business inventories, gross product by industry, and numerous other economic indicators or indices. Such measures of economic performance may be found in secondary sources such as business, trade, government, and general-interest publications. The Bureau of Economic Analysis (BEA), contained in the U.S. Department of Commerce, provides economic information via news releases, publications, diskettes, CD-ROMs, and the Internet. The information may be accessed through the Bureau's Web site (http://www.bea.doc.gov), on recorded telephone messages, and in printed *Bureau of Economic Analysis Reports.* Such economic data are also available online through STAT-USA's Economic Bulletin Board.

Step 3—Prepare or Select an Economic Forecast Of course, simply gathering information about economic indicators is not enough. Decision makers must use the data to identify trends and project forecasts. Decision makers know that it is important to gain some idea of what economic conditions will be in months or years ahead. As a result, they either use the collected data to prepare their own forecasts or they use economic forecasts that have been prepared by experts who monitor economic activity. Regardless of its origin, the forecast itself is essential if the decision maker is to recognize opportunities and threats posed by the economic environment. Thus, using economic data to predict the future is the third step in the process.

Economic forecasting can be and often is a complicated process. While accurate, relevant data are the basis for predictions, forecasters must be careful not to gather so much data that sheer volume makes analyzing impossible. Forecasts may be classified as short term (with spans or distances to the target period of up to one or two years), intermediate (two to five years), and long term (relating to more persistent developments and distant occurrences). Because of the possibility of unforeseen events occurring over a long interval, short-term forecasts are usually more accurate than long-range ones. There are four principal techniques used to forecast:

- Judgmental forecasting is the oldest and still the most important method of forecasting the future. Judgmental forecasters often blend several forecasters' judgments together to produce a forecast. This may be a complicated process, since various "Delphic" methodologies are used to integrate inputs from people experienced in forecasting.
- Indicator forecasts are nearly as old as judgmental forecasts. This technique requires that economic indicators be used to estimate the behavior of related variables. The index of leading indicators published by the Commerce Department is the best-known overall measure, but decision makers can use many other indicators for their own purposes.
- Time-series techniques use trend projections of past economic activity to extend into the future. Projecting is done by plotting data for the past years on a chart and, from the latest data, extending a line into future time periods that follows the pattern of prior years.
- Structural models of the economy try to capture the interrelationships among many variables, using statistical analysis to estimate the historic patterns. Large models of the U.S. economy, used by major forecasting firms and the government, may have up to a thousand interlinked equations. Simple models used by individual organizations, however, can have as few as one equation.

These four methods are not mutually exclusive. Combinations of methodologies are perhaps more commonly used in formulating forecasts today.

Step 4—Interpret the Economic Data The fourth step requires decision makers to examine, assess, and interpret the economic data collected and the subsequent forecast generated from the economic data. Decision makers evaluate the data and forecast for accuracy, try to resolve inconsistencies in the information, and—if it is warranted—assign significance to the findings. By analyzing economic data and forecasts, decision makers should be able to recognize and identify potential opportunities and threats linked to economic changes and developments. As a result, they are better able to understand the influence that the economy is exerting and better prepared to make decisions and plan strategy. The process, however, should not be viewed in an oversimplified manner. Today's global economic links make economic forecasting and analysis especially complex.

Step 5—Monitor Intervening Forces Then, too, intervening forces can and do influence economic activity. Such forces can shift or alter economic performance and trends and must be anticipated by decision makers. Thus, anticipating and monitoring the government's manipulation of two powerful sets of economic instruments, fiscal policy and monetary policy, becomes the fifth step in the process. Fiscal policy is the government's combined spending and taxation program, while monetary policy represents actions by the Federal Reserve System that affect the supply and availability of money and credit. The two arms of policy can work to supplement each other when powerful stimulus or restraint is sought. Or they can work in beneficial or damaging opposition, when one or the other is driven off-course into excessive stimulation or excessive restraint. Observers can often anticipate the government's implementation of fiscal and/or monetary policies based on prevailing economic conditions. The outcomes of such implementations must be considered by analysts.

Step 6—Use the Economic Analysis for Decision Making Finally, decision makers use the results of an economic analysis for decision making. Astute decision makers recognize that economic forces are uncontrollable and that current strategies may need to be adjusted to cope with or overcome obstructing economic changes. They approach with caution opportunities and threats discovered as a result of economic scanning and analysis. They pursue a proactive approach, however, knowing that an economic analysis enables them to choose from alternative approaches how to employ scarce or uncommon resources and achieve objectives in the most efficient and cost effective manner.

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Ralph D. Wray

ECONOMIC CYCLES

Economic cycles, more commonly called business cycles, are the recurring expansion and contraction of the national economy. This is a phenomenon that is unique to a private or free-enterprise economic system, also called a capitalist economy. Other systems do experience some of the same characteristics of the free-enterprise economy; however, business/economic cycles in the capitalistic economy are the focus of attention in this discussion.

The individual who is most famous for research on the business/economic cycle is Wesley Mitchell. He defined the business cycle as follows:

> *Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises; a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic; in duration business cycles vary from more than one year to ten or twelve years; they are not divisible into shorter cycles of similar character with amplitudes approximately their own.* (Burns and Mitchell, 1946, p. 3)

This definition illustrates Mitchell's point that business/economic cycles occur in private-enterprise but not other systems. He also pointed out that business cycles are not unique to a single firm or industry; they affect an entire economy. Although all cycles follow the same basic pattern, they differ in many ways, such as longevity and severity. Mitchell also points out that an economic cycle can last from one to twelve years.

UNDERSTANDING THE BUSINESS CYCLE

Business/economic cycles go through increases and decreases while reaching peaks and troughs. To begin thinking about a cycle, think about a trough, or the low flat part of the cycle, which moves to a peak and then to a terminating trough. In order to determine and isolate a specific cycle, it is necessary to determine the dates of the initial trough and the terminal trough. Most cycles are measured from cycle to cycle regardless of length or magnitude.

Cycle Divisions Every business/economic cycle goes through divisions. The period from the initial trough to the peak is called *expansion.* The declining period of the cycle is called *contraction.* Within the expansion period there are two phases, which are called *recovery* and *prosperity.* After the cycle reaches its peak and contraction begins, the cycle goes through *crisis* and *depression.* Another term used for a mild depression is *recession.*

The business cycle is often further divided into nine stages. Stage I is centered at the time of the initial trough; Stage V is at the time of the peak; and Stage IX is centered at the terminal trough. Stages II through IV are equally divided into thirds across the expansion period, and Stages VI through VIII are equally divided into thirds across the contraction period. These divi-

WAREHOUSE Nº 5
E.F. KEATING C
PIPE VALVES, FITTING
Offices 452 WATER ST.
Phone ORCHARD 9700

Men waiting for job openings during the Great Depression of the 1930s.

sions are made so economists can more easily analyze date and time periods for the cycles.

Cycle Terminology There is considerable terminology that is related to business/economic cycles, terms such as *expansion*, *contraction*, *depression*, *recession*, and others. To better understand business cycles, it is important to understand the terminology.

Expansion: When the economy is growing and businesses in general are doing well, the period is known as expansion. There are several ways in which economic growth is measured. One way is gross domestic product (GDP), which is the total value of all goods and services that are produced in a country in a specific time period, such as a month, a quarter, or a year. If production is increasing, this is an indicator that the economy is growing.

Another measure of economic expansion is personal income. If workers have increasing income, the indications are that the economy is growing and workers can be paid more. Likewise, if unemployment rates are declining or remain low, this means that people who want to work are finding jobs and the economy is expanding. One fear is that the economy will expand too rapidly, leading to inflation.

Inflation: In simplest terms, inflation means that there is too much money in the economy and not enough goods and services to purchase. Inflation is a general rise in the prices of goods and services. In economics, this relates to supply and demand. If consumers have high demands for goods and services, but the supply of these goods and services doesn't increase to meet the demands, producers can raise prices and consumers will still be willing to purchase the goods and services at higher prices. There is considerable competition for limited resources. Inflation is measured using the Consumer Price Index (CPI). The CPI is a market basket of goods and services that consumers regularly buy. As the prices of these goods and services rise, so do the

Consumer Price Index and all prices in general. This explains why the shoes that cost $50 last year now cost $55.

Contraction: The economy will reach a point where expansion first slows and then stops. There might be a period of stagnation during which there is no growth or even a decline in economic activity. An economic decline, or contraction, typically follows this period. This is the result of business activity slowing, less money being spent, unemployment rising, and wages and salaries declining or remaining stable.

Recession: If there are two consecutive quarters of decline in economic activity as measured by a decrease in GDP, the economy is said to be in a recession. During a recession, prices fall, consumers don't buy as many products (especially high-priced items), and businesses begin to fail. A recession has severe consequences for the economy, highlighted by high unemployment and an overall drop in living standards. When the fear of a recession begins to surface, the federal government expends considerable effort to change the course of activities. Those activities will be discussed later.

Depression: A depression is a very severe recession. History books talk about the Great Depression of the 1930s in the United States, one of the most severe in the history of the U.S. and world economies. Depressions are characterized by extremely high unemployment, low wages, business failures due to little money to purchase goods and services, and appalling living standards.

Deflation: The opposite of inflation, deflation means that prices are going down. The CPI goes down because the prices of the goods and services that are used to measure it are in general decline. Deflation often follows inflation but normally is shorter in length and of a lesser magnitude.

Stagnation: Stability in growth is a goal of the private-enterprise system. This means that there aren't any drastic changes in prices and the economy is moving forward at an acceptable rate. However, stability can lead to stagnation, a time when there is too much complacency, which in turn leads to a decline in new-product development and marketing. If this occurs, consumers become dissatisfied with what is available and spending slows down, followed by a decline in the economy. For example, if consumers are spending at a steady rate and they are willing to pay reasonable prices for goods and services, manufacturers don't feel the need for innovation and growth in new areas. This causes stagnation, which leads to decline.

Stagflation: The term stagflation is sometimes used to describe a situation in which there is slow to zero growth in real output, high inflation exists, and unemployment is higher than normal. This situation usually begins with rising prices at times when production is declining. Because of declining production, unemployment also increases. All three of these factors combined cause stagflation—stagnation in production and employment together with increasing inflation.

HISTORICAL PERSPECTIVE

The economies of the United States and of the world generally have been through numerous economic cycles. This discussion will not be an extensive one, but rather an overview to show the effects and relationships of the economy and business cycles.

The First Cycle Following the end of The Revolutionary War in 1783, the U.S. economy experienced rapid development and growth. This was a period when the population was growing rapidly and there was expansion to the West. Even though the manufacturing and agricultural processes were primitive by today's standards, the country was full of new activities. There were new outlets for goods and services, and trade opportunities were enhanced. This new growth and expansion lasted until the beginning of the Civil War.

The Second Cycle Rapid growth in economic activity continued in the period between the beginning of the Civil War and the start of World War I. This was caused in part by the steady increase in population growth, with immigrants arriving in the United States virtually daily. During this time, manufacturing became more dominant and replaced agriculture as the primary industry. At the beginning of this period, about 30 percent of production in the United States was from agriculture; and at the end of the period, it had declined to about 20 percent.

This period wasn't without setbacks, however. In 1873 a major depression began that lasted until the middle of 1879. This depression resulted from a financial panic that caused banks to call for repayment of many of their loans. Very few banks failed, but in the wake of the panic many businesses were affected and did fail.

The Third Cycle The third cycle of economic activity began in 1914 and lasted through 1950. This period was one of major economic variations. Following World War I, demand for goods and services was high, so the economy flourished. Manufacturing continued to flourish and grow, and mechanization in agriculture increased the efficiency of production and reduced the demand for labor. People who were farm laborers became laborers in the manufacturing sector, especially after the introduction of the gasoline-powered tractor.

In 1929, signs of a troubled economy began to surface. The stock market was greatly affected because investors were borrowing large amounts of money to purchase stocks. In late October, the stock market crash had a profound effect on all business activity. Business activity continued to decline through 1932. This was the Great Depression—a worldwide depression. In 1933, a recovery began that lasted until 1937. There was again a decline in economic activity and a recession, which lasted until late in 1938.

The United States entered World War II in December 1941. Because of military operations, the demand for goods and services rose dramatically, employment levels increased, and consumers had more money to spend. The economy was on the mend but rising too rapidly, causing fears of inflation. These fears caused the government to set price ceilings on some products and to ration others. Following the war, the country converted from wartime to peacetime production, causing many industries to slow down; but the economy continued to grow.

The Fourth Cycle This period, which began with 1950, has been characterized by many economic cycles. The first twenty years of this period saw satisfactory economic growth. The Korean conflict and the Vietnam War greatly influenced the economy. There were some downturns in the economy, but they were minimal. These occurred in 1953, 1957, and 1960. During this period, unemployment was becoming a problem because the demand for unskilled labor was decreasing and the labor force was growing at a rate faster than the demand for employees.

In more recent years, the economy has grown and prospered. There has been a shift to a service economy, which has largely resulted from rapid changes in technology. In this last cycle, there have been recessions that have been relatively short but have caused hardships for some business sectors. There was a period of recession from 1973 to 1975, in 1980, and again in late 1981. Inflation was a severe problem in 1981, and recovery didn't start again until late in 1982. Then, in late 1987, the stock market crash caused problems for many businesses and investors. In addition to those events, there have been several smaller cycles.

CONCLUSION

This overview of business/economic cycles has provided some insight to the cause of changes in the U.S. economy, highlighting terminology that it is important to understand. The role of the U.S. government in controlling changes in economic activity could not be discussed for reasons of length.

(SEE: *Fiscal policy, Monetary policy*)

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Paula Luft

ECONOMIC DEVELOPMENT

Economic development, generally speaking, is a process of change that is focused on the betterment of the community, state, and/or nation. Defining economic development can be difficult. The first term in this phrase—"economic"—refers to an accepted paradigm for organizing the business and financial and even to some extent the governmental sectors of a nation. Economics is viewed as the foundation for building a prosperous society. However, it is the second term—"development"—over which there is considerable debate. People's perceptions of development vary. For some, development has the appearance of successful commercial enterprise; for others, the face of development is one of economic equality. Nevertheless, the concept of "economic development" has the attention of government, the business sector, and the citizenry. We pursue economic development as one of the goals of a successful country, state, or city. It captures the attention of the news media and impacts, as well as is impacted by, political objectives.

MEASUREMENT OF ECONOMIC DEVELOPMENT

Economic development in a community can take many forms. However, before we can discuss the process of economic development, we must first understand how economic development has been measured, particularly at the national level. It is within this framework that communities have pursued their goal of improving the local economic environment. In fact, standardized measures of economic development are being used throughout the world, not just in the United States.

Standardized measures of economic development are used to identify the status of one's country, state, or local community. We use these measures for a number of different purposes, including identifying trends and understanding patterns of economic development in communities that face different resource opportunities and constraints.

One of the most common methods of measuring economic growth is by calculating the gross national product of a country. Gross national product (GNP) is the value of goods and services produced *by* an economy's factors in a given period of time (e.g., the value of all goods and services produced by U.S. operations throughout the world in a given year). Gross domestic product (GDP), on the other hand, is the value of goods and services produced *in* an economy in a given period of time (e.g., the value of goods and services produced in the United States in a given year). When these measures are adjusted for inflation, we correct for any changes in the GNP or GDP that are due simply to increases in the price level in the economy. Real GDP, for example, is the value of goods and services produced in an economy adjusted for changes in the price level. This is particularly important when comparing across different economies because changes in price levels will not necessarily be uniform from one country to the next.

The general purpose of using measures such as real GNP or real GDP is to collect and analyze information related to a country's economic transactions. Real GNP or real GDP provides analysts with an indication of how quickly the business sector of the economy is growing in a country. It also serves as a guidepost for local communities as they address economic development issues at a local level.

Trends in national economic development reflect changes occurring at the state and local levels and can impact local economic develop-

Economic development in Portland, Oregon.

ment planning. For instance, if the real GD of a country has increased, then we conclude that the country has experienced economic growth and the economy has improved. This information sends a signal to local economies suggesting that the national economy is in the growth phase of the business cycle. Communities can use this information to identify their position relative to the current trend and to plan future economic development. If, however, real GNP has declined, then the economy is thought to have experienced an economic downturn and a community can use this information to anticipate the impact of future economic downturns.

TRENDS IN ECONOMIC DEVELOPMENT IN THE UNITED STATES

Positive trends in growth at the national level do not guarantee that individual communities are or will be successful in developing their local economies. The needs of local communities have changed as the patterns of growth at the local level have changed. Thus the rules of local economic development as they relate to attracting new business in order to promote economic growth also have changed. As communities compete with each other to attract new businesses and hence jobs to the local environment, they are discovering that the traditional methods of tax abatement and low-interest loans, coupled with job training, are not sufficient to guarantee a level of development that improves the economic base of the community. In fact, communities are looking for ways to ensure that they will get more from the investment than it will cost them in terms of tax abatements and infrastructure costs.

As firms increasingly engage in multilocation operations, communities are finding that, in addition to attracting new businesses, encouraging local firms to develop is a valuable economic development tool. The community's view of its resources has expanded beyond providing the traditional tax incentives to expand a community's economic resources to include factors such as a well-educated work force and adequate public services. Communities are now more likely to target the type of firm that is "right" for the community. The emphasis on locating manufacturing enterprises has diminished as communities look to "healthy" businesses that fit the changing needs of the work force and infrastructure. Explicit consideration of the impact of the new business on economic equity in the community is also becoming more important, and growth and equity are increasingly recognized as complementary rather than opposing goals.

Many of these changes can be summarized in the phrase "sustainable development." The case of sustainable development is appearing more and more frequently in discussions of community economic development. What is "sustainable development"? Sustainable development is a process of development that "ensures the needs of the present are met, without compromising the ability of future generations to meet their own needs." (World Commission on Environment and Development, 1987, p. 9) The vision of sustainable development is one of developing within the capacity of our resources an ability to replenish themselves; by analogy to the financial sector, it means living off of the interest as opposed to the capital of our investment.

In the sustainable development context, economic development is managed and controlled in a way that recognizes the dynamic nature of social, political, technological, and economic factors in a local community. Ultimately, the process of economic development is changed from one of identifying incentives for business growth to one of comprehensive planning to address social, economic, and environmental concerns. The themes of economic development also change. Traditional local economic development policies pursue increases in economic activity and thus in the income levels of local residents. A larger tax base and lower levels of unemployment are equated with business expansion. Sustainable development means that growth occurs alongside community goals of increased self-sufficiency and improved environmental quality. In fact, different forms of growth are encouraged. The sustainable development initiative is not opposed to growth but rather focuses its efforts on answering the question, "*How* do we grow?"

Successful economic development has been achieved in many communities pursing a sustainable development approach. Among the success stories is Kansas City, Missouri. This city faced one of the most urgent economic development problems of urban areas—urban sprawl. From 1960 to 1990, the population in the metropolitan area grew by less than one-third while the land area developed more than doubled. The city's population was moving to the suburbs while the inner city was slowly being abandoned. As a result, the jobs moved with the population, and the communities in the outer ring of the city used traditional economic development tools, such as tax incentives, to attract new business.

The central city attempted to compete by providing additional incentives. The burden, however, was clearly felt by taxpayers, as this increased over this period.

Recently, however, a Metropolitan Development Forum was formed to address the community development issues associated with urban sprawl. The forum has been successful in many areas: they have identified regional transportation needs, achieved agreement on the role of tax incentives in the region as a whole, created a metropolitan greenway, and created local initiatives for economic development planning.

One community that has achieved long-term success is Portland, Oregon. Portland has channeled the economic growth in the city such that employment in the formerly dying downtown area grew from 50,000 jobs in 1975 to 105,000 jobs in 1998. This strategy has been successful because they focused the development of business in areas that are close to developed transit systems, limited commuter parking, and controlled the expansion of growth into the rural areas.

Kansas City and Portland are only two of many examples of successful sustainable development initiatives across the country. As a community's needs change and as development is more broadly defined to include social as well as economic indicators of progress, sustainable development and planned growth initiatives will continue to take hold. There are many opportunities ahead for local economies to grow and prosper in ways that recognize the importance of improving the quality of life as well as the economy's overall productivity and income levels.

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ELLEN JEAN SZARLETA

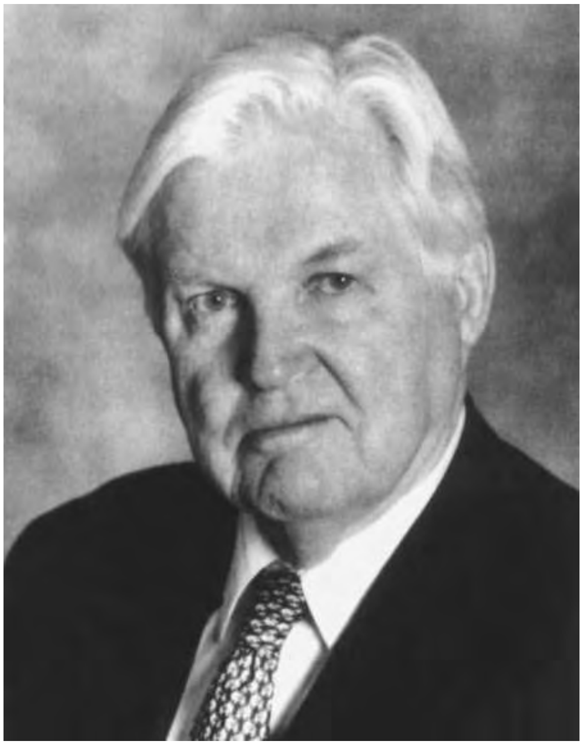
ECONOMICS

Economics is often described as a body of knowledge or study that discusses how a society tries to solve the human problems of unlimited wants and scarce resources. Because economics is associated with human behavior, the study of economics is classified as a social science. Because economics deals with human problems, it cannot be an exact science and one can easily find differing views and descriptions of economics. In this discussion, the focus is an overview of the elements that constitute the study of economics, that is, wants, needs, scarcity, resources, goods and services, economic choice, and the laws of supply and demand.

Every person is involved with making economic decisions every day of his or her life. This occurs when one decides whether to cook a meal at home or go to a restaurant to eat, or when one decides between purchasing a new luxury car or a low-priced pickup truck. People make economic decisions when they decide whether to rent or purchase housing or where they should attend college.

WANTS, NEEDS, AND SCARCITY

As a society, and in economic terms, people have unlimited wants; however, resources are scarce. Don't confuse wants and needs. Individuals often want what they don't need. In the automobile example used above, someone might want to drive a large luxury car, but a small pickup truck may be more suited to the purchaser's needs if he or she must have a vehicle for hauling furniture. Economic decisions must be made.



Robert Mundell, 1999 Nobel Economics winner.

A resource is scarce when there is not enough of it to satisfy human wants. And human wants are endless. Because of unlimited wants and limited resources to satisfy those wants, economic decisions must be made. This problem of scarcity (limited resources) must be addressed, which leads to economics and economic problems.

Figure 1 illustrates the relationships that exist relative to wants and scarcity. Many elements influence economic decisions. To better understand economics, it is critical to understand what is shown in this Figure.

RESOURCES

Economic resources, often called factors of production, are divided into four general categories. They are land, labor (sometimes referred to as human resources), capital, and entrepreneurship.

Land. *Land* describes the ground that might be used to build a structure such as a factory, school, home, or church, but it means much more than that. *Land* is also the term used for the resources that come from the land. Trees are produced by the land and are used for lumber, firewood, paper, and numerous other products, so they are referred to as land. Minerals that come from the ground, such as oil that is used to make gasoline or to lubricate automobile engines, or gold that is used to make jewelry, or wheat that is grown on the land and is used in the production of bread and other products, or sheep that are raised for the wool they produce that is used to make sweaters are all described as land.

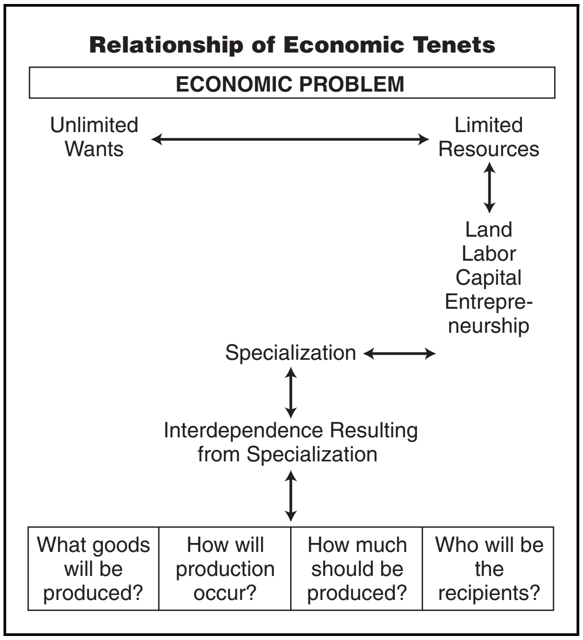

Relationship of Economic Tenets
ECONOMIC PROBLEM
Unlimited Wants
Limited Resources
Land
Labor
Capital
Entrepre-neurship
Specialization
Interdependence Resulting from Specialization
What goods will be produced?
How will production occur?
How much should be produced?
Who will be the recipients?

Figure 1

Labor (Human Resources). Labor is the general category of the human effort that is used for the production of goods and services. This includes physical labor, such as harvesting trees for lumber, drilling for oil or mining for gold, growing wheat for bread, or raising the sheep that produce wool for a sweater. In addition to physical labor, there is mental labor, which is necessary for such activities as planning the best ways to harvest trees and making decisions about which trees to harvest. Labor is also involved when a doctor or surgeon analyzes and diagnoses (mental labor) before performing a medical procedure, then performs the procedure (physical labor).

Capital. Capital is input that is often viewed in two ways, much as is labor. Capital might be viewed as human capital—the knowledge, skills, and attitudes that humans possess that allow them to produce. The other type of capital is physical capital, which includes buildings, machinery, tools, and other items that are used to produce goods and service. Traditionally, physical capital has been a prerequisite for human capital; however, because of rapid changes in technology, today human capital is less dependent on physical capital.

Entrepreneurship. One special form of human capital that is important in an economic setting is entrepreneurship (often thought of as the fourth factor of production). Entrepreneurial abilities are needed to improve what we have and to create new goods and services. An entrepreneur is one who brings together all the resources of land, labor, and capital that are needed to produce a better product or service. In the process of doing this, the entrepreneur is willing to assume the risk of success and failure.

Many people associate entrepreneurship with creating or owning a new business. That is one definition of entrepreneurship but not the only one. An entrepreneur might create a new market for something that already exists or push the use of a natural resource to new limits in order to maximize efficiency and minimize consumption. See ''entrepreneurship'' for a more general discussion as it relates to business ownership.

GOODS AND SERVICES

It takes land, labor, and capital that are used by an entrepreneur to produce goods and services that will ultimately be used to satisfy our wants. *Goods* are tangible, meaning they are something that can be seen or touched. The production of goods requires using limited resources to produce in order to satisfy wants. An example might be a farmer who grows grain. The farmer uses farm equipment manufactured from resources; ground is a natural resource that is used to grow the grain; and because the growth of grain depletes the nutrients in the soil, the farmer must use fertilizers to restore the nutrients. Limited resources are used to produce natural or chemical fertilizers, but they are necessary for crop production. Water might be used to irrigate the crop and enhance production. When the crop is ready for harvest, the farmer uses additional resources to complete the process—equipment, gasoline, labor, and so on—which results in a good that can be used or sold for use by others.

Services are provided in numerous ways and are an intangible activity. There is no doubt that one can often see someone providing a service, but the service is not something that someone can pick up and take home to use. An example of a service is a ride in a taxi through a crowded city. It takes resources for the owner or driver to provide the service, and a passenger is consciously aware of riding in a taxi. When the ride is completed and the provider has been paid, the passenger doesn't have anything tangible to hold except the receipt. However, resources have been used to provide the service. The automobile used as the cab, the fuel used to operate the cab, and the labor of the driver are all examples of resources being used to provide a service that will satisfy a want.

It is important to understand that because goods and services utilize resources that are limited, goods and services are also scarce. Scarcity results when the demand for a good or service is greater than its supply. Remember that society has unlimited wants but scarce resources. It is scarcity, then, that causes consumers to have to make choices. If individuals can't have everything they want, they must decide which of the goods and services are most important and which they can do without.

ECONOMIC CHOICE

Opportunity Cost. When one makes economic decisions, it is because of limited resources. Alternatives must be considered. People make such decisions based on expecting greater benefits from one alternative than another. There is an *opportunity cost* involved in the choice. Opportunity cost is the benefit forgone from the best alternative that is *not* selected: Individuals give up an opportunity to use or enjoy something in order to select something else.

Opportunity costs can't always be measured, because it might be satisfaction that is lost. At other times, however, opportunity cost can be measured. Here are examples of each. Perhaps a student is studying hard for a final examination in a difficult course because a good exam score is critical to achieve the desired grade. Friends call to invite the student out for the evening. The alternatives are to study or to have fun. Being wise, the student selects studying instead of going out. It is difficult to measure the opportunity cost of having fun with friends. In the second example, the same studying student is asked to help someone clean a garage. If the person offers to pay the student $50 to clean the garage and the student chooses to study, the opportunity cost is easily measured at $50. In both these examples, opportunity cost is directly related to what was given up, not any other benefits that might result from the decision.

Circumstances also play a role in opportunity cost. Sometimes people are forced into a decision because of circumstances and the results may not always be optimal. For example, if someone is planning to relocate to a new city to start a new job and wants to sell a house before the move in order to be able to purchase a new house in the new location, the person may sell the house for less than the market price in order to complete the process. The opportunity cost is the value of what was given up in order to be able to purchase a new home. Every time a choice is made, opportunity costs are assumed.

Production. Another economic choice that must be made is related to production. This is illustrated in Figure 1. All four of the decisions must be made: What goods will be produced? How will production occur? How much should be produced? Who will be the recipients? All are decisions that influence production efficiency.

Efficiency is the primary element in deciding what to produce and how to go about the production process. Efficiency is producing with the least amount of expense, effort, and waste, but not without cost. If you take something away from a person to satisfy another person, one will be less happy and the other will be more happy. If a way can be found to make one person more happy without making the other person less happy, this would be efficient.

An example of economic efficiency might be the following. Assume someone owns a car and a friend doesn't own a car but does drive. The friend needs transportation regularly for a week. It happens to be a time when the car owner will be away on a business trip and therefore won't be using the car. It makes no sense for the friend to buy a car to use for such a short period of time, so the owner loans the friend the car for that week. The car owner is no worse off and the friend is better off. Economic efficiency has occurred in this situation. If the car owner had not loaned the car to the friend, there would have been waste because the friend would have had to buy or rent a car. It is wasteful to fail to take advantage of opportunities in which there is no loss of satisfaction to either party.

Production efficiency is a situation in which it is not possible to produce any more units of a good without giving up the opportunity to produce another good unless a change occurs in available productive resources. If a farmer is growing wheat to be sold for the production of bread, there is a point at which adding additional fertilizer to the soil would do no good. If the fertilizer were used on an oat crop in a different field, production could be increased for that crop. The way to increase the wheat production is to find different resources to make the crop better, such as irrigating the land to provide more moisture.

In the above example, it was suggested that different or additional resources might be used to increase production. This is necessary only after efficiency has been achieved. Additional resources would have to come from land, labor, capital, or entrepreneurship. It is most common that capital will be used most often to increase production. Capital is productive input that is increased by people. This is known as investment. Investment involves giving up what might presently be consumed in favor of producing something to consume in the future. If the farmer wants to increase wheat production in the future, something will have to be given up now in order to increase the resources available for future production.

Increasing human capital is critical to increasing production. This does not mean that more people must be produced, but rather that the knowledge and skills of humans must be increased. This can happen because of improvements in technology and new ways of satisfying wants. This involves the entrepreneurial factor that was described previously—the human element that figures out ways to improve and expand the resources that already exist.

Product Distribution. Getting goods into the hands of those who want them involves many choices. The economic system must decide how to divide the products that are produced among the potential recipients. Sometimes products can be divided equally among recipients, but normally this is not the situation. It must then be determined how the division will take place. In a capitalistic economic system, distribution is often determined by wealth. If two people have the same wants, the person who can most afford something will be able to acquire it.

THE LAWS OF SUPPLY AND DEMAND

Production decisions are made based on demand for goods and services. Supply of goods and services is dependent upon demand for the same. Why do movies that are much more popular stay at theaters longer than those that aren't as popular? Demand for the movie causes the theater operators to supply the showings that the consumer wants. Why does the room rate in a convention hotel go down on weekends? There is less demand on weekends because most convention-goers leave on Friday or Saturday and others don't arrive until Monday, so the supply of available rooms goes up. Hotel operators try to create more demand for their vacant weekend rooms by lowering prices and offering attractive amenities.

The *law of demand* states that during a specific time period the quantity of a product that is demanded is inversely related to its price, as long as other things remain constant. The higher the price, the lower the demand; the lower the price, the higher the demand. Don't confuse demand with wants. Consumers have unlimited wants, as was established at the beginning of this discussion. Nor are demands and wants the same as needs. A consumer may need to have a crown put on a tooth but may not want to have it done because of the high cost. At some point, the suffering patient may demand the services be provided regardless of the price.

Often when prices are too high and demand for a product or service lessens, it is because consumers have found a suitable substitute. Substitution happens all the time as a result of economic decisions that are made by consumers. For example, if someone needs a winter coat and likes one with a designer name and a price that reflects that name, the purchase may not be made. Instead, the person finds a similar coat that does not have a designer label and purchases it instead at a much lower cost.

Demand for goods or services determines the amount that will be supplied. The *law of supply* states that the greater the demand, the more that will be supplied; the lower the demand, the less that will be supplied. The amount that will be supplied by a producer of the good or service is based on capacity and willingness to supply the product at a specific price. A producer will not supply goods and services just because there is demand for them—price for the good or service is an important consideration.

If consumers are willing to pay more for a good or service, the producer will likely be willing to shift more resources in order to increase the supply of the demanded product. If a rancher is raising prime beef cattle and there is high demand for this good and consumers are willing to pay more for high-quality beef, then the rancher might be willing to supply more even if it is necessary to shift resources or acquire additional resources to be able to do so.

Demands change, supplies change, and prices change. So how does a producer know how much is enough and what price to charge for the goods and services? Very simply, the demand for and supply of goods and services can be plotted on graphs using different prices. The supply and demand for a good or service intersect on the graph at what is called the equilibrium price, or the price where all of what is supplied will be demanded. If the price is below equilibrium, there will be a shortage of the good or service, and if the price is above equilibrium, there will be a surplus of the good or service. For a more detailed explanation on this aspect of economics, see the discussion of supply and demand.

SUMMARY

Economics is a complex topic that is studied constantly and thoroughly. This article has given an overview of some of the main tenets of economics; however, there is much that was not even introduced. There are other topics throughout this encyclopedia, such as macroeconomics and microeconomics, that will further define and expand the topic of economics.

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Roger L. Luft

ECONOMICS: A HISTORICAL PERSPECTIVE

Economics has been around since the beginning of time, but the study of economics dates back only a few hundred years. Since the beginning of human history, people have had to confront the problem of scarce resources and unlimited wants. The study of economics will continue until the end of time because each day uncovers new evidence that supports or revolutionizes economic theory.

THE DEVELOPMENT OF ECONOMIC SYSTEMS

The United States has a capitalistic economic system. Sometimes this system is called the free-enterprise system because that term is more acceptable to certain individuals. A capitalistic system includes a market society, or market system—a system of mercantilism in which participants react freely to the opportunities and challenges of the marketplace. This is in contrast to systems in which participants follow tradition or the commands of others. In a market system, anyone can buy land or sell it of his or her own free will or produce products and/or services that are sold at a market price. In earlier societies, participants responded not to the demands of the marketplace but to the demands of tradition or law as well as the threat and fear of punishment.

The factors of production, key to a capitalistic system, are the result of historical changes that made labor a key to creating wealth, made real estate out of land that had been in families for generations, and made capital out of possessions. Capitalism, a free-market system, was the cause of much unrest and insecurity, but it also gave birth to progress and, ultimately, fulfillment. There have been several key individuals whose work and economic writing help to clarify current thought about economic systems. The ideas of four are presented here.

ADAM SMITH (1723–1790)

Perhaps the best known and one of the most revered economists, Adam Smith wrote *The Wealth of Nations* in 1776, the same year the Declaration of Independence was signed. In this famous work, Smith explained how an independent society works. He answered several questions that people had at the time regarding the concepts of a free-market system.

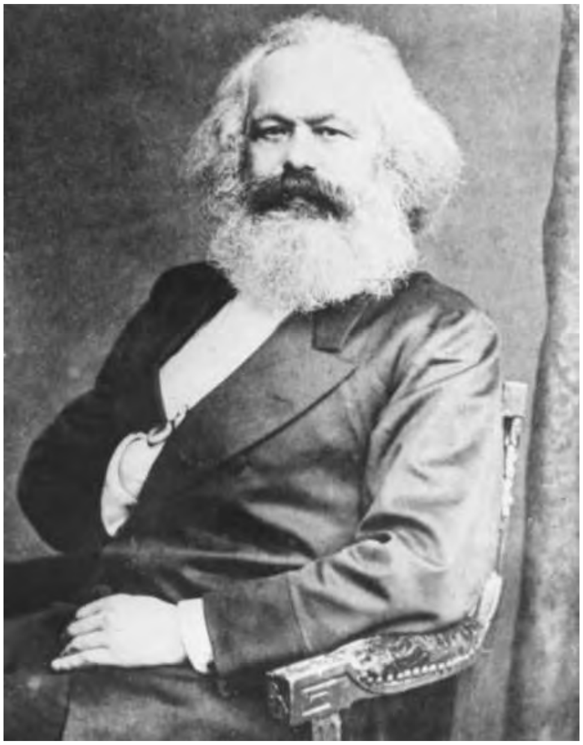
Of primary concern was the question of how those consumed with greed might be controlled so they wouldn't take over society. Smith introduced the concept of competition. Anyone bent on bettering only him- or herself with no regard for others will be confronted by others with the same goals. In this new system, those who are buying or selling are forced to meet the prices offered by competitors.

Smith also illustrated that a market system also has another important function. That function is to produce goods and services that society wants, and in quantities that society wants. A good example of this is when products such as hula-hoops, cabbage patch dolls, or beanie babies became the rage, there weren't enough being produced to satisfy all the potential buyers. As a result, the manufacturers had to increase production and were also able to increase prices because the demand for the products was so great and buyers were willing to pay higher prices. In fact, many buyers bought quantities they didn't need precisely so they could, in turn, sell the high-demand products to others who were willing to pay the higher price. That is the capitalistic market system.

Smith was extremely visionary and foresaw that if a free market is to grow and prosper, there must be little government intervention. He saw that a free market must be self-regulating in order to become wealthy and robust. He made it clear that it was truly individuals' greed and desire for profits that would create a working free-enterprise system that is self-regulating.

KARL MARX (1818–1883)

The mere mention of Karl Marx might be disturbing to some; however, his thoughts and writings on economics have stirred many to more intense economic analysis. His role in economic history is quite different from that of Adam Smith. Smith was the visionary regarding the orderly processes and growth of capitalism while Marx diagnosed its disorderliness and eventual demise. Marx believed that growth is fraught with crises and pitfalls.



Karl Marx stressed the instability of capitalism.

Marx was the first economic theorist to stress the instability of capitalism, maintaining that economic growth is wavering and uncertain. He pointed out that even though accumulation of wealth is primary in a free-market system, it may not always be possible. Marx believed that increasing instability would occur until the system collapsed.

Marx discussed how the size of businesses would continue to grow because of the inherent instability and demise of smaller, noncompetitive businesses. Failing businesses would be bought by successful ones; hence, the growth cycle would continue. He realized that a trend toward larger businesses is typical in a capitalistic system.

Marx also speculated that there would be a class struggle in a capitalistic society. He thought that as small businesses were forced out of the marketplace and acquired by larger businesses, the social structure would also evolve into two classes. He predicted that there would be one class of wealthy property owners and another class of propertyless workers. There are arguments for and against Marx's economic beliefs, but he has more critics than supporters in capitalistic countries.

JOHN MAYNARD KEYNES (1883–1946)

John Maynard Keynes was the father of a "mixed economy" in which the government plays a crucial role. Many believe that government should not have a role in a capitalistic system, viewing such a role with considerable distrust and suspicion. As a result, many find Keynes's theories to be as offensive as those of Marx.

One of the main tenets of Keynes's theory—in conflict with both Smith and Marx—is that economic problems in a capitalistic society are not self-correcting and that economies cannot keep growing indefinitely. He believed that if there is nothing to support capital growth, a depressed economy requires outside intervention or a substitute for business capital spending. Keynes believed that only government intervention could get a country out of a depression and the economy back on track.

ALFRED MARSHALL (1842–1924)

Alfred Marshall was a mathematician who applied his mathematical training to his explanation of economics. Marshall's economic theories, although very elaborate, have been viewed as eclectic and lacking in internal consistency. He was noted for taking a series of formal economic thoughts and analyses and linking them. He thought that his writings would present a detailed picture of economic reality.

His complex thoughts are much too detailed to go into here, but he did develop theories of value and distribution that combine marginal utility with real cost. The forces behind both supply and demand determine value. Behind demand is marginal utility, which is reflected in the prices at which given quantities will be demanded by buyers. Marshall stated that behind supply is marginal effort and sacrifice, reflected in the prices at which given quantities will be produced.

J. Maynard Keynes, father of the "mixed economy."

SUMMARY

There are, of course, many other noted economists who have influenced the study of economics. Many contemporary economic theorists have used the writings of the early economists to further develop economic thought. Economics is a continually evolving study, and its history will be constantly changing.

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Roger L. Luft

ECONOMIC SYSTEMS

The fundamental economic problem in any society is to provide a set of rules for allocating resources and/or consumption among individuals who can't satisfy their wants, given limited resources. The rules that each economic system provides function within a framework of formal institutions (e.g., laws) and informal institutions (e.g., customs).

In every nation, no matter what the form of government, what the type of economic system, who controls the government, or how rich or poor the country is, three basic economic questions must be answered. They are:

> *What and how much will be produced?* Literally, billions of different outputs could be produced with society's scarce resources. Some mechanism must exist that differentiates between products to be produced and others that remain as either unexploited inventions or as individuals' unfulfilled desires.
>
> *How will it be produced?* There are many ways to produce a desired item. It may be possible to use more labor and less capital, or vice versa. It may be possible to use more unskilled labor to substitute for fewer units of skilled labor. Choices must be made about the particular input mix, the way the inputs should be organized, how they are brought together, and where the production is to take place.
>
> *For whom will it be produced?* Once a commodity is produced, some mechanism must exist that distributes finished products to the ultimate consumers of the product. The mechanism of distribution for these commodities differs by economic system.

MARKET VS. COMMAND SYSTEMS

One way to define economic systems is to classify them according to whether they are market systems or command systems. In a *market system*, individuals own the factors of production and individually decide how to use them. The cumulative decisions of these individuals are reflected in constantly changing prices, which result from the supply and demand for different commodities and, in turn, impact that supply and demand. The prices of those commodities are signals to everyone within the system indicating relative scarcity and abundance. Indeed, it is the signaling aspect of the price system that provides the information to buyers and sellers about what should be bought and what should be produced.

In a market system the interaction of supply and demand for each good determines *what and how much to produce*. For example, if the highest price that consumers are willing to pay is less than the lowest cost at which a good can be produced, output will be zero. That doesn't mean that the market system has failed. It merely implies that the demand is not high enough in relation to supply to create a market; however, it might be someday.

In a market economy the efficient use of scarce inputs determines *how output will be produced*. Specifically, in a market system, the least-cost production method will have to be used. If any other method was used, firms would be sacrificing potential profit. Any firm that fails to employ the least-cost technique will find that other firms can undercut its price. That is, other firms can choose the least-cost or any lower-cost production method and be able to offer the product at a lower price, while still making a profit. This lower price will induce consumers to shift purchases from the higher-priced firm to the lower-priced firm, and inefficient firms will be forced out of business.

In a market system, individuals make the choice about what is purchased; however, ability to pay, as well as the consumer's willingness to purchase the good or service, determine that choice. *Who gets what* is determined by the distribution of money income. In a market system, a consumer's ability to pay for consumer products is based on the consumer's money income. Money income in turn depends on the quantities, qualities, and types of the various human and non-human resources that the individual owns and supplies to the marketplace. It also depends on the prices, or payments, for those resources. When you are selling your human resources as labor services, your money income is based on the wages you can earn in the labor market. If you own non-human resources—capital and land, for example—the level of interest and rents that you are paid for your resources will influence the size of your money income, and thus your ability to buy consumer products.

Critics commonly argue that in a market system the rich, who begin with a disproportionately large share of resources, tend to become richer while the poor, who begin with a disproportionately small share of resources, tend to become poorer. They further argue that a government, which is designed to protect private-property rights, will tend to be exploited by those in power, which tends to be the economically wealthy. These critics argue that a market economy leads to selfish behavior rather than socially desirable outcomes.

In contrast, a *command system* is one in which decision making is centralized. In a command system, the government controls the factors of production and makes all decisions about their use and about the consumption of output. The central planning unit takes the inputs of the economy and directs them into outputs in a socially desirable manner. This requires a careful balancing between output goals and available resources.

In a command system the central planners determine *what and how much* will be produced by first forecasting an optimal level of consumption for a future period and then specifically allocating resources projected to be sufficient to support that level of production. The "optimal" level of production in a command economy is determined by the central planners and is consistent with government objectives rather than being a function of consumer desires.

As a part of the resource allocation process, the central planners also determine *how production will take place.* This process could focus on low-cost production or high quality production or full-employment of relatively inefficient resources or any number of other governmental objectives.

Finally, the command system will determine for *whom the product is produced.* Again, the focus is on socially-desirable objectives. The product can be allocated based on class, on a queuing process, on a reward system for outstanding or loyal performance, or on any other socially-desirable basis for the economy.

Critics commonly argue that because planned economies cannot effectively process as much relevant information as a market does, command economic systems cannot coordinate economic activity or satisfy consumer demand as well as market forces do. For example, consider an economic planning board of twenty people, that must decide how many coats, apartment buildings, cars, trains, museums, jets, grocery stores, and so forth should be built in the next five years. Where should these planners begin? How would they forecast the future need for each of these? Critics argue that, at best, planners would make a guess about what goods and services would be needed. If they guess wrong, resources would be misallocated and too much or too little production would take place. These critics argue that private individuals, guided by rising and falling prices and by the desire to earn profits, are better at satisfying consumer demand.

CAPITALISM

Under a capitalist economic system, individuals own all resources, both human and non-human. Governments intervene only minimally in the operation of markets, primarily to protect the private-property rights of individuals. Free markets in which suppliers and demanders can enter and exit the market at their own discretion are fundamental to the capitalist economic system. The concept of laissez-faire, that is, leaving the coordination of individuals' wants to be controlled by the market, is also a tenet of capitalism.

What and how much will be produced? How will it be produced? For whom will it be produced? In a capitalist system, individuals own resources, either through inheritance or through industry. The individual receives compensation for the use of resources by others. This, combined with inherited wealth of the person, determines an individual's spending power. The accumulated spending power and the willingness of individuals to allocate resources to consumption determine demand. The availability and costs of resources, together with the potential for profits of firms, determine supply. In a market system the demand of consumers combined with the supply of producers determine what and how much will be produced.

Because of the economic competitiveness of the market system, the lowest-cost production method will be used. If anything other than the lowest-cost production method was being used, a competing firm would have an incentive to enter production to earn a greater profit and could afford to sell at a lower price, thus driving the original firm out of production. Consumers could then purchase more of the product at a lower price, allowing their limited resources to purchase more.

Production will be allocated to those with available resources and a willingness to purchase the output of production. These purchases then become information for suppliers in determining what and how much to produce in the future.

Thus, pure capitalism is an economic system based upon private property and the market in which—in principle—individuals decide how, what, and for whom to produce. Under capitalism, individuals are encouraged to follow their own self-interests, while the market forces of supply and demand are relied upon to coordinate economic activity. Distribution to each individual is according to his or her ability, effort, and inherited property. Typically the economies of Canada, the United States, and Western Europe are considered to be capitalist.

SOCIALISM

Under a socialist economic system, individuals own their own human capital and the government owns most other, non-human resources—that is, most of the major factors of production are owned by the state. Land, factories, and major machinery are publicly owned.

What and how much will be produced? How will it be produced? For whom will it be produced? A socialist system is a form of command economy in which prices and production are set by the state. Movement of resources, including the movement of labor, is strictly controlled. Resources can only move at the direction of the centralized planning authority. Economic decisions about *what and how much*, *how*, and *for whom* are all made by the state through its central planning agencies.

In theory, socialism is an economic system based upon the individual's good will toward others, rather than a function of his or her own self-interest. Socialism attempts to influence individuals to take other people's needs into account and to adjust their own needs in accordance with what's available. In socialist economies, individuals are urged to consider the well-being of others; if individuals don't behave in a socially desirable manner, the government will intervene. In practice, socialism has become an economic system based on government ownership of the means of production, with economic activity governed by central planning. The economies of Sweden and France are examples of a socialist economic system.

COMMUNISM

Under a communist economic system, all resources, both human and non-human, are owned by the state. The government takes on a central planning role directing both production and consumption in a socially desirable manner.

What and how much will be produced? How will it be produced? For whom will it be produced? Central planners forecast a socially beneficial future and determine the production needed to obtain that outcome. The central planners make all decisions, guided by what they believe to be good for the country. The central planners also allocate the production to consumers based on their assessment of the individual's need. Basic human needs and wants would be met according to the Marxist principle, "From each according to his ability to produce, to each according to his need."

The economies of China, the former Soviet Union, and the former East Germany are examples of communist economies.

MIXED ECONOMIC SYSTEMS

In practice, most economies blend some elements of both market and command economies in answering the three fundamental economic questions: *What and how much will be produced? How will it be produced? For whom will it be produced?* Furthermore, within any economy, the degree of the mix will vary.

The economy of the United States is generally considered to be a free market or capitalist economic system. However, even in the United States the government has determined a "minimum wage," has set rules and regulations for environmental protection, has provided price supports for agricultural products, restricts the imports of items that might compete with local production, restricts the exports of sensitive output, provides for public goods such as a park system, and provides health and retirement services through Medicaid and Medicare. All of these detract from the essential nature of a capitalist economy. However, most decisions continue to be left to free markets, leaving the United States as a mixed economy that leans heavily toward the capitalist economic system.

In contrast, the economy of the former Soviet Union is generally considered to be communist. However, the strict controls of the central planning unit of the country tended to be more intensely focused on heavy industry, including the defense and aerospace industries, than on agricultural industries. Farmers often had significant freedom to produce and sell (or barter) what they wished.

SUMMARY

Countries have scarce resources. The economic systems of countries are designed to allocate those resources, through a production system, to provide output for their citizens. The fundamental questions that these systems answer are:

- *What and how much will be produced?*
- *How will it be produced?*
- *For whom will it be produced?*

Market economies leave the answers to these questions to the determination of the forces of supply and demand while command economies use a central planning agency to direct the activities of the economy. Pure capitalist economies are market economies in which the role of government is to ensure that the ownership of the resources used in production are privately held. Socialist economies are primarily command economies where most non-human resources are owned by the state but human capital is owned by the individual. Communist economies are also command economies but all resources, both human and non-human, are owned by the state.

In practice, all economies are actually mixed economies, incorporating some facets of both market and command economies. The relative importance of the particular economic system in the country is the determinant of the type of economic system that it is generally considered to be.

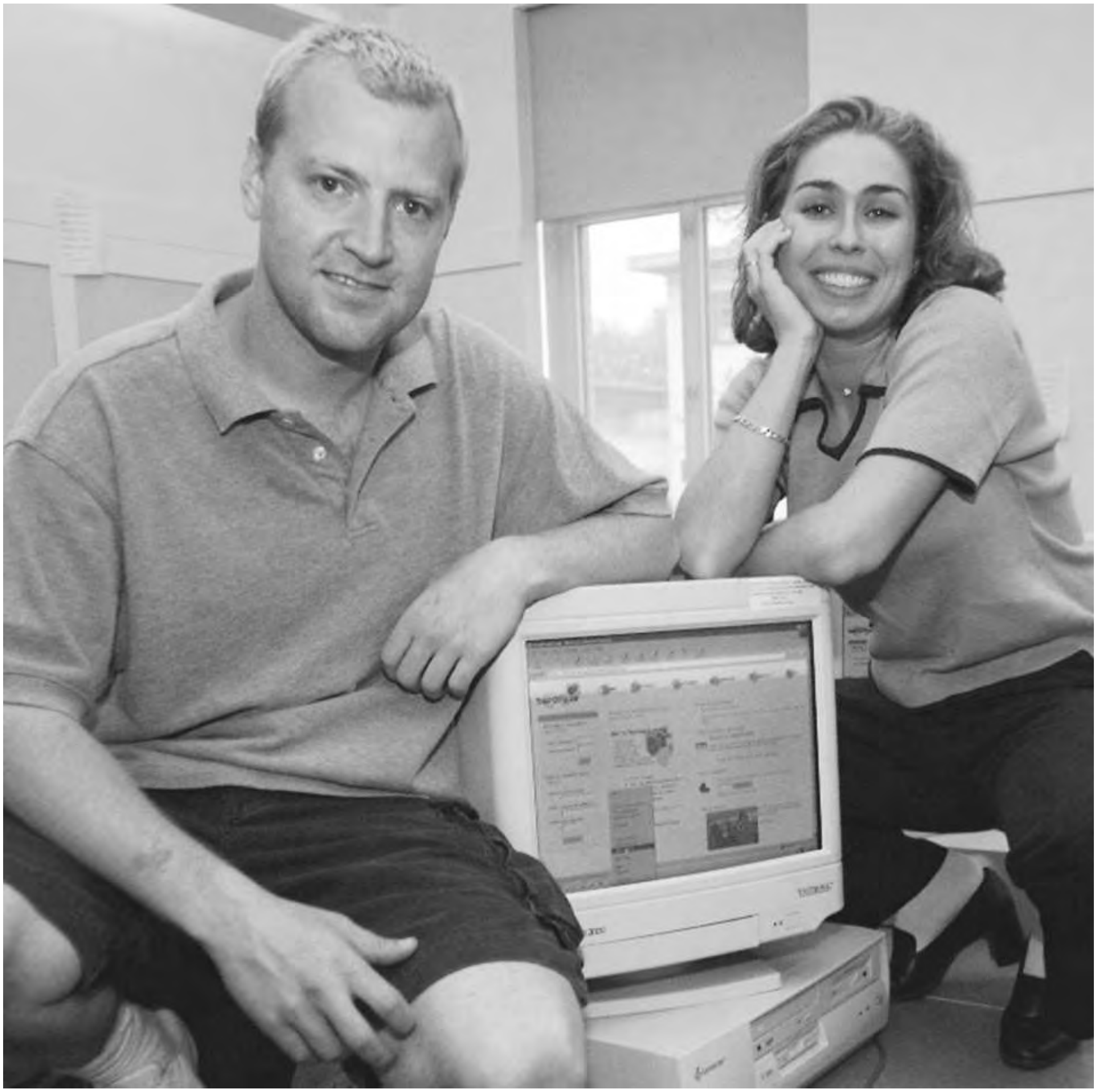
DENISE WOODBURY

EDUCATION

(SEE: *Corporate Education*; *Training and Development*)

ELECTRONIC COMMERCE

"No single force embodies our electronic transformation more than the evolving medium known as the Internet. Internet technology is having a profound effect on the global trade in services," according to a White House paper in



These Carnegie Mellon University students were among the first to graduate with a Master of Science in Electronic Commerce.

1997. Electronic commerce is estimated to have been in the range of $63 billion in 1999 and is expected to soar to $1,444 trillion by 2003 (Forrester Research, 1999). *Electronic commerce* is a broad term describing business activities with associated technical data that are conducted electronically. It is an entire set of different, digitally enabled activities that are progressively replacing the more traditional brick-and-mortar commercial functions. While the wider phenomenon of ‘‘electronization of economic activities’’ encompasses the digitalization of all processes of economic wealth generation—including economic analysis, production, storage, information provi-

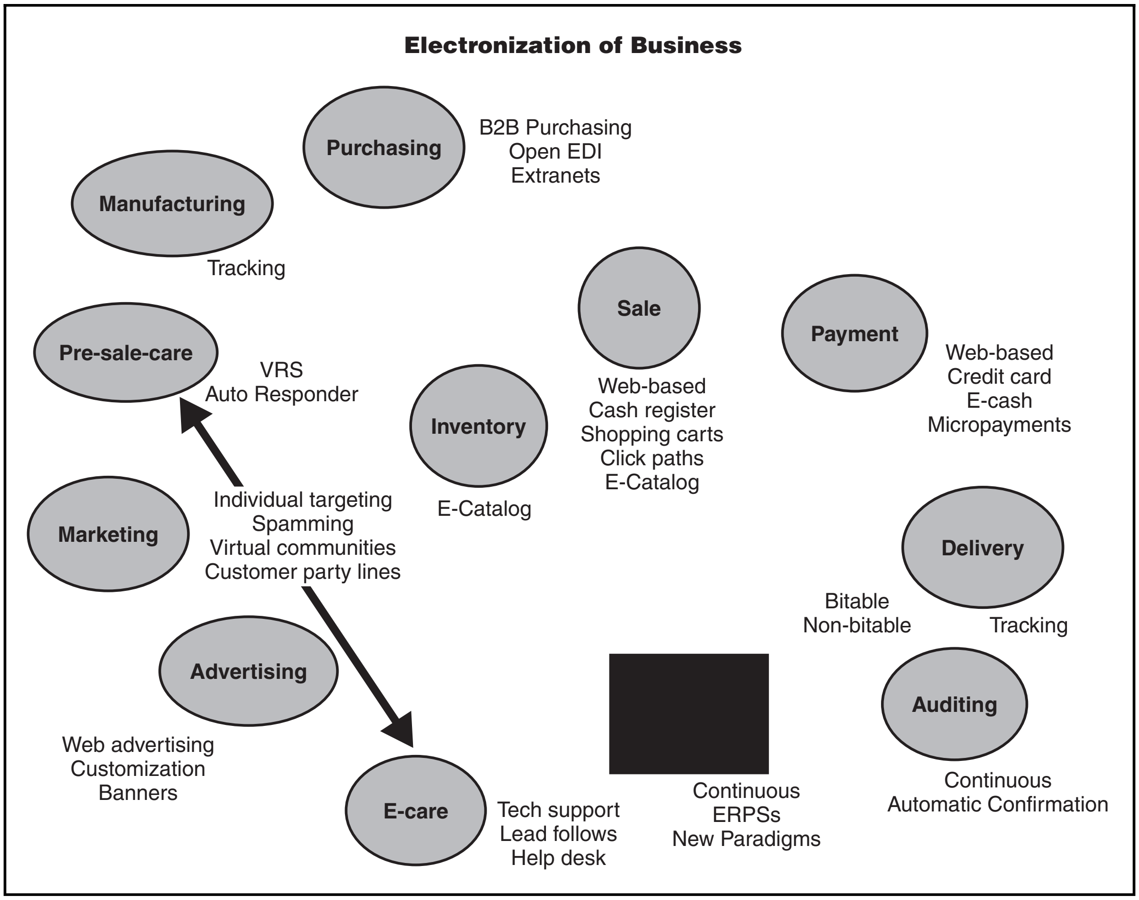

Electronization of Business
Purchasing
B2B Purchasing
Open EDI
Extranets
Manufacturing
Tracking
Sale
Payment
Pre-sale-care
VRS
Auto Responder
Web-based
Credit card
E-cash
Micropayments
Inventory
Web-based
Cash register
Shopping carts
Click paths
E-Catalog
Marketing
Individual targeting
Spamming
Virtual communities
Customer party lines
E-Catalog
Delivery
Bitable
Non-bitable
Tracking
Advertising
Auditing
Web advertising
Customization
Banners
E-care
Tech support
Lead follows
Help desk
Continuous
ERPSs
New Paradigms
Continuous
Automatic Confirmation

Figure 1

sioning, marketing, and so on—it is the area of sales and related processes facilitated by electronic media that have been popularly termed "electronic commerce." Consequently within the more general phenomenon of digitalization of modern life, we find its most important component electronic commerce.

NEW WAYS OF DOING BUSINESS

Corporate, not-for-profit, and governmental systems are incorporating many increasingly digitalized processes that are leading to astounding productivity gains in the world economy because these processes are becoming less expensive, less time consuming, and more useful ("Why the Productivity Revolution," 2000). For example, a directory-assistance call formerly required an operator, look-up in paper-based directories, and a localized search. Now it involves a national (or international) computer database, voice synthesis, and automatic connection. Furthermore, the process has been expanded; one can do reverse searches through the Internet that will point to the owner of a telephone number, link this to one's telephone bill, and not involve any individual as the service provider. Thousands of "system processes" are undergoing this type of mutation, leading to cheaper, less time-consuming, and expanded types of services. Figure 1 shows several components of the business process (e.g., marketing) and electronic commerce tools (e.g., Web banners) that are structurally changing ways of doing business.

The marketing, advertising, and care triad are the core of the phenomenon. One-to-one

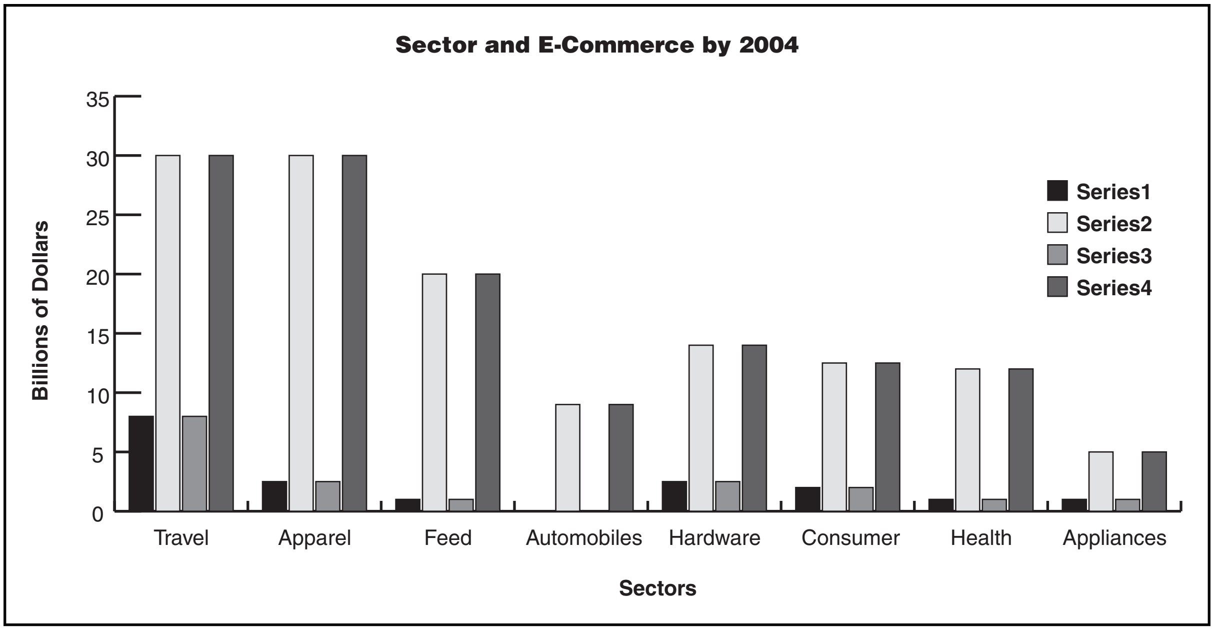


Figure 2

marketing (whereby large customer databases link much information about clients, thus creating very efficient leads) is linked to very tailored advertising: The firm knows the client when he or she is connected to the Internet, and it fires off a series of individually targeted banners catering very closely to the client's needs. These advertising banners can explore the geography of the client at that moment (for example, if in a car, the closest gas station, drug store, or sports bar), linkages among products or recent purchase (bought a computer, needs parts and software), personal factors (getting married, needing a dress, birthday, death in the family), and other factors. The e-care part of the triad is the emerging process of the new organization. Technologically rich products need superior, technologically based support. E-care—a mix of e-mail, Web-based support, and, when essential, phone support—is cheaper and more powerful if properly done than the traditional means. Organizations are finding that the same stringent standards of traditional care must be applied in the e-organization.

The electronic commerce revolution is in its initial phases and will progressively take over all processes either directly or indirectly. The distinction between ''snail'' commerce and e-commerce will disappear, with all processes becoming either digital or aided by digital supporting processes. The pace of this transformation is what differentiates winning from losing competitors, industries, and investors. The intrinsic nature of the product and processes, as well as the dynamics and resistance to change of corporations and industries, will determine the pace of change and the gains in productivity. Together with the telephone, railroads, and electricity, the Internet is one of the major agents of change of modern life.

Two major factors affect the speed of change in terms of product: (1) bitability and (2) e-commoditization. A product is bitable or not. If it can be transmitted over the Internet, the product (or service) is bitable. Software, information, remote support services, banking, brokerage, and insurance, for example, fall into this category. If a product is bitable it does not ultimately have to be physically delivered, although

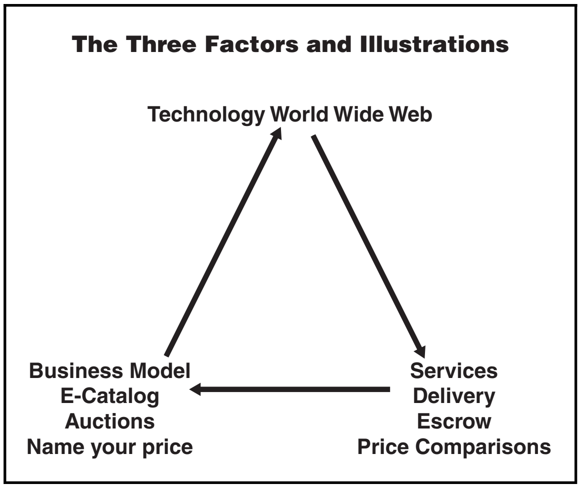


Figure 3

it may take some time to acquire sufficient bandwidth or get consumers used to the idea. The e-commoditization factor is more complex. An e-commodity is an item that one does not need to touch, see, try on, try out, taste, or squeeze before buying. Clearly high-fashion clothes, cars, foods, meats, vegetables, and girlfriends tend not to fall into this category. On the other hand, this is very much a question of attitude and need. Busy executives will forgo the examination of food items for the convenience of having them at home when they arrive there. Once a teenager has tried on an item of brand-name clothing for size, it becomes a commodity, since sizes tend to be quality controlled. A buyer who lives in a very remote location may consider an item to be a commodity because the cost of its examination does not warrant extensive travel—and, in the case of clothes, they can be altered. Ultimately, bitable goods and bitable commodity goods present the highest potentials for e-commerce.

Research predicts that there will be a wide range of business expansion on the Internet. This is reflected on Figure 2, which incorporates a series of predictions from four different organizations.

Travel and apparel are expected to be the largest B2C (business to consumer) areas. At the same time, the volumes of B2B (business to business) trade are expected to be six to ten times larger than B2C, but with much narrower margins.

EMERGING PRINCIPLES OF ELECTRONIC COMMERCE

An entirely new set of principles of commerce is emerging. First is the realization that a Malthusian physical world is giving way to a place where information is abundant and eyeballs limited. Second is the realization that paradoxes exist because of technology, and that giving things away for free, not protecting software against privacy, and paying for visitors, may be the paradigms of the e-world. Third, the meaning of the words *competitor* and *industry* are changing. In the faceless world of the Internet, one's current and future customers and suppliers are both one's competitors and one's allies. Fourth, industries are blending and changing, and affiliation agreements allow for the creation of entire product cycles without the ownership of inventory or production facilities. Finally, pricing models are changing; hybrids of fixed pricing, auctions, variable pricing, contingent pricing, and name-your-price pricing are emerging and creating new business models. While technology gets most of the credit, actually successes are usually based on the triad of: (1) technology, (2) business model innovation, and (3) a family of facilitating (profitable) services. (See Figure 3)

The B2B sector of e-commerce will present both vertical and horizontal models. In the vertical model, the firm will focus on an industry and develop great industry expertise in order to develop its markets. In the horizontal model the firm will focus on one type of product or service and offer it across industries (e.g., Internet payroll services). The B2B sector is intrinsically different from B2C. Buyers are well informed, possess many resources and can negotiate based on volume. Brand name is much less of a consideration than price, quality, delivery time, and reliability. Three different models have emerged for B2B transactions: (1) the e-catalog model for situations in which there are many different items at distributed locations and the price is fixed (e.g., auto parts); (2) the auction model, in which products are not standardized and there are great differences in the perceptions of value (e.g., auctions of used capital plant products); and (3) the commodity auction model, in which there are not too many variations on the type of product and there are large buyers and sellers (e.g., natural gas, pork bellies, coffee, etc.).

Electronic commerce is progressively and irreversibly changing the face of many businesses because of three dominant phenomena: (1) disintermediation, whereby one party to a transaction is eliminated (e.g., brokers in on-line trading); (2) re-intermediation, whereby a new electronic intermediary comes between the seller and the buyer (e.g., electronic booksellers that take orders and farm them out to providers that have the book in stock); and (3) cannibalization, whereby businesses progressively give up their traditional brick-and-mortar ventures for the superior electronic model (e.g., traditional pharmacies opening on-line drug stores).

PROBLEMS IN SEARCH OF SOLUTIONS

The e-commerce juggernaut is not without its dangers and shortcomings. It is drastically affecting traditional firms that cannot continue to do business according to the traditional economic model. For example, a stock brokerage firm that on average charged $90 per trade cannot compete with $10 on-line trades; if any adaptations meet with strong resistance, the organization could be dooming itself to extinction. The security weaknesses of the e-commerce infrastructure have been well publicized: Viruses, security intrusions, and inability to provide services because of volume attacks are not phenomena that will disappear. A continuous struggle is evolving among facilitating technologies, intrinsic technological dangers, and the management of these factors.

Privacy issues present a different set of challenges. The same technology that facilitates business activities and provides wonderful services is also a major threat to individual freedom. Large databases linking information about economic activity from different sources (purchases, banking activity, medical records) provide great economic advantages by making marketing more efficient, loans more targeted, and medical information ubiquitous. They also create great dangers for privacy potentials for abuse. Doubleclick.com, a marketing analysis technology firm, tracks customer activities in Web sites. Its click-path analysis allows firms to understand customer behavior and improve their offerings. However they have 11,000 clients, and linking together the buyers' profiles from these sites is considered to be far too intrusive by many people. Complaints have been filed with the Federal Trade Commission and boycotts proposed. As a response, Doubleclick lured bigger profile "primary" officers for its board."

Solutions, however, are not as straightforward as they might seem. Making certain actions illegal can actually create arbitrage opportunities and extraordinary advantages for Internet players. Because gambling rules are strict in the United States, electronic casinos are created in cooperative havens in the Bahamas: A legal obstacle in the United States is a business opportunity for another country. When restrictions are placed on the use and content of databases in Germany, offshore database havens appear immediately. When Web-site censorship appears in China, free-Chinese Web sites are constructed. Telephone systems are monitored and taxed by PTTs, supranational satellite telephone networks are being created.

Consequently, easy fixes are not possible and new methods of establishing order, efficiency, and decency will have to be created. Because the Internet is truly a supranational entity, nations need to band together to maintain order and efficiency and reasonableness in cyberspace. The same economic factors that allow for arbitrage can also be used for self-policing and monitoring of the e-commerce environment. To benefit fully from this medium, companies/entities and nations must have payment-clearing solutions, customs solutions, and access to the large markets of the economy. Rogue countries can be excluded from the payment-clearing chains; rogue companies behaving in unacceptable ways can be boycotted and excluded from any affiliation and linking deals. Self-policing seals such as the American Institute of Certified Public Accountants' (AICPA) Web Trust and SysTrust products, inspections, and certificates can be used for monitoring and supervision. International information structures, involving many cooperating organizations, can be on the alert for rogue behavior and spearhead a drive to create reasonable and unbiased rules. Technology can be used to monitor and detect money laundering, illegal product flows, and information trafficking. But such monitoring must be carefully conceived and supervised, because it could turn into a "Big Brother" type of behavior. Most important of all is not to succumb to the easy temptation of creating restrictive and ill-thought-out laws of the sort that legislators tend to create when some local scandal occurs.

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MIKLOS A. VASARHELYI

E-MAIL

Electronic mail, or e-mail, is a method of communicating whereby an individual uses a computer or other electronic device to compose and send a message to another individual. Messages may be sent through computer systems linked by a network, through modems using telephone lines, or, in some cases, through wireless transmissions.

While some systems provide links only within a company's particular e-mail system, the prevailing trend is for e-mail users to be able to send e-mail to anyone in the world. In order to send an e-mail message, each party must have an e-mail address. The address is composed of an identifying name, an @ sign, the name of the fileserver where the account is located, and a domain name. Typical domain names are com (commercial), gov (government), edu (schools), and org (organization). An example of an e-mail address would be marysmith@linc.lincoln.com. In order to send a message outside the company e-mail system, the complete address must be used.

Address book: Most electronic mail systems offer an address book feature. The address book provides a place to store e-mail addresses, which can often be complex and difficult to remember. The address book can also be used to develop mailing lists. For example, if six friends frequently communicate, a user might list all their addresses in a folder in the address book. The folder would have a name such as "My Friends." Then the user could quickly send a message to all six friends at one time by addressing the message to "My Friends" rather than to each individual user.

Attachments: While the majority of e-mail messages are composed of text, e-mail users are sending increasingly complex messages with accompanying attachments. Users can send documents by using an attachment feature of the e-mail package. The attachment feature allows the user to specify where an electronic file—such as a text document, a spreadsheet, or a graphics presentation—is located and then to send a copy by e-mail. Attachments can also be sent to a list of people in one e-mail message. This feature has greatly enhanced the ability of people at a distance to work together. For example, if two people are planning a presentation at a conference, they can attach outlines of the presentation as well as slides of the actual presentation and transmit them for revision or review.

Photographs can also be attached to e-mail messages, in the same way as another file can. One caution is that multimedia files including photos can be quite large and take a longer time to send. With the additional use of digital cameras and/or scanners, photographs that are valuable to business are easier to send than ever before.

Deleting a message: After reading an incoming e-mail message, the reader may decide that the message does not need to be saved. All e-mail systems have a feature to allow for quick deletion of messages. However, many systems convey the deleted message to a trash file that will allow the message to be recalled. To delete the message from the individual computer, the message in the trash file must also be deleted. Even after this double deletion, the message may still be accessible. Large computer systems periodically back up all mail, so the message may be floating around in the organization's computer memory backup for a much longer time.

Forwarding a message: At times, the reader of a message may decide to forward a message to a third party. The person sending e-mail has no control over what the receiver will do with the message. The receiver can easily forward the message to one individual or a list of individuals.

Replying to a message: If the reader wishes to respond to an e-mail message, the reply feature provides a quick way to answer the message without keying in the e-mail address of the person who sent it. There is a common e-mail faux pas, however, that should be avoided. If a message has been sent to a list and one reader replies to the person who sent the message by using the reply feature, that reply may be sent to everyone on the list. For example, a conference coordinator sends a reminder message to a list of 500 people who will be attending a conference. One of the respondents has a question about whether his or her registration has arrived and replies to the message using the reply feature. Since the original message was sent to a list, it is quite possible that using the reply feature will result in that individual's message being transmitted to all 500 people on the list instead of only to the original sender. This is a common violation of "netiquette," a term that refers to using courtesy on the Internet.

Netiquette: Using the correct etiquette helps people respond correctly in their environment. For example, eating peas with a knife, interrupting a speaker, and not introducing people are examples of poor etiquette. Poor etiquette can also exist in the electronic environment. A few things that could be considered violations of netiquette are flaming (sending an immediate, angry overreaction to an e-mail message), shouting (typing a message in all capital letters), forwarding personal messages without permission, and sending a personal message to an entire list. Other problems include preparing a list that includes individuals who have no interest in the topic and bombarding them with e-mail, sending e-mail messages that criticize others, and using emoticons (typed symbols to indicate expressions) in business e-mail. Just as an understanding of good manners helps one move effectively in society, so an understanding of netiquette helps one perform effectively in electronic communication.

Privacy of e-mail: One of the controversies surrounding electronic mail has been the issue of privacy. The term "mail" seems to imply the same safeguards that one has when using the U.S. Postal Service. These safeguards include the right to open your own mail and legal protection from those who would tamper with your mail. Electronic mail, however, may not include these safeguards.

Courts have upheld the right of corporations to review the e-mail of employees who use company resources such as hardware, software, and/or company time to compose and send e-mail messages. It is the court's position that a company has the right to read the e-mail of employees is especially strong for those companies who have an e-mail policy in place.

Employees should be judicious in their use of e-mail and should not put in electronic writing anything they would not write on paper for public distribution. Both individuals and companies have seen their e-mail communications come back to haunt them in the media and in court. For example, some plaintiffs in sexual harassment cases have used negative e-mail messages sent by company employees to establish the legal definition of a hostile working environment. Others have seen their e-mail admitted in court as proof of their beliefs and actions that may disagree with their sworn testimony.

Electronic mail policy: Many organizations have implemented e-mail policies in the workplace. A good policy clearly defines an employer's expectations about how e-mail should be used by employees. If personal e-mail is acceptable, conditions for its use are outlined in the policy. In addition, a process should be developed so employees can indicate their understanding of the e-mail policy in place.

Volume of electronic mail messages: A concern for many employees is the large number of e-mail messages that they receive and are expected to respond to on a daily basis. Some e-mail systems allow the sender to assign a priority rating to the message. In this way priority messages are flagged. Other systems rely on the subject line. For that reason, a concise subject line that clearly defines the message is an asset when a reader reviews the message. The subject line will help the reader decide when the message should be read. A message from an unknown sender with no subject line may not be evaluated very quickly.

Organizing electronic mail messages: As e-mail messages arrive, the reader can reply, forward, or delete them. The reader can also save or store messages. E-mail systems allow the reader to set up filters to organize incoming messages and folders to organize messages that should be stored. The reader then merely transfers the message to the appropriate folder. This action will clear the inbox of messages and provide a logical arrangement to locate messages by sender or by topic.

Response speed: Just as it is easier to send an e-mail message than to mail a letter or, in many cases, to attempt to phone someone, the amount of time allowed for a response has also decreased. While a letter may take two to three days to travel to its destination, an e-mail message is transmitted almost instantaneously. Few would expect an answer to a letter within a week of sending it. However, the tolerance for a slow e-mail response has dwindled. Seldom would a person sending an e-mail message expect to wait two to three days for a response. If the first e-mail message elicits no response, the sender may send follow-up messages or attempt some other means of communication if a timely response is not received.

Junk mail or spam: Junk mail, or spam, can arrive in the inbox in the form of chain letters, unsolicited advertisements, warnings (usually not founded in fact) about viruses or files, and other nonbusiness information. The difference between the junk mail received via the U.S. Postal Service and the junk mail received through e-mail is that the former can be quickly discarded. The junk mail received via e-mail, however, is more difficult to get rid of and ties up the company's resources as well. Some corporations use procedures to block junk mail, or spam, from entering their e-mail systems. Some users find that friends or acquaintances can be the worst violators and are too willing to pass along unnecessary information they have found on the Internet.

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MARSHA L. BAYLESS

EMPLOYEE ASSISTANCE PROGRAMS

The term *employee assistance program (EAP)* refers to a program that provides business and industry with the means of identifying employees whose job performance is negatively affected by personal or job-related problems. The EAP arranges for structured assistance to solve those problems, with the goal of reestablishing the employee's effective job performance. The services of an EAP may be contracted, or the program may be an employer's own creation, designed to fit the unique needs of a company. EAPs typically provide professional, confidential, no- or low-cost assistance for employees with personal problems.

EAPs help employers by identifying troubled workers, by either supervisory referrals or self-referrals. Each referred employee is assessed, and a plan of action is designed to suit his or her needs. The ability to uncover the employee's primary problem is required. The goal is to enable the employees to work again at peak levels. An effective EAP requires a knowledge of resources available in the community.

HISTORY

No one knows when the first employer offered counseling and social work services to its employees. But in 1917 Macy's, the New York City department store, opened an office specifically devoted to helping employees deal with personal problems. Metropolitan Life Insurance Company and Western Electric were also pioneers in the field, but it was not until the years immediately following World War II that a limited form of EAP became relatively common.

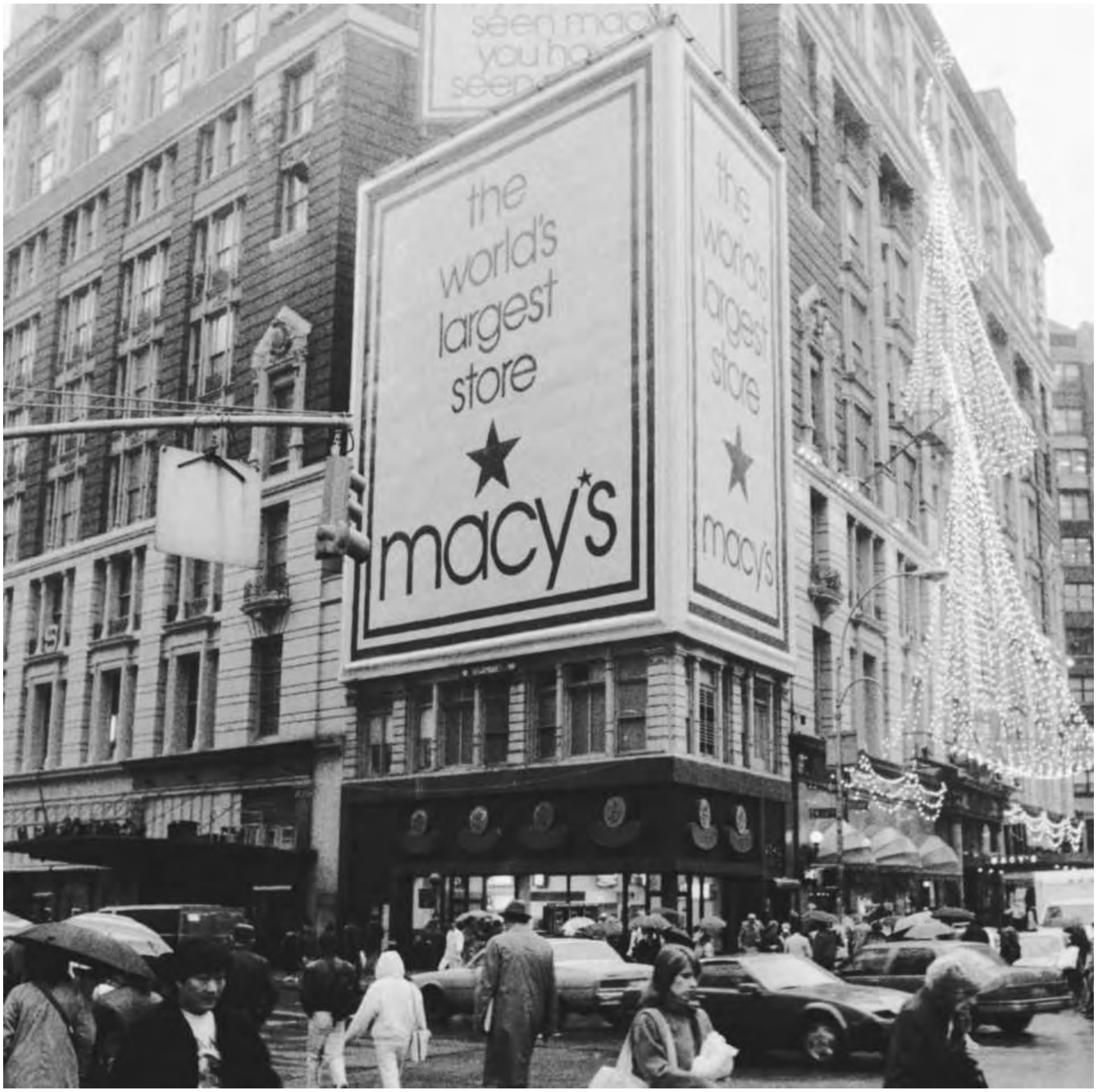
In those days, Alcoholics Anonymous was a new organization gaining widespread attention. For the first time, alcohol abuse was perceived by business to be a workplace problem, and many companies started alcoholism programs for their workers. These programs were usually staffed by recovering alcoholics who trained supervisors to spot alcoholics by looking for such symptoms as shaking hands, bloodshot eyes, and alcohol on the breath. These early programs produced gratifying results, but they were severely limited because they identified only late-stage problems. Alcoholics in the early stage whose hands did not shake and who did not drink on the job did not receive help.

Today, most EAPs pay close attention to the specific needs of clients. For example, until recently few EAPs dealt with gambling-related issues; but now counselors are being trained to deal with gambling addiction and related problems. A number of companies also have EAPs that offer financial and legal referrals to employees with consumer credit or bankruptcy problems and legal concerns. These services are in addition to assistance offered for emotional, family, work, and substance-abuse problems.

Another area that EAPs frequently deal with is critical incident intervention—helping workers handle deaths, suicides, hostage situations, major accidents, and natural disasters, including fires, earthquakes, mudslides, floods, and hurricanes. Employees often need assistance in dealing with the emotional and physical trauma of these natural disasters.

MODERN PROGRAMS

Organizational development, managed care, workers' compensation, child care, and catastrophic disasters are just a few of the issues that are expanding the scope of today's EAPs. The changes going on in corporate America are tremendous. As a result, the role and scope of the company's employee assistance program has evolved with the times. Some EAPs offer workers



In 1917, Macy's department store in New York City opened an office to help employees deal with personal problems.

professional organizational counseling. This service runs the gamut from counseling work-group members who are having problems getting along with one another to counseling survivors of downsizing on how to handle stress.

Managers may have to terminate good employees as well as difficult ones. Besides the emotional effects, there is also a practical side to letting workers go: There is documentation and a procedure to follow. Human resources staff members are stretched to the limit in some cases.

Many EAPs provide disability management services. Companies today want to complement the traditional disability arrangement with a whole-person approach. In many cases workers' self-esteem is tied to their jobs. As workers sit at home recuperating from injuries or disabilities, they may become bored and depressed. In some cases their disabilities may put financial strains on their families. Therefore, there is a need to supplement the medical care a person is receiving with counseling on issues he or she is facing. The goal is to keep the worker connected to the workplace.

Today's EAPs have grown in size and sophistication. In some businesses EAPs are operated through employee associations. Sometimes professional groups or similar businesses and small industries unite to form a consortium. Although all EAPs aim to help both management and employees, there are differences in how they do it. Boiled down to the essentials, these differences come under two headings: who is helped and how that help is provided.

SINGLE-ISSUE PROGRAMS

Single-issue programs aim to help only employees impaired by a specific problem. Their focus is clear, and they are generally small enough to cost the employer relatively little. A disadvantage of single-issue programs is that they may become stigmatized because of the negative connotations of terms such as *addiction* and *alcoholism.* Some people may be afraid to use the program for fear of being labeled "drunks" or "addicts." Since the per-person cost of an EAP decreases with the number of people who use it, this stigmatization is an important issue to consider. Furthermore, supervisors tend to look only for symptoms of abuse instead of concentrating on declining job performance.

The greatest weakness of single-issue programs is their lack of preventative power. Late-stage alcoholics and addicts have the highest relapse rate and the least chance for permanent recovery. Single-issue programs tend to find these late-stagers, but recognizing those in the early stages for whom help can be most effective is much more difficult.

BROAD-BRUSH EAPS

Broad-brush EAPs offer help to employees suffering from all kinds of problems, including chemical dependency. For example, a broad-brush program may provide crisis-management services for those whose problems can be dealt with over the short term. Sometimes all that is needed is a chance to talk a problem over with a sympathetic listener. The great advantage of broad-brush programs is their ability to uncover drug and alcohol problems in their early stages. Often early-stagers come to their EAP presenting problems that make no mention of alcohol or drugs. At first clients complain about financial trouble, a stressful marriage, or abuse of problem children. It is only after working with a skilled counselor that the truth is revealed: cocaine bankrupting an executive; a marriage in trouble because the wife drinks and the husband enables her; children acting out because they cannot get the nurturing they need from addicted parents.

One disadvantage of broad-brush programs is that they are usually more expensive than single-issue programs. There are, however, ways to minimize costs by designing a program customized to specialized businesses. Costs can be reduced when multiple businesses form an EAP alliance. In the long run, EAPs can save businesses money by making them more efficient and productive, by reducing accidents, by reducing employee absenteeism/turnover, by raising employee morale and decreasing grievances, and by cutting back on the number of unnecessary insurance claims.

MODES OF SERVICE

Today's EAPs differ from their predecessors in the mode of service they deliver. It would be impossible to describe all variations that exist, but a short description of several of the most common varieties will provide some insight.

Some EAPs are just a hotline. Employees are encouraged to call a particular number and ask for help. The EAP provides the names and numbers of local public service agencies that may be able to address employees' personal problems. Alone, this just barely qualifies as employee assistance. However, a hotline in conjunction with other services may prove helpful in attracting fearful employees for whom anonymity is essential. And hotlines can be extremely beneficial when depression is a serious problem.

Other EAPs amount to no more than a single individual in the personnel department or the medical office who can direct an employee offsite on the basis of his or her problem. This is not much better than the hotline, and employees may not go near the office for fear of being labeled. Employees required to report to this office because of poor performance evaluations and fear of losing their livelihoods may complain about the lack of confidentiality.

A few very large companies have elaborate on-site EAP divisions with full staffs, including doctors and nurses. Or several geographically close companies with similar concerns or products may join together to form an EAP consortium that contracts with a consulting EAP organization to provide services to employees from each site.

Most EAP providers emphasize the confidential nature of their services and will give the employer numerical information only, without divulging names of EAP-assisted employees. Otherwise, many employees would be hesitant, if not totally unwilling, to admit a personal problem for fear that it would jeopardize their job status or chances for promotions.

However, there may be situations in which an employer may need to know certain types of information. For example, when an employee is engaged in dangerous duties, supervisory personnel may need to know general information about the employee's condition for safety reasons. Therefore, the employer's promise of confidentiality and privacy to employees is extremely important. Whatever level of confidentiality the employer establishes must be maintained; notice must be given to employees and consent obtained for variances. Also, it is important that an employer give employees clear warnings that such disclosures are permitted. Specific state privacy laws may affect the availability of such information.

Some EAP programs provide services to groups of employees during a crisis. For example, a team of counselors from an EAP may work with an entire department affected by a violent workplace incident.

EAPS CAN DETER VIOLENCE

Stress at home or on the job, burnout, or relationships that have soured can result in violent acts at work. Experts estimate that more than 100,000 incidents of workplace violence occur annually in the United States. The typical workplace killer is a middle-aged man, most likely a loner frustrated by problems on the job with few personal contacts outside the workplace. One study showed men were responsible for 98 percent of all violence committed at work. The average age was 36, and firearms were used 81 percent of the time. Following workplace homicides, one-fourth of the murderers killed themselves.

Workplace violence, whether it involves harassment, threats, or physical attack, is a serious and growing problem for employers. Lack of attention to the issue can mean lost lives, discontent, and fear among employees, as well as tremendous cost to companies.

Corporations without preventative measures are particularly subject to lawsuits and higher costs. The best way to prevent workplace violence is to have an effective employee assistance program. Other precautions companies can take to prevent violence are establishing clear guidelines on appropriate behavior, screening applicants carefully, training employees to identify warning signs, and setting up procedures for managers to respond to cries for help. Companies also should look closely at the procedures they use when they terminate employees. Perhaps most important is maintaining a healthy work environment. It really boils down to one person's relationship with another and whether or not the environment fosters mutual respect.

EXTERNAL PROVIDERS

A unique feature of employee assistance programs is the dual responsibility that its professionals have toward both the companies they work for and the individual workers in those organizations who require assistance. The special responsibilities toward the organization go beyond those that social workers have toward their agencies because the occupational setting also is a client to which they have service obligations. At times this dual responsibility creates ethical dilemmas for practitioners. The very existence of a well-functioning EAP is a major source of assistance to the organization as a whole, not just the individual clients who receive direct services.

Both managers and employee clients expect staff members of in-house EAPs to be especially adept in matching an employee's needs with resources that provide prompt and effective intervention. The depth and thoroughness of the assessment is a means of increasing the probability that key problems will be identified and prioritized accurately. Failure to meet these expectations can adversely affect the credibility of the EAP. As a result, most EAPs devote a significant part of program resources to locating, evaluating, and updating their network of providers. The referral function is distinct from the procedures governing the internal services. Referring is the process of locating one or more providers external to the employer to supply ongoing services to deal with employee concerns. These external resources may assume responsibility for all of a client's needs or they may be ancillary to the work being done in-house by an EAP counselor.

Most employees are not well informed about treatment programs, community agencies, or even self-help groups. EAPs must educate them about available services, their relative benefits, and how these resources are viewed in the community. In addition, clients often need to be encouraged to assume a consumer orientation regarding referral sources. Having to apply for any kind of help is intimidating, and it is difficult for the uninitiated to recognize appropriate or inappropriate requirements. Clients should be told that if they decide a resource is not acceptable they may return to the EAP for other options.

PERSONAL PROBLEMS

People thrive on things they do well. Often it is their work. A happy, healthy worker is likely to be a productive one. Conversely, personal problems can hamper an employee's performance. Sometimes problems can be alleviated quickly, but often the problems extend over long periods of time. The impact on the employee will vary, but there will usually be noticeable change in behavior and attitude. Personal problems are significant hurdles that every person living in today's complex society will confront in one fashion or another.

Employees' personal problems can have many sources. Most can be categorized into one of the following categories: substance abuse, health related, family related, and financial. Almost every adult will deal with one or more of these problems. It is how individuals deal with these problems, and the level of support they receive in addressing the issue, that will determine the intensity of the problem's impact.

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PATRICK J. HIGHLAND

EMPLOYEE BENEFITS

Employee benefits are compensations given to employees in addition to regular salaries or wages. These compensations are given at the entire or partial expense of the employer. Benefit packages usually make up between 30 and 40 percent of an employee's total compensation for employment, which makes them an important aspect of the terms of employment. While some employee benefits are required by law, many employers offer additional benefits in order to attract and retain quality workers and maintain morale. Some types of benefits are also used as incentives to encourage increased worker productivity.

LEGALLY REQUIRED BENEFITS

While some benefits are offered as incentives to attract workers, some are legally required. For example, employers must provide workers' compensation insurance, which pays the medical bills

Target stores offer employees a 10 percent discount on merchandise.

for job-related injuries and provides an income for employees who become disabled because of a job-related injury. Social Security must be paid by the employer (in addition to the amounts deducted from employee's pay) to help meet employees' retirement needs, and employers must pay for unemployment insurance to compensate workers in the event that their job is eliminated. The Family and Medical Leave Act, passed by Congress in 1993, requires large employers to provide workers with unpaid leave for family or medical emergencies (up to 12 weeks of unpaid, job-protected leave per year). Under this law, employees are guaranteed that they can return to the same or a comparable position and that their health care coverage will be continued during the leave.

TRADITIONAL TYPES OF EMPLOYEE BENEFITS

Because of continually rising health care costs, one of the most desirable types of benefits for employees to have is a health insurance plan. These plans can be set up to cover the individual worker and, in many cases, the worker's family as well; they may or may not include such options as dental, eye, chiropractic, hospital, and other types of health care. Health insurance plans may be provided at no cost to employees, or they may be made available at a more desirable rate than employees could get on their own. The health insurance aspect of a benefit package is often the major deciding factor in whether a person accepts a position with a company. The degree of health insurance is often more important to a potential employee than the salary level; especially when children are an issue.

Most benefit plans also include a certain number of paid sick days, personal days, and/or vacation days. Many companies are finding ways of increasing the flexibility of employee benefits. One way to increase flexibility is to group sick, vacation, and personal days into a certain amount of *paid time off* (PTO). PTO allows employees to take days off—for example, to care for a sick child, observe a religious holiday, or go on vacation—without having to explain why. The PTO benefit helps employees because their time is more flexible, and it helps employers by maintaining morale and reducing unanticipated absenteeism.

Life insurance and retirement options are another type of benefit many companies offer their employees. These types of benefits often encourage employees to remain with the same company because they do not want to cash in their life insurance or retirement plans. This tends to make employees more loyal to the company because their future is invested with the company. It also gives the employee a feeling of power by having some control over planning for retirement.

EXPANDED TYPES OF EMPLOYEE BENEFITS

While health care, paid time off, and retirement plans are the most common types of benefits employees receive, some companies offer even more types of benefits to help attract and retain employees as well as increase employee morale and improve job performance. One example of this type of benefit is tuition reimbursement, which allows employees to further their education while working. Motivating employees to better themselves at the employer's expense, helps the company keep knowledgeable employees.

With the growing number of single parents and dual-career couples in the work force, many companies have opened day-care facilities in the workplace where employees can feel safe about leaving their children. On-site child care is obviously a very desirable benefit for parents because it allows them to check up on the children, cut down on travel time, and be available in case of an emergency. However, some childless workers feel that this benefit discriminates against them because they get no use out of the day-care facility. One way many companies are handling this type of concern is through a *cafeteria plan.* While there are several different ways to set up a cafeteria plan, such as setting aside pre-tax dollars for medical expenses, one of the most useful ways is to give employees many different benefit options to choose from. Each employee is given a set allowance that can be used toward any benefit the employee chooses, allowing the employees to pick the options that will most benefit them. The cafeteria plan is one fair way to handle benefits for everyone concerned.

Another characteristic of the work force is its increasingly older age. As a result, there are an increasing number of workers with aging parents who need care. Many companies recognize the need for elder care and are providing benefits to help, such as referral services for quality nursing homes and flexible work hours and/or days off so employees can care for aging parents.

Other benefits provided by some employers include credit unions to help employees with financial needs, gym facilities to allow employees to fit exercise into their busy schedules, cafeterias that sell reduced price meals to working employees, and on-site laundry services where employees can have laundry done while they are at work. Making the work environment seem more like a family helps boost employee morale and improve working relationships. Many companies provide uniforms for their employees, so that workers do not have to worry about ruining their own clothing. The uniforms also help with the feeling of unity because everyone in the company is dressed similarly. Because transportation can often be a problem for employees, some companies are even providing transportation options as a benefit to employees. Disney World, in Orlando, Florida, has a shuttle that picks employees up from their living quarters and takes them to work. Corn detasslers meet in a central location and a bus takes them to the site. Sales people are often provided with a company car.

While these types of benefits are meant to attract and retain employees as well as create a positive work environment, some types of employee benefits are used to encourage increased performance. The following are the four main types of benefits used as incentives to encourage employees to exhibit superior performance:

1. *Profit sharing* gives the employee a portion of the company profits. Profit

sharing is often done through making shares of company stock part of the employee benefit package. Employees receive a certain number of shares of stock each year, which provides employees an incentive to help the company succeed. This might also be accomplished through a yearly profit-sharing bonus.

2. *Gain sharing* rewards employees for exceeding a predetermined goal by sharing the extra profits. If profits exceed the goal, employees share in the extra profits.
3. *Lump-sum bonuses* are a one-time cash payment based on performance. Lump-sum bonuses may be an annual reward, such as a Christmas bonus, where the purpose is to share profits with the employees, and thus motivate them.
4. *Pay for knowledge* rewards employees for continuing their education and/or learning new job tasks. The more education or experience an employee has, the higher he/she moves up on the pay-for-knowledge pay scale. Pay for knowledge is an incentive for employees to continue their education because it results in immediate rewards on the job.

PERKS

In addition to what we typically think as employee benefits, many employers also offer "*perks*" to their employees. Typically limited to employees in management positions, these perks include such benefits as country club or health club memberships, a company car, special parking privileges at work, tickets for sporting events, first-class travel accommodations, and generous expense accounts. However, certain types of perks are also being extended to employees in many different types of positions. One type of perk that is common in many retail stores is an employee discount on merchandise bought from the place of employment. For example, Dayton Hudson's Target stores offer a 10 percent discount to employees and their immediate families when purchasing merchandise from any Target store. Employees of local movie theaters often receive free movie tickets as a perk, while many restaurant employees receive free or reduced-price meals. By offering employees such perks, the company is providing a strong incentive for employees to continue working there.

FLEXIBLE WORK PLANS

A flexible work plan is another type of employee benefit that has been proven to have a positive influence on employee productivity, attendance, and morale. A flexible work plan allows employees to adjust their working conditions within constraints set by the company and may include such options as flex-time, a compressed workweek, job sharing, and home-based work. Flex-time involves adjusting an employee's daily time schedule; it can be as simple as allowing a worker to come into work an hour earlier and leave an hour earlier than the normal 8-to-5 workday. Usually there are some time constraints set up by the company, but employees who work within those constraints can basically set their own schedules. A compressed workweek involves working longer hours each day for fewer days than the normal Monday-through-Friday workweek. For example, at many businesses employees work ten-hour days, four days a week.

Job sharing allows two or more people to divide the tasks of one job. It allows the same consistency as a full-time person, because the work is simply divided among the people who share the job responsibility. Job sharing is popular among people who only want to work part time but want a job with full-time responsibilities. These types of people include older workers, retirees, students, and working parents. Home-based work programs allow employees to perform their jobs at home instead of in an office setting. These people are often know as telecommuters, because they "commute" to work through electronic mail, faxes, and other types of telecommunications. Home-based work is popular with disabled workers, elderly workers, parents with small children, and workers who have had to relocate far away from the workplace because of a spouse's job change. Through home-based work, all of these types of employees are able to take care of personal and family responsibilities while maintaining and enjoying their job and/or career.

CONCLUSION

Finally, it should be noted that the various types of benefits offered to employees can depend greatly on the size and type of the business as well as its geographic location. For example, a small business might be unable to afford to provide complete health care coverage for employees because there are not enough employees to divide the risk. This would cause the cost of the insurance to be high. On the other hand, a large company may not want to give all 1,000 employees a turkey for Thanksgiving because of the enormity of the undertaking. A video store would be more likely to give employees free movie rentals, while a restaurant would offer employees free or reduced-price meals. Employee benefits may be the major deciding factor for many people when choosing a company for employment. In order to attract and retain the best-quality employees, companies must be willing to offer flexible and extensive types of benefits to meet various employee needs.

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MARCY SATTERWHITE

EMPLOYEE COMPENSATION

In exchange for job performance and commitment, an employer offers rewards to employees. Adequate rewards and compensations potentially attract a quality work force, maintain the satisfaction of existing employees, keep quality employees from leaving, and motivate them in the workplace. A proper design of reward and compensation systems requires careful review of the labor market, thorough analysis of jobs, and a systematic study of pay structures.

There are a number of ways of classifying rewards. A commonly discussed dichotomy is intrinsic versus extrinsic rewards. Intrinsic rewards are satisfactions one gets from the job itself, such as a feeling of achievement, responsibility, or autonomy. Extrinsic rewards include monetary compensation, promotion, and tangible benefits.

Compensation frequently refers to extrinsic, monetary rewards that employees receive in exchange for their work. Usually, compensation is composed of the base wage or salary, any incentives or bonuses, and other benefits. Base wage or salary is the hourly, weekly, or monthly pay that employees receive. Incentives or bonuses are rewards offered in addition to the base wage when employees achieve a high level of performance. Benefits are rewards offered for being a member of the company and can include paid vacation, health and life insurance, and retirement pension.

A company's compensation system must include policies, procedures, and rules that provide clear and unambiguous determination and administration of employee compensation. Otherwise, there can be confusion, diminished employee satisfaction, and potentially costly litigation.

DETERMINANTS OF COMPENSATION

Fair and adequate compensation is critical to motivating employees attracting high-potential employees, and retaining competent employees. Compensation has to be fair and equitable among all workers in the same company (internal equity). Internal equity can be achieved when pay is proportionate to the individual employee's qualifications and contributions to a company. On the other hand, compensation also has to be fair and equitable in comparison to the external market (external equity). If a company pays its employees below the market rate, it may lose competent employees. In determining adequate pay for employees, a manager must consider the three major factors: the labor market, the nature and scope of the job, and characteristics of the individual employee.

Potential employees are recruited from a certain geographic area—the labor market. The actual boundary of a labor market varies depending on the type of job, company, and industry. For example, an opening for a systems analyst at IBM may attract candidates from across the country, whereas a secretarial position at an elementary school may attract candidates only from the immediate local area of the school.

Pay for a job even within the same labor market may vary widely because of many factors, such as the industry, type of job, cost of living, and location of the job. Compensation managers must be aware of these differences. To help compensation managers understand the market rate of labor, a compensation survey is conducted. A compensation survey obtains data regarding what other firms pay for specific jobs or job classes in a given geographic market. Large companies periodically conduct compensation surveys and review their compensation system to assure external equity. There are professional organizations that conduct compensation surveys and provide their analysis to smaller companies for a fee.

Several factors are generally considered in evaluating the market rate of a job. They include the cost of living of the area, union contracts, and broader economic conditions. Urban or metropolitan areas generally have a higher cost of living than rural areas. Usually, in calculating the real pay, a cost-of-living allowance (COLA) is added to the base wage or salary. Cost-of-living indexes are published periodically in major business journals. During an economically depressed period, the labor supply usually exceeds the demand in the labor market, resulting in lower labor rates.

The characteristics of an individual employee are also important in determining compensation. An individual's job qualifications, abilities and skills, prior experiences, and even willingness to work in hardship conditions are determining factors. Within the reasonable range of a market rate, companies offer additional compensation to attract and retain competent employees.

In principle, compensation must be designed around the job, not the person. Person-based pay frequently results in discriminatory practices, which violates Title VII of the Civil Rights Act, and job-based compensation is the employer's most powerful defense in court. For job-based compensation, management must conduct a systematic job analysis, identifying and describing what is happening on the job. Each job must be carefully examined to list the necessary tasks and actions, identify skills and abilities required, and establish desirable behaviors for successful completion of the job.

With complete and comprehensive data about all the jobs, job analysts must conduct systematic comparisons of them and determine their relative worth. Numerous techniques have been developed for the analysis of relative worth, including the simple point method, job classification method, job ranking method, and the factor comparison method.

Information resulting from the comprehensive job analysis will be used for establishing pay or wage grades. Assume that twenty-five jobs range from 10 to 50 points in their job scores based on the job point method. All twenty-five of these jobs are reviewed carefully for their relative worth and plotted on Figure 1. The x-axis represents job points and the ordinate (y-axis) represents relative worth or wage rates. Once a man-

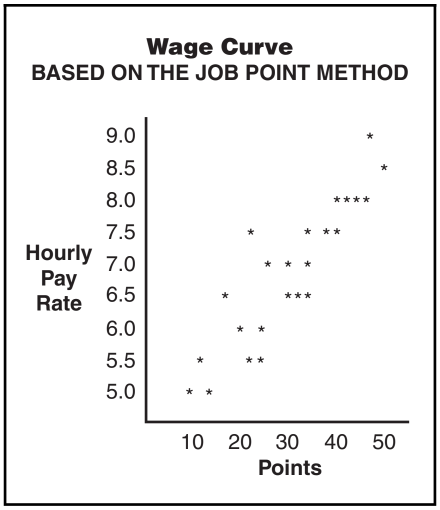

Figure 1

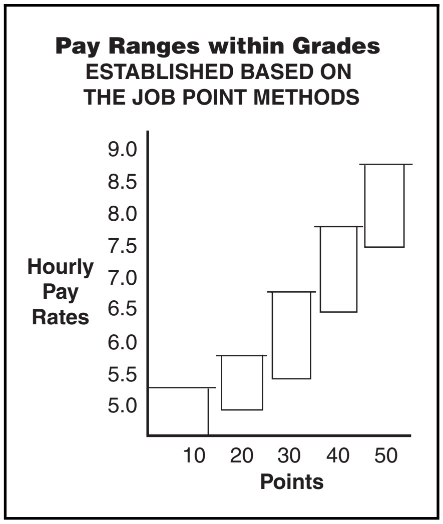

Figure 2

ager can identify fair and realistic wages of two or more jobs, desirably top and bottom ones, then all the rest can be prorated along the wage curve in the diagram.

In order to simplify the administration of a wage structure, similar jobs in the approximate cluster are grouped together into a class or grade for pay purpose. Figure 2 shows how twenty-five jobs are grouped into five pay grades. Employees move up in their pay within each grade, typically by seniority. Once a person hits the top pay in the grade, he or she can only increase the pay by moving to a higher grade. Under certain unusual circumstances, it is possible for an outstanding performer in a lower grade to be paid more than a person at the bottom of the next-highest level.

INNOVATIONS IN COMPENSATION SYSTEMS

As the market becomes more dynamic and competitive, companies are trying harder to improve performance. Since companies cannot afford to continually increase wages by a certain percentage, they are introducing many innovative compensation plans tied to performance. Several of these plans are discussed in this section.

Incentive Compensation Plan. Incentive compensation pays proportionately to employee performance. Incentives are typically given in addition to the base wage; they can be paid on the basis of individual, group, or plant-wide performance. While individual incentive plans encourage competition among employees, group or plant-wide incentive plans encourage cooperation and direct the efforts of all employees toward achieving overall company performance.

Skill-Based or Knowledge-Based Compensation. Skill-based pay is a system that pays employees based on the skills they possess or master, not for the job they hold. Some managers believe that mastery of certain sets of skills leads to higher productivity and therefore want their employees to master a series of skill sets. As employees gain one skill and then another, their wage rate goes up until they have mastered all the skills. Similar to skill-based pay is knowledge-based pay. While skill-based pay evolved in the manufacturing sector, pay-for-knowledge developed in the service sector (Henderson, 1997). For example, public school teachers with a bachelor's degree receive the lowest rate of pay, those with a master's degree receive a higher rate, and those with a doctorate receive the highest.

Team-Based Compensation. As many companies introduce team-based management practices such as self-managed work teams, they begin to offer team-based pay. Recognizing the importance of close cooperation and mutual development in a work group, companies want to encourage employees to work as a team by offering pay based on the overall effectiveness of the team.

Performance-Based Compensation. In the traditional sense, pay is considered entitlement that employees deserve in exchange for showing up at work and doing well enough to avoid being fired. While base pay is given to employees regardless of performance, incentives and bonuses are extra rewards given in appreciation of their extra efforts. Pay-for-performance is a new movement away from this entitlement concept (Milkovich and Newman, 1996). A pay-for-performance plan increases even the base pay—so-called merit increases—to reflect how highly employees are rated on a performance evaluation. Other incentives and bonuses are calculated based on this new merit pay, resulting in substantially more total dollars for highly ranked employee performance. Frequently, employees also receive an end-of-year lump sum bonus that does not build into base pay.

EXECUTIVE COMPENSATION

Recently, people have been concerned with the excessively high level of executive compensation. According to *Business Week*'s annual executive pay survey, in 1997 Sanford Weill, CEO of Travelers Group, collected $7.5 million in salary and bonuses plus $223.2 million for long-term compensation, totaling $230.7 million. In the same year, Roberto Goizueta, CEO of Coca-Cola, earned a total of $111.8 million, including annual salary, bonuses, and long-term compensation. Compensations of the twenty highest-paid executives ranged from $28.4 million to $230 million.

Frequently, executive compensation becomes controversial. Are these compensations excessive? What justifies such a large compensation for executives? Justification of such a large sum of compensation is linked to the company's performance. In fact, a significant portion of executive compensation results from exercising stock options, which were quite valuable in the recent "bull" market. And yet ordinary working-class Americans are outraged by the shocking contrast in pay raises: Annual executive pay at large companies rose 54 percent in 1996, whereas the pay raises of most working-class people were in the 3 percent to 5 percent range during the same period.

An executive compensation package is typically composed of (1) base salary, (2) annual incentives or bonuses, (3) long-term incentives (e.g., stock options), (4) executive benefits (e.g., health insurance, life insurance, and pension plans), and (5) executive perquisites. Considering the high turnover rate of competent executives, offering a competitive salary is crucial in attracting the top candidates.

Frequently, annual bonuses play a more important role than base salary in executive compensations. They are primarily designed to motivate better performance. In order to underscore the importance of financial performance, usually measured by the company's stock price, top executives are offered stock options. Sometimes, exercising stock options yields more cash benefits to executives than do annual salaries.

In addition to monetary compensation, executives enjoy many different types of perquisites, commonly called "perks." Such executive perks include the luxurious office with lush carpets, the executive dining room, special parking, use of a company airplane, company-paid membership in high-class country clubs and associations, and executive travel arrangements. Many companies even offer executives tax-free personal perks, including such things as free access to company property, free legal counseling, free home repairs and improvements, and expenses for vacation homes or boats.

Another perk that became popular recently is the so-called golden parachute—a protection plan for executives in the event that they are forced out of the organization. Such severance frequently results from a merger or hostile takeover of the company. The golden parachute provides either a significant one-time sum to the departing executive or a guaranteed executive position in the newly merged company.

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LEE W. LEE

EMPLOYEE DISCIPLINE

Discipline refers to the actions imposed by an organization on its employees for failure to follow the organization's rules, standards, or policies. Traditional approaches to discipline, based on punishment, are known to promote adversarial relationships between leaders and followers. A more effective approach now being used by many companies recognizes good performance and encourages employee commitment to the organization and its goals. Once employees see the discrepancy between actual and expected performance, the burden is on the employee to change. Even with more positive approaches to discipline, organizations still need to have some form of disciplinary procedure, whether formal or informal, that carries successively stiffer penalties for repeated or more serious offenses.

ESTABLISHING AND COMMUNICATING WORK RULES

A first step in the disciplinary procedure is to establish work rules that are in line with the organization's goals or objectives. These work rules become the basis for disciplinary actions when the rules are broken. They are generally established jointly by management, the organization's human resources unit, and employees, who should have an opportunity for input to ensure that rules are fair and can reasonably be followed. Work rules are directly related to work behavior and productivity. Employees who continually violate the rules are candidates for a disciplinary procedure.

Employees must know the rules that have been established. Even though employees might have had input in the development of the rules, it is the employer who creates the final version. The organization's work rules should be presented in a printed format, and each employee should be given a copy. This is usually accomplished in the form of an employee handbook. The handbook may have other information, but the work rules are a critical part of it.

In some organizations, these work rules are discussed at meetings, seminars, or training sessions. Employees with long tenure in the organization typically review the rules periodically. Work rules should be reviewed from time to time and, if necessary, revised. If an organization makes major changes in the way it operates because of new equipment, expansion or contraction, or new ownership, it will need to revise its work rules accordingly. Small companies with only a few employees also need to have written work rules. Such companies may not have an employee handbook, but it is still wise for the rules to be written down and presented to each employee. Additionally, these rules may be posted in a spot where all employees can read them easily.

EVALUATING EMPLOYEES

In the employee evaluation process, either formal or informal, behaviors requiring disciplinary actions are often revealed. Informal evaluation might occur at all times as supervisors monitor employees. Formal evaluations of each employee should be completed regularly so that deficiencies can be discovered and discussed with the employee. When employees violate work rules, a change of behavior is sought. Although small companies with only a few employees may not use a formal written evaluation, it is still important that employees be evaluated regularly. Small companies may find it easier to take corrective actions than large companies because of the closeness of the supervisor to each of the work situations. In contrast, a supervisor in a large organization might be responsible for fifty, a hundred, or more workers.

When employees break the rules of the organization, they often need assistance to change their behavior so as to operate within the established parameters. Counseling and coaching could be a part of this process, but they usually take place prior to disciplinary actions. If employees change their behavior as a result of disciplinary actions and conform to the established work rules, there is no need for further discipline. If a change in behavior does not occur, then a harsher disciplinary procedure will need to be implemented.

The need to resort to disciplinary procedures may be lessened by (1) smart hiring, using background checks and extensive interviews; (2) performance evaluations with clear goals and objectives; (3) training and development to improve skills and increase performance; and (4) rewarding performance and goal achievement.

USING THE DISCIPLINARY PROCEDURE

Although most employees do follow the organization's rules and regulations, there are times when the employer must use the discipline procedure. Frequent reasons for using the procedure include the following:

Absence from work

Absenteeism

Abusing customers

Abusive language toward supervisor

Assault and fighting among employees

Causing unsafe working conditions

Damage to or loss of machinery or materials

Dishonesty

Disloyalty to employer (includes competing with employer, conflict of interest)

Falsifying company records (including time records, production records)

Falsifying employment application

Gambling

Horseplay

Incompetence (including low productivity)

Insubordination

Leaving place of work (including quitting early)

Loafing

Misconduct during a strike

Negligence

Obscene or immoral conduct

Participation in a prohibited strike

Possession or use of drugs or intoxicants

Profane or abusive language (not toward supervisor)

Refusal to accept a job assignment

Refusal to work overtime

Sleeping on the job

Slowdown

Tardiness

Theft

Threat to or assault of management representative

A formal disciplinary procedure usually begins with an oral warning and progresses through a written warning, suspension, and, ultimately, discharge. Formal disciplinary procedures also outline the penalty for each successive offense and define time limits for maintaining records of each offense and penalty. For instance, tardiness records might be maintained for only a six-month period. Tardiness prior to the six months preceding the offense would not be considered in the disciplinary action. Less formal procedures generally specify the reasons for disciplinary action as being for just or proper cause.

Preventing the disciplinary procedure from progressing beyond the oral warning stage is obviously advantageous to both the employee and management. Discipline should be aimed at correction rather than punishment. If the behavior can be corrected by a friendly talk between the supervisor and the employee, there is less chance that the problem will become a source of bitterness. Formal oral or written warnings are less likely to cause animosity than would a suspension. Of course, the most costly and least acceptable form of discipline is discharge. Disciplinary procedures should be viewed as a means of encouraging employees to abide willingly by the rules and standards of the organization.

The importance of having a procedurally correct performance evaluation system receives constant emphasis. There is a need to adopt procedural due process for performance evaluation systems in order to rate employee job performance accurately because those ratings might be challenged. Legal problems regarding employee disciplinary measures can be prevented by making sure that these measures follow prescribed guidelines, such as these:

- Employees are given advance notice of disciplinary action.
- Disciplinary rules are reasonable.
- Offenses are properly investigated.
- Investigations are conducted objectively.
- Rules are enforced equally.
- Penalties are related to the severity of offenses.

LABOR UNION INVOLVEMENT

Numerous employees in the United States are represented by labor unions. In a unionized organization, the supervisor is the primary link between the organization and union members. The supervisor's first responsibility is to uphold the interests of management. At the same time, the supervisor must fulfill the contractual obligations of management and see that the union fulfills its obligations. Collective bargaining between management and the union determines terms of worker contracts, legal documents that cover a specified period of time. Union contracts include provisions for a worker grievance and disciplinary procedures. For example, the union contract may stipulate that an employee can be disciplined for just cause. To fulfill this provision, management must develop a system of discipline that supervisors must follow.

FEATURE OF AN EFFECTIVE DISCIPLINARY PROCESS

A disciplinary procedure is directed against the worker's behavior rather than the person. Key features of an effective process include the following principles of disciplining workers.

1. The length of time between the misconduct and the discipline should be short. For discipline to be most effective, it must be administered as soon as possible, but without making an emotional, irrational decision.

2. Disciplinary action should be preceded by advance warning. Noting rule infractions in an employee's record is not sufficient to support disciplinary action. An employee who is not advised of an infraction is not considered to have been given a warning. Noting that the employee was advised of the infraction and having the employee sign a discipline form are both valid employment practices. Failure to warn an employee of the consequences of repeated violations of a rule is a frequently cited reason for overturning a disciplinary action.

3. Consistency in the discipline procedure is key. Inconsistency lowers morale, diminishes respect for the supervisor, and leads to grievances. Consistency does not mean that an absence of past infractions, long length of service, a good work record, and other mitigating factors should not be considered when applying discipline. However, an employee should feel that under essentially the same circumstances any other employee would have received the same punishment/penalty.

4. Supervisors should take steps to ensure impartiality when applying discipline. The employee should feel that the disciplinary action is a consequence of behavior, not of personality or relationship to the supervisor. The supervisor should avoid arguing with the employee and

should administer discipline in a straightforward, calm manner. Administering discipline without anger or apology and then resuming a pleasant relationship aid in reducing the negative effects of discipline.

5. Ordinarily, the supervisor should administer discipline in private. Only in the case of gross insubordination or flagrant and serious rule violations is a public reprimand desirable. Then a public reprimand helps the supervisor regain control of a situation. Even in such situations, however, the supervisor's objective should be to regain control, not to embarrass the employee.

6. The supervisor should warn the employee of the result of repeated violations. Sometimes suggestions to the employee on ways to correct behavior are beneficial. Supervisors should be very reluctant to impose disciplinary suspensions and to discharge workers. Usually, discipline of this degree is reserved for higher levels of management. However, even though supervisors usually lack the power to administer disciplinary suspensions or to discharge workers, they are nearly always the ones who must recommend such action to higher management.

7. Finally, it is necessary to document the action taken and inform others in the organization. Any time an organization takes disciplinary action, it must consider the possibility of an Equal Employment Opportunity complaint. The documentation should be sufficiently detailed that another manager at a similar level in the organization would come to the same conclusions or least see clearly why the decision was made. Sufficient documentation does not mean that every detail of an individual's work needs to be recorded. Rather, the manager should keep accurate records of those elements that significantly contribute to or hamper the work effort. In addition, this information, both positive and negative, should be communicated to the employee either orally or in writing.

SUMMARY

If a company is to have a successful employee disciplinary procedure, both the organization and the manager have important roles to play. In practice, companies assume the responsibility of establishing rules, communicating them to employees, and developing a penalty system for enforcing them. The manager's role in the disciplinary procedure is distinct from that of the organization, yet the two overlap and support each other. Managers are responsible for implementing the organization's discipline procedure. This requires them to do several things: They must compare their organization's rules with employee behavior to determine whether a rule has been broken; they must determine whether they have sufficient proof that the employee did indeed break the rule; they must decide what corrective action should be taken and then take it; and they must document whatever action is taken. To the extent that all managers perform these steps effectively, the disciplinary procedure will be effective and there is a very good chance that employee behavior on the job can be significantly improved.

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Marcia Anderson

EMPLOYEE MOTIVATION

(SEE: *Motivation*)

ENTREPRENEURSHIP

A subject taught in many high schools and colleges, *entrepreneurship* is actually defined as ''the state of being an entrepreneur.'' An entrepreneur is an individual who owns, organizes, and manages a business and, in so doing, assumes the risk of either making a profit or losing the investment. According to the Small Business Administration (1999), the total number of businesses in the United States in 1995 was somewhere between 16 million and 24 million, of which approximately 15,000 were large. In 1997, there were an estimated 8.5 million businesses owned by women.

For any business to be successful, an adequate level of funding must be furnished. The amount needed varies according to the scope and nature of the business. Another key factor in the success of an entrepreneurial organization is planning, including planning for the marketing, management, and financial aspects of the business.

From a personal perspective, becoming an entrepreneur is not a simple task. It certainly has its drawbacks. However, it can also be quite rewarding.

BENEFITS AND DRAWBACKS OF ENTREPRENEURSHIP

Choosing to create a new business, or even to purchase an existing one, is a decision that has a far-reaching impact. Long hours, poor pay, and an unclear future are only three of the challenges a budding entrepreneur must face. And, of course, losing everything one invests in a business is a very real risk. In fact, while 885,416 ''new employer firms'' were created in 1997, as reported by the U.S. Department of Labor, 857,073 businesses were terminated during the same year, with 53,826 of these being bankruptcies and 83,384 being failures. Failures and bankruptcies are business closures that occur while the business owes debts.

Computer entrepreneur Bill Gates.

However, the potential rewards are unlimited. Business owners can profit greatly. Many of the wealthiest people on earth are entrepreneurs, including William Henry Gates III, the world's richest person and co-founder, chairman, and CEO of Microsoft Corporation. Another reward entrepreneurs tend to appreciate is independence. However, entrepreneurs' time is not necessarily their own. The work of the business must be completed, and often the entrepreneur is the one who must perform the most complex tasks of the business. Although others may work for the owner and manager of the business, it is ultimately the responsibility of the entrepreneur to make sure that the work gets done. Other rewards cited by entrepreneurs include personal satisfaction gained while performing the duties of the business and the resulting prestige.

BUSINESS PLAN

Planning is a key ingredient in the success of an entrepreneur. A business plan helps to guide the decision making needed to operate a business. The first decision is to choose what sort of business to own. The business may be:

- a retail business that markets a tangible product (such as clothing, houses, food)
- a wholesale business that acquires goods from a producer and distributes requested quantities to retailers
- a service business that offers an intangible product (such as insurance, haircuts, consultant services, construction, financial services)
- a manufacturing business that produces a product

Of course, a business may perform more than one of these functions. The scope of the business will also be dependent on the breadth and depth of the products or services offered as well as the geographic region served.

One option available to someone interested in purchasing a business is a franchise. A franchise is a license to organize a business that markets products manufactured or owned by a parent company, such as a Kwik Copy, Sleep Inn, McDonald's, Play It Again Sports, or other businesses.

Another early decision involves choosing the legal form of ownership. Three options are sole proprietorship, partnership, and corporation. In a sole proprietorship, a single person owns and operates the business. The owner assumes all risks and responsibilities for the business, including debts. Two or more individuals may form a partnership and serve as co-owners of the business. If the partnership is a general partnership, all partners assume unlimited liability. However, if the partnership is a limited partnership, one or more of the partners assumes unlimited liability while the remaining partner(s) do(es) not. Instead, they may lose up to the amount of their investment, while having limited involvement in the business.

The third form of ownership is the corporation. A corporation is a group of individuals who obtain a charter giving the organization formed by the group legal rights and privileges. This organization can perform such functions as buying and selling, as well as owning property, as if the group were an individual person. The corporation is actually owned by individuals who purchase stock. A major advantage of this form of ownership is that the stockholders themselves have limited liability, thus minimizing financial risks.

The Small Business Administration (1999) reports that in 1996, according to the Internal Revenue Service, 16,471,000 sole proprietorships, 1,679,000 partnerships, and 5,005,000 corporations filed nonfarm business tax returns.

A business plan often contains three major sections: the marketing plan, the management plan, and the financial plan.

Marketing Plan Marketing is a process in which the decisions of the business are based upon the goals of the organization. One of these goals is usually that of satisfying the needs and wants of potential customers or a target market. Potential customers can be divided into specific market segments that represent groups based on specified characteristics. For example, a business may strive to serve those in their late teens and early twenties who live primarily in large cities. Narrowing the segment even further, the business may offer goods or services for those interested specifically in sports—both as active players and as spectators or fans. Thus the business may sell athletic shoes and clothing, sports equipment, and "how-to" books. The owner(s) would locate this business in an area with a large number of people in that age group. Other factors to consider when defining a target market include such demographic factors as income level, sex, marital status, and ethnic group, and such geographic factors as climate and region of the country.

Part of the marketing plan is the marketing mix. A marketing mix has four basic components: product, place, price, and promotion.

Product: The product is the goods and/or services offered by the business. A travel agent may offer the service of arranging any type of trip to anywhere in the world or may specialize specifically in cruises. Choosing products is dependent on the market segment the business intends to serve. Other considerations include the amount of physical space available for storing the product, the amount of funds needed to purchase the product from the wholesaler or manufacturer, and the profitability potential of offering the product. Another important consideration is the product's life cycle. A life cycle has four sections: introduction, growth, maturity, and decline. When a new product is introduced to the market, it is in the introduction phase. Over time, it may grow in popularity and sales, reaching a point of maturity. Maturity is then followed by decline. An entrepreneur must be careful to avoid offering products or services that are in decline. That is one of the reasons for continually monitoring the sales of products and adjusting the product mix to reflect such changes in the product life cycle.

Place: Another factor in the marketing mix is place. Marketers often say that the success of a business is dependent upon "location . . . location . . . location." Choosing the location of the business is an important decision that must take into consideration such factors as the chosen target market, traffic patterns, parking availability, population trends, competitive businesses, rental costs, and other expenses. The place function also includes business activities that involve physical distribution, such as transporting goods, handling the goods, storing the goods, and keeping track of the goods (inventory).

An increasing number of businesses are locating on the Internet. Entrepreneurs create World Wide Web pages on which they promote their offerings. Consumers may either telephone the business to order the product or service or use a credit card to purchase the item over the Internet. The actual location of the business is less important since the Web is available throughout the country and, indeed, the world. However, the location still must be considered relative to business expenses (e.g., rent, utility prices) and transportation prices (e.g., cost of transporting products purchased on the Internet from the business to the customer).

Businesses can also be located in the home; in fact, home-based businesses represent a large portion of businesses in the United States. Many entrepreneurs begin their businesses in the home and eventually outgrow the space available there, at which point the owner usually seeks an outside facility.

Price: Price is the third component of the marketing mix. A pricing structure must be developed that includes specific goals and reflects policies of the business. A goal may reflect an intended image of the business or a particular profit margin that is sought. Factors to consider when identifying goals and policies related to price are: the amount of sales that are sought, pricing policies of competitors, profits that are projected, supply of the product that is available and projected demand for that product, the location of the business, and the expenses of the business.

Promotion: The fourth component of the marketing mix is promotion—the activities of the business that are intended to inform potential customers about the product or service and persuade them to purchase it. Methods include personal selling, advertising, visual merchandising (the coordination of all physical elements in a business such as displays, counters, offices, windows, signs, fixtures, lighting, and such), and publicity. The effectiveness of promotional strategies must be monitored so that promotional dollars are spent on strategies that are contributing to the achievement of business goals.

Management Plan Another major section of a business plan is the management plan. The four basic functions of management are planning, organizing, directing, and controlling.

Planning involves the determination of goals and objectives for the business, including the actual results sought by the firm. A set of policies and procedures are determined that guide the identification of specific activities that will lead to these goals. Planning does not end with the creation of a business plan, however; it continues throughout the life of the business.

To implement the plan, the entrepreneur organizes the personnel and other resources of the business. An organizational chart is created that shows the hierarchy of the people working in the business. After the number of employees and their qualifications are determined, applicants are recruited and, once hired, are trained. Other types of resources that are organized by management are facilities, equipment, materials, and supplies.

The third management function is directing. Managers direct the work of the business by applying leadership and management skills. They model desired behavior while supervising, motivating, and evaluating their employees. Finally, comparing the plan with the actual results is called "controlling." By observing and studying financial statements, managers can understand the status of the business and adjust activities where necessary to contribute toward the achievement of the business goals. The controlling function also includes evaluation of employees.

Financial Plan The financial aspects of the business must also be planned. The financial plan includes several financial statements. One of these statements is the "statement of financial requirements," which identifies the projected expenses and the assets they will create for a specified time period. Among the expenses listed are those for rent, insurance, telephone, and inventory. The entrepreneur also needs money to meet personal expenses as the business grows. These expenses are also included in this statement. The expenses are used to create assets. Assets are items of value that are owned by the business. For example, if a business purchases land upon which to place a facility for the business, the money needed for the purchase is an expense that then creates the asset of land.

The financial plan also includes the source(s) of the funds needed to meet the financial requirements. Sometimes an entrepreneur will already have all the funds needed; more often these must be acquired from family members, private lending agencies, and/or governmental loan programs.

Another statement included in the financial plan is the income statement, which may be referred to as a profit-and-loss statement or operating statement. This statement is a projection of the sales expected in a given period of time, the cost of the merchandise that will be sold, and the operating expenses of the business. From this information, projected profits or losses are determined.

A financial plan also includes a beginning balance sheet. This form provides a list of the assets, liabilities, and net worth of a business on a given day. Assets are tangible items that are owned by the business, liabilities are the debts of a business, and net worth is the amount of investment that the owner(s) has in the business.

The financial plan also includes a cash-flow analysis and a break-even analysis. The cash-flow analysis identifies the cash generated after expenses and loan principal payments are deducted. This projection is calculated for several years into the future. The break-even analysis identifies the break-even point, which is the level of sales and expenses, including loan principal payments, at which a business has no profit and no loss.

RESOURCES

Information that can help the budding entrepreneur is available from people, printed material, and the Internet. All entrepreneurs need people they can go to for advice. Accountants and attorneys are especially important. An accountant not only provides the financial data and statements for the business but also interprets the information for the entrepreneur. This is important because business decisions must be based on a variety of considerations, including financial ones. Attorneys provide legal advice throughout the process of purchasing or creating a business and owning and managing it.

Other sources of information include financial institutions, the Chamber of Commerce, educational institutions, insurance agents, and suppliers of products used in the business. Publications provide up-to-date information: Books from major publishers, magazines such as

Entrepreneur and *Inc.*, and newsletters and journals offered by associations are available. Many types of businesses are served by trade associations such as the American Hotel and Motel Association, which is comprised of owners and operators of lodging businesses throughout the country. Along with providing publications, these organizations hold conferences and workshops and provide networking opportunities. Various government agencies are also available for advice, such as the Small Business Administration and the Internal Revenue Service.

The Internet provides information from a variety of people and organizations. Although the Internet is a valuable resource, the information available on it is not screened for accuracy. Relevant Web sites can be located by use of search engines that pinpoint specification on categories and topics.

Although it is important that the entrepreneur seeks advice throughout the planning and operation of a business, the ultimate decision maker on matters related to the business is the entrepreneur.

SUCCESSFUL ENTREPRENEURS

Successful entrepreneurs can be found in just about every community in the country. From small businesses employing only a few persons to megabusinesses employing thousands, successful entrepreneurs abound. The following successful entrepreneurs represent a few of those at the high end of success as measured by wealth:

> William (Bill) H. Gates is the co-founder, chairman, and CEO of Microsoft Corporation, the world's leading provider of software for personal computers. Gates was a student at Harvard when he developed BASIC, a programming language for the first microcomputer. He founded Microsoft in 1975 with a childhood friend, Paul Allen. According to Microsoft Corporation, Gates's determination to develop Microsoft stemmed from his belief that the personal computer would be a valuable tool for every home and office; thus he began developing software for personal computers.
>
> Mary Kay Ash launched Mary Kay Cosmetics on September 13, 1963. Mary Kay, Inc. reports that, with a life savings of $5000, Ash launched what is now the largest direct seller of skin care products and the best-selling brand of skin-care and color cosmetics in the United States. Mary Kay Cosmetics originated from an idea of writing a book to help women survive in the male-dominated business world. From there, Ash inadvertently created the marketing plan for Mary Kay Cosmetics.
>
> Gozi Samuel Oburota founded the Gozi Samuel Oburota Certified Public Accountancy Corporation (GSO) in 1994. According to the GSO Corporation, before founding the company, Oburota had served as a senior accountant at IBM, trusted with worldwide accounting responsibility for the DASD 3390 mainframe computer project from product development through manufacturing and general availability. GSO is a full service certified public accounting firm with offices in San Jose, Los Angeles, and Washington, D.C. By 1999, GSO was one of the fastest-growing professional firms headquartered in Silicon Valley. GSO is 100 percent minority owned.

(SEE ALSO: *Factors of Production*)

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ROBERT G. BERNS
JEWEL E. HAIRSTON

ENVIRONMENTAL PROTECTION AGENCY

In December 1970, the U.S. Environmental Protection Agency (EPA) was established as an independent agency. Reorganization Plan #3 of 1970 consolidated fifteen components from five agencies for the purpose of grouping all environmental regulatory activities under a single agency. Most of these functions were housed in the Department of the Interior, Department of Agriculture, and the Department of Health, Education and Welfare.

The purpose of the EPA is to ensure that all Americans and the environment in which they live are safe from health hazards. The EPA has a number of goals: clean air, clean and safe water, safe food, preventing and reducing pollution, water management and restoration of waste sites, redirection of international pollution, and credible deterrents to pollution. Also, the EPA engages in education about pollution and its environmental risks.

The first four goals deal with the immediate environment of people: clean air; clean and safe water; safe food; and preventing pollution and reducing risks in our environment. The remaining goals deal with education, the clean-up of existing pollution, and efforts in the global arena. They involve better water management, the reduction of cross-border environmental risks, the expansion of Americans' right to know about their environment, sound service, improved understanding of environmental risks, credible deterrents to pollution, and greater compliance with the law and effective management.

In addition to these goals, the EPA has adopted a number of principles to guide management in establishing priorities. These guidelines are to reduce environmental risks, to prevent pollution, to focus on children's health, to establish partners with local governments, to maximize public participation, to emphasize community-based solutions, to work with Indian tribes, and to choose cost-effective solutions. The EPA also is engaged in ongoing educational programs, which emphasize the community's right to know about its environmental risks.

The EPA has to enforce fifteen or more statutes or laws, including the Clean Air Act; the Clean Water Act; the Federal Food, Drug, and Cosmetic Act; the Endangered Species Act; the Pollution Prevention Act; and the Federal Insecticide, Fungicide, and Rodenticides Act. The EPA also enforces other laws dealing with pollution and toxic substances.

The EPA has had some major successes since its inception. In the area of air quality: (1) More than half of the large cities now meet air-quality standards; (2) emissions of common air pollutants have dropped by an average of 24 percent; and (3) blood lead levels in children have declined by 75 percent. In the area of water quality: (1) 60 percent of the nation's waterways are safe for fishing and swimming; (2) ocean dumping has been banned; and (3) standards for wastewater have been established for fifty industries. In the area of toxic and pesticide management: (1) DDT has been banned; (2) safer pesticides have been introduced; and (3) toxic emissions have been reduced by 39 percent. Finally, the EPA has been able to set many standards covering a wide range of pollutants. More information is available from the EPA at 401 M Street SW, Washington, D.C. 20460-0003; (202)260-2090; or http://www.epa.gov.

American Electric Power, in Beverly, Ohio, was named in a lawsuit by the Environmental Protection Agency.

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MARY JEAN LUSH
VAL HINTON

EQUAL EMPLOYMENT OPPORTUNITY ACT

The Equal Employment Opportunity Act of 1972 (Public Law 92-261) instituted the federal Equal Employment Opportunity program, which is designed to ensure fair treatment to all segments of society without regard to race, religion, color, national origin, or sex. The goal of this law and program is to make discrimination in employment illegal. Equal Employment Opportunity programs include affirmative action for employment as well as processing of and remedies for discrimination complaints. All employees, including supervisors, managers, former employees, and applicants for employment, regardless of grade level or position, are covered under this legislation. The Equal Employment Opportunity Act of 1972, which amended the Civil Rights Act of 1964 to include public employees, granted enforcement authority to the Civil Service Commission (now the Office of Personnel Management) to ensure nondiscrimination in human resources actions and to establish affirmative employment measures.

Equal Employment Opportunity (EEO) means fair treatment in employment, promotion, training, and other personnel actions without regard to the previously mentioned factors. The main misconception about the EEO is that it applies is only to selected groups, but the EEO

EEO IS FOR EVERYBODY
SSA
RIMINATES
AGAINST
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2000 ??
HOW LONG
MUST WE WAIT
FOR EQUALITY
AT SSA??

Black Males for Justice campaign for Equal Employment Opportunity.

applies to everyone because it is the law. However, the EEO program is not a guarantee of employment for anyone. Under the EEO law, only job-related factors can be used to determine whether an individual is qualified for a particular job.

The development of the EEO policies and laws can be dated back to the Civil Rights Act of 1883, which prohibited political favoritism in federal employment. In 1940, Executive Order 0948 prohibited discrimination in federal agencies based on race, creed, or color. In 1961, Executive Order 10955 required that positive steps be taken to eliminate workplace discrimination in agencies. The next landmark influencing equal employment opportunity was the Equal Pay Act of 1963, which prohibited the payment of different wage rates to workers for substantially similar work on the basis of sex. Title VII of the Civil Rights Act of 1964, which prohibited discrimination based on race, color, sex, religion, or national origin and established the Equal Employment Opportunity Commission (EEOC), was another very influential piece of legislation for the EEO movement. Executive Order 11246 in 1965 was also influential because it named the process for achieving equal employment opportunity—affirmative action. Other important milestones were Executive Order 11375 in 1967, which prohibited discrimination based on sex and required affirmative action employment to help women, and the Age Discrimination in Employment Act of 1967, which prohibited discrimination against persons between the ages of 40 and 70. The final piece of legislation that influenced the Equal Employment Opportunity Act of 1972 was Executive Order 11478 of 1969, which mandated that equal employment opportunities be a part of every aspect of human resources policy and practice in the employment, development, advancement, and treatment of civilian employees of the federal government.

In addition to the Equal Employment Opportunity Act of 1972, two other pieces of legislation dealing with equal employment opportunities have been passed. The Equal Employment Opportunity Act of 1995 is one of these more recent laws. This act prohibits discrimination on fourteen grounds: (1) impairment, (2) marital status, (3) political belief or activity, (4) race, (5) religion, (6) sex, (7) societal status as a person, (8) age, (9) role in business dealings, (10) lawful sexual activity, (11) physical features, (12) pregnancy, (13) position or past positions held as employment, and (14) association with a person who is identified by reference to any of the thirteen other listed grounds. The act also prohibits sexual harassment, which applies to both employers and employees. The other piece of legislation dealing with equal employment opportunity is the Further Amendment to Executive Order 11478, Equal Employment Opportunity in the Federal Government. The order provides a uniform policy for the federal government to use in prohibiting discrimination based on sexual orientation in the federal civilian work force, in addition to race, color, religion, sex, national origin, physical disabilities, or age for which discrimination is prohibited in Executive Order 11478.

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Nikole M. Pogeman

EQUAL PAY ACT

The Equal Pay Act of 1963, which is an amendment to the Fair Labor Standards Act of 1938, is a federal law that requires employers to pay all employees equally for equal work, regardless of their gender. In other words, the act prohibits unequal pay for equal or substantially equal work performed by men and women in the same establishment who are performing under similar working conditions. Enforced by the Equal Employment Opportunity Commission, the Equal Pay Act also bars employers from reducing the wages of either sex in order to comply with the law. The act makes no provisions as to wage discrimination based on race or national origin, addressing only the issue of sex-based wage discrimination and covering only situations involving substantially equal work. The Equal Pay Act applies to all employees covered by the Fair Labor Standards Act, which means that virtually all employees are covered. However, in addition to the employees covered by the Fair Labor Standards Act, the Equal Pay Act covers professional employees such as executives and managers and includes administrators and teachers in elementary and secondary schools.

In order to fully understand the Equal Pay Act, it is important to determine the definition of "equal work." Jobs do not have to be identical for them to be considered equal. The courts have ruled that two jobs are equal for the purposes of the Equal Pay Act when both require equal levels of skill, effort, and responsibility and are performed under similar conditions. Although there is a lot of room for interpretation, the focus of equal work should be on only the duties performed. Job titles, classifications, and descriptions may weigh into the determination, but they are not all that is considered.

Significant legal history of employment discrimination began to appear in the early 1960s. The Equal Pay Act of 1963 was established to fix pay contingent upon the job. The act has almost always been applied to situations in which women are being paid less than men for doing similar jobs. Indeed, the law was passed to help rectify the problems faced by women workers because of sex discrimination in employment. The Equal Pay Act was closely followed by Title VII of the Civil Rights Act of 1964, which pro-

EQUAL PAY FOR
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President Clinton speaks on Equal Pay.

hibits discrimination in employment. However, the Equal Pay Act provides two advantages over Title VII of the Civil Rights Act. First, a lawsuit can be filed under the Equal Pay Act without first filing a complaint with the Equal Employment Opportunity Commission. In addition, unlike Title VII, the Equal Pay Act does not require proof that the employer acted intentionally when discriminating, which makes an Equal Pay Act case easier to win.

When a worker establishes a pay disparity between a male and a female worker performing substantially equal jobs, the burden of proof shifts to the employer to justify its actions. Employers can defend themselves in one of four ways. The defenses that can be used are to show that the pay disparity was based on (1) a seniority system, (2) a merit system, (3) a system that determines wages based on the quantity or quality of work produced, or (4) some factor other than sex. However, an investigation occurs only if the employee can prove that the male and female are working in the same place, doing equal work, and receiving unequal pay because of their genders. In the event the employer is found guilty of violating the Equal Pay Act, back pay can be doubled if the employer's violation is determined to be willful.

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NIKOLE M. POGEMAN

EQUILIBRIUM

(SEE: *Supply and Demand*)

EQUITY THEORY

(SEE: *Motivation*)

ERGONOMICS

Ergonomics is the science of fitting the job to the worker and adapting the work environment to the needs of humans. An overall goal of ergonomics is to promote health and safety and to optimize productivity.

The term *ergonomics* comes from the Greek words *ergon*, meaning "work", and *nomos*, meaning "laws"—thus, laws of work. The study of ergonomics as a way to reduce human error began in the military during the Korean War. In planes used for pilot training, the eject button was poorly placed and pilots sometimes accidentally ejected themselves—often at too low an altitude for their parachutes to open. The button's location was changed and fewer lives were lost.

Principles of ergonomics are now applied to the design of many elements of everyday life, from car seats to garden tools. Many different occupations are involved in implementing these "human factor" principles in the workplace, such as human factors/ergonomics specialists; safety engineers; industrial hygienists, engineers, designers; human resource managers; occupational medicine physicians and therapists; and chiropractors. Research in ergonomics is ongoing.

Knowledge of basic ergonomics principles is important for both workers and employers because both share responsibility for a safe work environment. One can easily imagine the potential hazards in manufacturing settings where equipment is operated and heavy materials are handled, but hazards exist in other environments, too. And technology (especially computer use) has brought about widespread changes in how work is accomplished.

Attention to ergonomics principles helps to reduce workplace injuries and illnesses that result in workers' compensation costs, medical claims, and lost work time. Many disorders and injuries are preventable when work conditions are designed for human safety and comfort. People need training in how to recognize hazards and safety problems as well as how to control their own behaviors for maximum comfort and health.

One of the key considerations in ergonomics is adjustability of physical elements. People come in all shapes and sizes, and the "average" workstation configuration will not fit everyone. Making changes during a workday in the physical setup of equipment, such as adjusting chair height, can alleviate discomfort and fatigue. Work surfaces should be at comfortable heights in relationship to a chair or to a standing position. Equipment and related items should be arranged conveniently.

Whenever a mismatch occurs between the physical requirements of a job and the physical capacity of a worker, musculoskeletal disorders can result. People working with intense concentration or at high speeds often work with poor posture. Cumulative trauma disorders (also called repetitive strain injuries) are caused by repeating the same motion in awkward positions or with noticeable force, such as in lifting heavy objects. Carpal-tunnel syndrome, a disorder affecting nerves in the wrist that has the potential to permanently disable, is a condition affecting people in a variety of occupations from meatpackers to musicians. Wrist pain can be severe, with treatment involving wrist splints, anti-inflammatory drugs, or even surgery. And people who use a computer extensively are especially prone to developing carpal-tunnel syndrome. Computer use often contributes to vision problems, too.

Posture in standing and in seated positions is important to avoid musculoskeletal disorders. The natural curve of the spine should be maintained, with the head balanced over the spine. When a person is seated:

- Feet should rest on the floor, with legs and body forming 90° to 110° angles.
- The body should be straight, with the neck upright and supporting the head balanced on the spine (not forward or twisted to the sides).
- Upper arms should be perpendicular to the floor; forearms should parallel the floor.

Ergonomic keyboards help ease the strain on computer users' hands and wrists.

Symptoms of musculoskeletal disorders can begin as numbness or stiffness in joints or tingling, aching sensations in muscles. Pain or burning sensations may be evident, too. Often symptoms progress gradually, becoming more severe with prolonged exposure to the condition causing them. Damage to nerves, tendons, joints, or soft tissue can result.

With computer use so prevalent, poor work habits will contribute to musculoskeletal disorders for many people who spend long hours seated at a computer. These include the following:

- Wrists misaligned or excessive force used with a keyboard
- Poor posture used with an incorrect seating height

- A monitor incorrectly positioned, resulting in eye strain and vision problems
- Inappropriate lighting, causing glare on monitors and other work surfaces
- High concentration, causing infrequent breaks

The following paragraphs provide a few guidelines for working conditions when using a computer.

Chair: A well-designed chair with easy-to-implement adjustability is essential. A user can vary angles of back support and the seat pan to control the degree of pressure on the thighs and back. Weight should be evenly distributed, with no extreme pressure points. An upright posture is a little easier to achieve if the seat pan is tilted slightly forward of horizontal. When a person is seated, feet should rest on the floor and the chair seat pan should be even with the back of the knee, ranging from 13 to 19 inches above the floor depending on an individual's height. A foot rest may be used to relieve pressure on the thighs. Both lumbar and mid-level back support are needed. Arm rests, adjustable for height, are helpful to many people. The chair should have a five-point base for stability and casters for easy movement.

Keyboard: The keyboard provides the primary means of interacting with a computer. The keyboard should be in a comfortable position, and wrists should "float" over the keyboard when keying with a light touch so wrists and forearms remain straight. Although wrist pads are helpful for resting when not keying, they can actually create problems when a user keeps wrists on them when keying because the wrists can bend down. Different opinions exist on the appropriate angle of the keyboard; some people prefer a flat position while others find a reverse incline more comfortable. Split and curved keyboards are available, too. However, the most important part of keyboard use is keeping the wrists straight in line with the forearm and not bent to the side. When voice-recognition technology becomes commonly used, dependency on the keyboard will be reduced.

Mouse: A mouse should be positioned next to the keyboard, reachable without extending the arm in an awkward position. Again, a light touch is needed and users should avoid gripping or squeezing the mouse. A wrist support or adjustable mouse platform may be helpful if a user begins to develop wrist problems. A variety of shapes are available for these pointing devices, and a trackball can be used for the same purpose.

Monitor: A monitor should be directly in front of the user, with the top of the screen at or below the line of sight, 18 to 30 inches away from the eyes, and tiltable to avoid glare from overhead lighting and windows. If necessary, antiglare filters can be added. Screen size should be large enough for easy reading of screen character sizes with a screen refresh rate fast enough to avoid a visible flicker. An individual can experience blurred vision or fatigue from a poor monitor viewing angle, reflected glare, or a low-quality monitor. Because glands in the eyelids produce tears that cleanse eyes as the eyelids blink and the eyes move, irritated eyes can develop because one's blink rate tends to decrease when one is concentrating.

To avoid neck and eyestrain, an individual should do the following:

- Use a copyholder positioned near the monitor to support material used with computer work.
- Use lower levels of lighting to reduce glare on monitors. Many older offices have high illumination levels that are necessary for paper-intensive tasks—but are too highly lighted for computer work. Softer overall, or ambient, lighting should be used, with task lighting added to surfaces as needed for more illumination.
- Relax eye muscles by shifting focus from the computer screen to distant objects for a few seconds every 5 to 10 minutes.
- Take microbreaks to stretch the neck, shoulders, hands, wrists, back, and legs as well as to rest the eyes. Stretching exercises can be simple neck rotations, shoulder shrugs, fists clenched and then released, or arms hanging down naturally for a few moments. Get up and move around about every 30 minutes. Take a brisk walk if possible. Exercises with

hand weights will help with stretching and will give the body isometric exercise.

While it may be ideal to have individually adjustable temperature controls, this is not feasible in many work situations. For business offices, most people are comfortable with temperature levels at 68° to 72° in the winter and 72° to 76° in the summer. Humidity levels should be maintained between 40 to 60 percent not only for comfort but also for proper functioning of office equipment. Indoor air quality involves more than heating and cooling—air should be cleansed of pollutants (bacteria, dust, fumes, etc.), with fresh air added before circulation. Many factors affect the efficiency of HVAC (heating, ventilation, and air conditioning) systems. These systems must be designed for the number of people and the equipment to be used in each area because computers and other devices can produce almost as much heat as a human body produces.

Another important concept is adjustability of work pace. Jobs may require redesign to allow workers to accomplish tasks at varying speeds or to enable workers to rotate to different tasks or to use a variety of work methods that permit different movements. Rest breaks are important, too, and microbreaks can be taken to interrupt intense situations, to rest arms and wrists, or to rest eyes.

Much ergonomics information is available in print and on the Internet, published by organizations such as the Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety and Health (NIOSH), the National Safety Council, the Human Factors and Ergonomic Society, and others. OSHA is developing ergonomics program standards that were to be published in 2000 (OSHA 1999). Consultants can provide technical expertise to help with all phases of ergonomics assessment and the implementation of corrective measures and/or training programs.

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PAT R. GRAVES

ETHICS IN ACCOUNTING

Ethics in accounting is of utmost importance to accounting professionals and those who rely on their services. Certified Public Accountants (CPAs) and other accounting professionals know that people who use their services, especially decision makers using financial statements, expect them to be highly competent, reliable, and objective. Those who work in the field of accounting must not only be well qualified but must also possess a high degree of professional integrity. A professional's good reputation is one of his or her most important possessions.

The general ethical standards of society apply to people in professions such as medicine and accounting just as much as to anyone else. However, society places even higher expectations on professionals. People need to have confidence in the quality of the complex services provided by professionals. Because of these high expectations, professions have adopted codes of ethics, also known as codes of professional conduct. These ethical codes call for their members to maintain a level of self-discipline that goes beyond the requirements of laws and regulations.

CODES OF ETHICS

By joining their professional organizations, people who work in the field of accounting agree to uphold the high ethical standards of their profession. Each of the major professional associations for accountants has a code of ethics. The Code of Professional Conduct of the American Institute of CPAs (AICPA), the national professional association for CPAs, sets forth ethical principles and rules of conduct for its members. The principles are positively stated and provide general guidelines that CPAs (or any professionals, for that matter) should strive to follow. The rules of conduct are much more explicit as to specific actions that should or should not be taken. The Institute of Management Accountants (IMA) Standards of Ethical Conduct applies to practitioners of management accounting and financial management, and the Institute of Internal Auditors (IIA) Code of Ethics applies to its members and to Certified Internal Auditors (CIAs).

ETHICAL RESPONSIBILITIES

A distinguishing mark of professions such as medicine and accounting is acceptance of their responsibilities to the public. The AICPA Code of Professional Conduct describes the accounting profession's public as consisting of "clients, credit grantors, governments, employers, investors, the business and financial community, and others who rely on the objectivity and integrity of CPAs to maintain the orderly functioning of commerce." Many, but not all, CPAs work in firms that provide accounting, auditing, and other services to the general public; these CPAs are said to be *in public practice.* Regardless of where CPAs work, the AICPA Code applies to their professional conduct, although there are some special provisions for those in public practice. Internal auditors, management accountants, and financial managers most commonly are employees of the organizations to which they provide these services; but, as professionals, they, too, must also be mindful of their obligations to the public.

The responsibilities placed on accounting professionals by the three ethics codes and the related professional standards have many similarities. All three require professional competence, confidentiality, integrity, and objectivity. Accounting professionals should only undertake tasks that they can complete with professional competence, and they must carry out their responsibilities with sufficient care and diligence, usually referred to as *due professional care* or *due care.* The codes of ethics of the AICPA, IMA, and IIA all require that confidential information known to accounting professionals not be disclosed to outsiders. The most significant exception to the confidentiality rules is that accounting professionals' workpapers are subject to subpoena by a court; nothing analogous to attorney-client privilege exists.

INDEPENDENCE

Maintaining integrity and objectivity calls for avoiding both actual and apparent conflicts of interest. This notion is termed *independence.* Being independent in fact and in appearance means that one not only is unbiased, impartial, and objective but also is *perceived* to be that way by others. While applicable to all accounting professionals, independence is especially important for CPAs in public practice. The AICPA's rules pertaining to independence for CPAs who perform audits are detailed and technical. For instance, a CPA lacks independence and thus may not audit a company if he or she (or the spouse or dependents) owns stock in that company and/or has certain other financial or employment relationships with the client.

ETHICS ENFORCEMENT

To a large extent, the accounting profession is self-regulated through various professional associations rather than being regulated by the government. The AICPA, the IMA, and the IIA have internal means to enforce the codes of ethics. Furthermore, the professional organizations for CPAs in each state, known as *state societies of CPAs*, have mechanisms for enforcing their codes of ethics, which are usually very similar to the AICPA Code. Violations of ethical standards can lead to a person's being publicly expelled from the professional organization. Because of the extreme importance of a professional accountant's reputation, expulsion is a strong disciplinary measure. However, ethical violations can lead to even more adverse consequences for CPAs because of state and federal laws.

The state government issues a CPA's license to practice, usually through an organization known as the *state board of accountancy.* Since state laws governing the practice of accountancy typically include important parts of the AICPA Code, the Code thus gains legal enforceability. Consequently, ethical violations can result in the state's revoking a CPA's license to practice on a temporary or even permanent basis. Because a licensed CPA is also likely to belong to the AICPA and the state society of CPAs, investigations of ethics violations may be carried out jointly by the AICPA, the state society, and the state board of accountancy.

CPAs in public practice who audit the financial statements of public corporations are subject to federal securities laws and regulations, including the Securities Exchange Act of 1934. The Securities and Exchange Commission (SEC), which administers these laws, has broad powers to regulate corporations that sell their stock to the public. One important SEC requirement is that these corporations' financial statements be audited by an independent CPA. The SEC has the authority to establish and enforce auditing standards and procedures, including what constitutes independence for a CPA. The SEC has largely delegated standard setting to the private sector but retains oversight and enforcement responsibilities. In 1998 the SEC and the AICPA jointly announced the creation of the Independence Standards Board (ISB), a private-sector body whose mission is to improve auditor independence standards. In announcing the formation of the ISB, the SEC reaffirmed the crucial importance of the CPA's independence: "[M]aintaining the independence of auditors of financial statements . . . is crucial to the credibility of financial reporting and, in turn, to the capital formation process" (SEC Release FRR-50, 1998).

(SEE ALSO: *American Institute of Certified Public Accountants*; *Institute of Internal Auditors*; *Institute for Management Accountants*; *State Societies of CPAs*)

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MARY BRADY GREENAWALT

ETHICS IN ECONOMICS

As might be suspected, early writings on ethics were centered not on economics or business, but personal beliefs and actions. It becomes readily apparent from early discussions of ethics that philosophers and writers viewed ethics as a matter of choice. Individuals must make choices in their lives. This is important to note—businesses don't make choices. Choices are made and/or implemented by individuals within the economic enterprise. People in government make choices, people in educational institutions make choices, people in businesses make choices, people with churches make choices; everyone is forced to make choices, and even the choice not to choose is a decision.

ETHICS IN ORGANIZATION

Velasquez (1982) illustrated some important points regarding organizations and their acts relative to individuals in the organization. He stated:

> I. A corporate organization "exists" only if (1) there exist certain human individuals placed in certain circumstances and (2) our linguistic rules lay down that when those kinds of individuals exist in those kinds of circumstances, they shall count as a corporate organization.
>
> II. A corporate organization "acts" only if (1) certain human individuals in the organization performed certain actions in certain circumstances and (2) our linguistic rules lay down that when those kinds of individuals perform those kinds of actions in those kinds of circumstances, this shall count as an act of their corporate organization. (p. 16)

Linguistic rules are the rules of either written or spoken language. In the above quote, it is pointed out that individuals make up the corporation or business and that the corporation acts when these individuals carry out their assigned duties within the scope of the corporate authority. However, since it is human individuals on whom the corporation depends, it is these individuals who are seen to be responsible for moral duties and issues.

Businesses are the most significant institution in the economic structure. As such, businesses are expected to produce goods and services that are demanded by members of society, and once produced, these goods and services must be distributed to the numerous societal groups. Decisions are made within the business structure about who will produce, how much will be produced, how production will be implemented, how the work will be organized, and how the finished good or service will be made available to the consuming members of society. All these decisions are necessary in the day-to-day operation of an economic institution, and all these choices are made by people. It could be argued that computer models are used to make decisions, but it can be further counter-argued that computer models are developed by people and people are the ones who implement recommendations made by computer modeling.

In order for people in all institutions to make choices, there must be some guidelines or principles upon which the choices are based. These guidelines are often referred to as values. Everyone develops a set of values, or preferences, beginning in early childhood—or perhaps even immediately from birth. These values stem from how people are raised, where they live, their ancestry, and all the other factors that influence everyone's lives. If everyone has a value system, everyone must have an ethical system upon which to base judgments and choices. Stemming from this personal set of values will come policies and procedures that will guide all organizations within the economic structure.

Boulding (1968) argued that individuals have a "real" personal ethic, which can be deduced from a person's actual behavior, and a "verbal" ethic, which can be deduced from a person's statements. Boulding found that it is basically a universal phenomenon that a person will talk about one set of ethical principles but act according to another. The old statement "Do as I say, not as I do" seems to reflect an accurate perception of reality.

Ethics, from an economist's perspective, is a matter of choice. Economics is a matter of choice. There are several alternatives from which a choice must be made. A business owner or manager might have to decide between producing weapons for military use or firearms for use by private individuals who pursue the sport of wild game hunting. These decisions are not always easy, especially when guided by the need for the organization to make a profit. The choice that is ultimately made is based on a value system that influences policies and procedures in the organization. In an economic environment, the decision is often made based on values that have been determined to be most important or that are ranked on a scale of best to worst.

A dilemma that faces all decision makers, especially when group decision making is used, is the different value systems that are held by individuals. While organizations have policies and procedures, not every option from which to choose is necessarily easily defined or clearly understood. Many organizations have mechanisms through which those affected by the decision can appeal it for further consideration. In the case of a university student who receives a failing grade but thinks the grade was undeserved because of a conflict with the professor, an appeal by the student might be heard and a decision could be made to overturn the professor's decision. Or the decision might be made in favor of the professor and the student's appeal denied. Such a decision is based on value systems that guide ethical behaviors.

Decisions made by economic institutions do not always match what the general populace thinks is correct. When this happens, the result can be new laws or rules that are passed to try to contain those who are perceived as violating the public trust. For example, many laws have been passed to curb problems with pollution. Antipollution laws are designed to reduce the harmful effects of pollution; when a business does not follow the laws, it can be severely penalized. In some cases, the new laws force the closure of business enterprises because conformity to the laws is cost-prohibitive. This was the case when laws went into effect requiring underground gasoline tanks at service stations to meet Environmental Protection Agency requirements. Many businesses couldn't meet the requirements because of the expenses involved and they closed their doors.

At other times, businesses choose to violate the laws in order to save money. In the long run, this can cost more than the business would have had to pay had the changes been made to comply with the laws. This occurred when a chemical manufacturing company was caught dumping hazardous waste into an Illinois River. The company was told to stop the dumping and was fined a large sum of money. But during the time the environmental inspectors were on the premises, the company chose to dump more waste into the river, saying that if they hadn't done it, there could have been a fatal accident in the plant. They were fined an additional sum. These examples illustrate choices that must be made—not by businesses in economic systems, but by individuals in the businesses.

It was stated earlier that businesses are the most significant institution within the economic structure. It should also be noted, however, that businesses are not the only institutions within an economic structure. There are many other important groups, such as the family, government, churches, and schools. All these institutions play an important role in developing value systems and the moral influences on individuals in businesses.

Because many other institutions influence the thinking of individuals in organizations, different value systems are developed. Some value systems are inconsistent with what is necessary for successful business operations and become a threat to a business and economic system. An example of that is honesty. An individual whose value system does not include complete honesty becomes a threat to successful business operations. Because of threats like these to economic entities, rules are established to deal with those who have different value systems. The rules are called laws, and the government is the largest enforcer of laws.

Governments are important to successful business and economic operations. Governments help to assure fair trade and commerce within a country and internationally. A good example of this is when the U.S. government ordered the breakup of the Bell Telephone System several years ago. It was felt that the system had grown too large and that fair competition wasn't possible. When companies become monopolies, they can set prices and control supplies of goods and services in ways that might not be fair to consumers. A government can intervene to assure fair trade practices. Many laws have been written to influence fair economic trade.

SETTING BUSINESS ETHICAL STANDARDS

Businesses make decisions that influence consumers, employees, and society in general. It is people who make up the businesses, and it is people who must set the standards for ethical conduct. The process for setting standards needs to be a top-down approach—management must develop and support an ethical code. Employees must understand what is expected of them in order to follow the codes. Managers and employees must be trained to interpret and consider alternatives relative to established ethical codes. In larger businesses, compliance offices are often established to assure that ethical codes are followed.

People outside the business must also know what ethical standards are being followed, and they must know that individuals within the company who do not follow the prescribed ethical codes will be dealt with in a manner appropriate to the violation. This illustrates the need to enforce the ethical codes. If a business establishes an ethical code but does not enforce it, the code will not be followed.

SOCIAL RESPONSIBILITY

Closely related to ethical codes are responsibilities that economic enterprises have to society. This is known as social responsibility. This is a difficult element of business operations because it normally means additional costs to the business. Social responsibility could mean making contributions to charitable organizations. An example might be a corporation donating land it is not using to a conservation group for the development of a nature preserve.

Social responsibility also includes internal considerations, such as hiring minorities, establishing on-site child-care facilities, controlling pollution, ensuring safe working conditions, providing substance-abuse programs for employees, and manufacturing safe products. These are all economic decisions that have social effects both within and outside the business.

Businesses that are concerned about social responsibility will conduct social audits. This is a systematic evaluation of the organization's progress toward implementing socially responsible programs. This is not a precise science and depends on interpretations of what is socially responsive behavior. Again, these decisions must be made by individuals within the business. Social audits do illustrate that a business is at least concerned about the social impact it has.

SUMMARY

Ethics is not easy for any business, and there will always be individuals and/or groups who question the behaviors of institutions in our economic system. Our discussion has focused on businesses in the economic system, but other systems such as churches, schools, and governmental agencies are also subjected to critical ethical scrutiny. Ethics and social responsibility are the concern of everyone, and it is up to individuals to establish ethical codes and to follow them.

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ROGER L. LUFT

ETHICS IN FINANCE

Ethics in general is concerned with human behavior that is acceptable or "right" and that is not acceptable or "wrong" based on conventional morality. General ethical norms encompass truthfulness, honesty, integrity, respect for others, fairness, and justice. They relate to all aspects of life, including business and finance. Financial ethics is, therefore, a subset of general ethics.

Ethical norms are essential for maintaining stability and harmony in social life, where people interact with one another. Recognition of others' needs and aspirations, fairness, and cooperative efforts to deal with common issues are, for example, aspects of social behavior that contribute to social stability. In the process of social evolution, we have developed not only an instinct to care for ourselves but also a conscience to care for others. There may arise situations in which the need to care for ourselves runs into conflict with the need to care for others. In such situations, ethical norms are needed to guide our behavior. As Demsey (1999) puts it: "Ethics represents the attempt to resolve the conflict between selfishness and selflessness; between our material needs and our conscience."

Ethical dilemmas and ethical violations in finance can be attributed to an inconsistency in the conceptual framework of modern financial-economic theory and the widespread use of a principal-agent model of relationship in financial transactions. The financial-economic theory that underlies the modern capitalist system is based on the rational-maximizer paradigm, which holds that individuals are self-seeking (egoistic) and that they behave rationally when they seek to maximize their own interests. The principal-agent model of relationships refers to an arrangement whereby one party, acting as an agent for another, carries out certain functions on behalf of that other. Such arrangements are an integral part of the modern economic and financial system, and it is difficult to imagine it functioning without them.

The behavioral assumption of the modern financial-economic theory runs counter to the ideas of trustworthiness, loyalty, fidelity, stewardship, and concern for others that underlie the traditional principal-agent relationship. The traditional concept of agency is based on moral values. But if human beings are rational maximizers, then agency on behalf of others in the traditional sense is impossible. As Duska (1992) explains it: "To do something for another in a system geared to maximize self-interest is foolish. Such an answer, though, points out an inconsistency at the heart of the system, for a system that has rules requiring agents to look out for others while encouraging individuals to look out only for themselves, destroys the practice of looking out for others" (p. 61).

The ethical dilemma presented by the problem of conflicting interests has been addressed in some areas of finance, such as corporate governance, by converting the agency relationship into a purely contractual relationship that uses a carrot-and-stick approach to ensure ethical behavior by agents. In corporate governance, the problem of conflict between management (agent) and stockholders (principal) is described as an agency problem. Economists have developed an agency theory to deal with this problem. The agency theory assumes that both the agent and the principal are self-interested and aim to maximize their gain in their relationship. A simple example would be the case of a store manager acting as an agent for the owner of the store. The store manager wants as much pay as possible for as little work as possible, and the store owner wants as much work from the manager for as little pay as possible. This theory is value-free because it does not pass judgment on whether the maximization behavior is good or bad and is not concerned with what a just pay for the manager might be. It drops the ideas of honesty and loyalty from the agency relationship because of their incompatibility with the fundamental assumption of rational maximization. "The job of agency theory is to help devise techniques for describing the conflict inherent in the principal-agent relationship and controlling the situations so that the agent, acting from self-interest, does as little harm as possible to the principal's interest" (DeGeorge, 1992). The agency theory turns the traditional concept of agency relationship into a structured (contractual) relationship in which the principal can influence the actions of agents through incentives, motivations, and punishment schemes. The principal essentially uses monetary rewards, punishments, and the agency laws to command loyalty from the agent.

Most of our needs for financial services—management of retirement savings, stock and bond investing, and protection against unforeseen events, to name a few—are such that they are better entrusted to others because we have neither the ability nor the time to carry them out effectively. The corporate device of contractualization of the agency relationship is, however, too difficult to apply to the multitude of financial dealings between individuals and institutions that take place in the financial market every day. Individuals are not as well organized as stockholders, and they are often unaware of the agency problem. Lack of information also limits their ability to monitor an agent's behavior. Therefore, what we have in our complex modern economic system is a paradoxical situation: the ever-increasing need for getting things done by others on the one hand, and the description of human nature that emphasizes selfish behavior on the other. This paradoxical situation, or the inconsistency in the foundation of the modern capitalist system, can explain most of the ethical problems and declining morality in the modern business and finance arena.

ETHICAL VIOLATIONS

The most frequently occurring ethical violations in finance relate to insider trading, stakeholder interest versus stockholder interest, investment management, and campaign financing. Business in general and financial markets in particular are replete with examples of violations of trust and loyalty in both public and private dealings. Fraudulent financial dealings, influence peddling and corruption in governments, brokers not maintaining proper records of customer trading, cheating customers of their trading profits, unauthorized transactions, insider trading, misuse of customer funds for personal gain, mispricing customer trades, and corruption and larceny in banking have become common occurrences.

Insider trading is perhaps one of the most publicized unethical behaviors by traders. Insider trading refers to trading in the securities of a company to take advantage of material "inside" information about the company that is not available to the public. Such a trade is motivated by the possibility of generating extraordinary gain with the help of nonpublic information (information not yet made public). It gives the trader an unfair advantage over other traders in the same security. Insider trading was legal in some European countries until recently. In the United States, the 1984 Trading Sanctions Act made it illegal to trade in a security while in the possession of material nonpublic information. The law applies to both the insiders, who have access to nonpublic information, and the people with whom they share such information.

Campaign financing in the United States has been a major source of concern to the public because it raises the issue of conflict of interest for elected officials in relation to the people or lobbying groups that have financed their campaigns. The United States has a long history of campaign finance reform. The Federal Election Commission (FEC) administers and enforces the federal campaign finance statutes enacted by the Congress from time to time. Many states have also passed lobbying and campaign finance laws and established ethics commissions to enforce these statutes.

ETHICAL CODES

Approaches to dealing with ethical problems in finance range from establishing ethical codes for financial professionals to efforts to replace the rational-maximizer (egoistic) paradigm that underlies the modern capitalist system by one in which individuals are assumed to be altruistic, honest, and basically virtuous.

It is not uncommon to find established ethical codes and ethical offices in American corporations and in financial markets. Ethical codes for financial markets are established by the official regulatory agencies and self-regulating organizations to ensure ethically responsible behavior on the part of the operatives in the financial markets.

One of the most important and powerful official regulatory agencies for the securities industry in the United States is the Securities and Exchange Commission (SEC). It is in charge of implementing federal securities laws, and, as such, it sets up rules and regulations for the proper conduct of professionals operating within its regulatory jurisdiction. Many professionals play a role within the securities industry, among the most important of which are accountants, broker-dealers, investment advisers, and investment companies. Any improper or unethical conduct on the part of these professionals is of great concern to the SEC, whose primary responsibility is to protect investor interests and maintain the integrity of the securities market. The SEC can censure, suspend, or bar professionals who practice within its regulatory domain for lack of requisite qualifications or unethical and improper conduct. The SEC also oversees self-regulatory organizations (SROs), which include stock exchanges, the National Association of Security Dealers (NASD), the Municipal Securities Rulemaking Board (MSRB), clearing agencies, transfer agents, and securities information processors. An SRO is a membership organization that makes and enforces rules for its members based on the federal securities laws. The SEC has the responsibility of reviewing and approving the rules made by SROs.

Other rule-making agencies include the Federal Reserve System, the Federal Deposit Insurance Corporation (FDIC), and state finance authorities. Congress has entrusted to the Federal Reserve Board the responsibility of implementing laws pertaining to a wide range of banking and financial activities, a task that it carries out through its regulations. One such regulation has to do with unfair or deceptive acts or practices. The FDIC has its own rules and regulations for the banking industry, and it also draws its power to regulate from various banking laws passed by Congress.

In addition to federal and state regulatory agencies, various professional associations set their own rules of good conduct for their members. The American Institute of Certified Public Accountants (AICPA), the American Institute of Certified Planners (AICP), the Investment Company Institute (ICI), the American Society of Chartered Life Underwriters (ASCLU), the Institute of Chartered Financial Analysts (ICFA), the National Association of Bank Loan and Credit Officers (also known as Robert Morris Associates), and the Association for Investment Management and Research (AIMR) are some of the professional associations that have well-publicized codes of ethics.

TOWARD A PARADIGM SHIFT

There has been an effort to address the ethical problems in business and finance by reexamining the conceptual foundation of the modern capitalist system and changing it to one that is consistent with the traditional model of agency relationship. The proponents of a paradigm shift question the rational-maximizer assumption that underlies the modern financial-economic theory and reject the idea that all human actions are motivated by self-interest. They embrace an alternative assumption—that human beings are to some degree ethical and altruistic—and emphasize the role of the traditional principal-agent relationship based on honesty, loyalty, and trust. Duska (1992) argues: "Clearly, there is an extent to which [Adam] Smith and the economists are right. Human beings are self-interested and will not always look out for the interest of others. But there are times they will set aside their interests to act on behalf of others. Agency situations were presumably set up to guarantee those times."

The idea that human beings can be honest and altruistic is an empirically valid assumption; it is not hard to find examples of honesty and altruism in both private and public dealings. There is no reason this idea should not be embraced and nurtured. As Bowie (1991) points out: "Looking out for oneself is a natural, powerful motive that needs little, if any, social reinforcement. . . . Altruistic motives, even if they too are natural, are not as powerful: they need to be socially reinforced and nurtured" (p. 19). If the financial-economic theory accepts the fact that behavioral motivations other than that of wealth maximization are both realistic and desirable, then the agency problem that economists try to deal with will be a nonproblem. For Dobson (1993), the true role of ethics in finance is to be found in the acceptance of "internal good" ("good" in the sense of "right" rather than in the sense of "physical product"), which, he adds, is what classical philosophers describe as "virtue"—that is, the internal good toward which all human endeavor should strive. He contends: "If the attainment of internal goods were to become generally accepted as the ultimate objective of all human endeavor, both personal and professional, then financial markets would become truly ethical" (p. 60).

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ANAND G. SHETTY

ETHICS IN INFORMATION PROCESSING

New technologies in information processing often raise ethical concerns, resulting from their creating new possibilities for human action. *Computer ethics* can be defined as moral philosophy concerning the ethical dilemmas involved in areas of information processing, including theories, approaches in decision-making situations, and methods of increasing awareness of ethics. These ethical and moral issues are among the most socially important aspects of information processing. There are two major problems in the area: (1) unethical behavior leading to immoral acts such as virus creation and software piracy and (2) lack of awareness about information technology security and information technology-related crimes (Siponen and Kajava, 1999).

Ethics in information processing is considered so important that the Computer Ethics Institute developed the following Ten Commandments of Computer Ethics.

> Thou shalt not use a computer to harm other people.
>
> Thou shalt not interfere with other people's computer work.
>
> Thou shalt not snoop around in other people's computer files.
>
> Thou shalt not use a computer to steal.
>
> Thou shalt not use a computer to bear false witness.
>
> Thou shalt not copy or use proprietary software for which you have not paid.
>
> Thou shalt not use other people's computer resources without authorization or proper compensation.
>
> Thou shalt not appropriate other people's intellectual output.
>
> Thou shalt think about the social consequences of the program you are writing or the system you are designing.
>
> Thou shalt always use a computer in ways that ensure consideration and respect for your fellow humans.

INFORMATION-PROCESSING ETHICS AND BUSINESS

Ethical issues raised by information processing in business include confidentiality of data, software piracy, hacking, and stealing the property of others. In order to determine the ethical knowledge and behavior of young people, a survey of 780 high school and university business students was conducted (Vincent and Meche, 1998). The ethical knowledge survey was made up of nineteen questions, six of which were the information-processing questions shown in Table 1.

All of the actions in Table 1 are unethical. The responses shown in the table demonstrate that ethical problems exist among young people. As can be seen, some do not recognize ethical dilemmas, and many would participate in unethical behavior regardless. For instance, revealing confidential information, stealing the ideas of others, copying software, and punching the time clock from home are unethical behaviors. Unauthorized copying of software—software piracy—is stealing. Besides being strictly illegal in many countries, it is morally wrong, because it violates the right of the owners of the software to receive payment for the use of their invention. Illegal software amounts to more than 90 percent of all software used in some Asian countries, at least 75 percent in Eastern Europe, and less than 33 percent in the United States (Siponen and Kajava, 1999). Additionally, according to a *Computerworld* survey of 255 information systems professionals in corporate America, 53 percent have made unauthorized copies of commer-

Use of Information

		% Ethical		% Would You Do It?	
		High School Yes	Univ Yes	High School Yes	Univ Yes
1.	You are the payroll clerk and know what everyone's salary is. A raise will be given next month. You feel that it would be OK to tell a few of your closest friends what they will be getting.	0.36	0.27	0.54	0.29
2.	Your job is in jeopardy because you have displayed very little initiative. You need this job because you have a family to support. You use a colleague's computer and see a proposal for a new product. You write it up as your own.	0.15	0.12	0.25	0.15
3.	Today is the third day you have had trouble getting to work on time. You can punch in by computer from your home. You do it "just for today" so that you do not lose your job.	0.15	0.10	0.48	0.35
4.	You work for the phone company and have access to private/unlisted numbers. A friend calls you, saying he must make an emergency call; and he needs to know a number that is unlisted. You give your friend the number.	0.17	0.17	0.39	0.42
5.	A really nice word processing program is on the computer in your office. You would like to have it on your home computer, so you copy it.	0.33	0.33	0.59	0.56
6.	You work in a bank and have access to all bank account records. Out of curiosity, you check to see what your friends' bank balances are.	0.10	0.13	0.23	0.21

Table 1

cial software (“Results of a Survey,” 1995). The typical reason given was to try it out before buying it.

Hacking and virus creations are serious crimes that must be treated just like other criminal offenses. Generally speaking, hacking is breaking into other people’s property; it is an immoral action that cannot be justified under any circumstances. One of the most popular hackers’ arguments is that “electrons are free—they do not belong to anybody.” This premise is invalid; there is no reason why electrically committed crimes should be treated differently from physical crimes (Siponen, 1997).

Information on the Net, including thousands of databases and more than four hundred magazines, is extremely hard to control. Search engines or robots have been designed to search for specific information in this immense collection of data. When a search engine filters or controls all the information that a person accesses, there is the danger that the person’s view of the topic will become narrowed (Pedersen, 1996). This offers the designers of search engines an opportunity to manipulate people’s minds by controlling the information they receive. Additionally, online shopping creates the possibility of disclosure of financial information, such as credit card information, to unauthorized parties.

Questions have arisen concerning computer graphics. For example, should graphical re-creations of incidents such as automobile accidents be allowed to be used in courtrooms? Is it right for an individual to electronically reproduce and then alter an artistic image originally created by someone else. It is apparent that there should be clear rules and regulations concerning cyberspace (Johnson, 1994).

INFORMATION-PROCESSING ETHICS AND ETIQUETTE

Courtesy in information processing is often referred to as Netiquette—or etiquette on the Internet. E-mail and chat room etiquette is central to courtesy in cyberspace. In both situations people should follow the Golden Rule: "Do unto others as you would have them do unto you."

Regarding e-mail, one should respond promptly to e-mail messages; think twice before sending personal information and private letters on business systems; not send flame mail (mail written in anger); not send duplicate copies of private e-mail without letting the recipient know who else is getting it; and not send unsolicited mail, such as pyramid schemes, chain letters, and junk mail.

Schools and employers should establish e-mail policies, present them in writing, and have training sessions for all involved. Lack of an e-mail policy creates legal risks. Often, the company is responsible for the e-mail of its employees. Additionally, e-mail is not a secure medium. Many company policy statements say that e-mail is owned or co-owned by the company and that the company has a right to inspect it. The federal Electronic Communication Privacy Act of 1986 prohibits the interception of any wire, oral, or electronic communication, but there is a business exception to the law that allows employers to intercept such communications that are deemed work-related.

Chat room etiquette involves communicating with others over the Internet. The same etiquette used in personal conversation should be observed here. Anonymity does not excuse bad behavior.

INFORMATION-PROCESSING ETHICS AND PORNOGRAPHY

Currently computer pornography means depiction of actual sexual contact (hard-core) and depiction of nudity or lewd exhibition (soft-core). The courts and numerous U.S. statutes concur with the distinction between hard-core and soft-core pornography. Not all pornography meets the legal test for obscenity, however, nor are all depictions of sexual activity deemed pornographic (Albee, 1999). Pornography and obscenity certainly raise a few moral questions: Are pornographic materials morally objectionable or not? Is it right for the state to regulate access to pornographic material by consenting adults? In all the confusion one point should be made: Pornography degrades human beings.

Feminists consider pornography to be demeaning to women, contributing to their being seen as objects of desire and control for men. Some religious leaders maintain that pornography ought to be banned because it is morally wrong. Meanwhile pornography continues to be a huge force in the social and personal context (Albee, 1999).

CODES OF ETHICS IN INFORMATION PROCESSING

The following guidelines should be considered when developing codes of ethics for schools and businesses:

1. Identify prevailing social values before addressing current issues in the school or workplace. Examples of ethical values important to society might include trustworthiness, responsibility, respect, empathy, fairness, and citizenship.
2. In composing the code of ethics, give examples of behaviors that reflect each value.
3. Have key members of the organization review the code and provide input.
4. Review any rules or values incorporated into the code to assure that they adhere to relevant laws and regulations; this ensures that the school or organization is not breaking any of them.
5. Indicate that all employees are expected to conform to the values stated in the code of ethics.
6. Announce and distribute the new code of ethics to all involved.
7. Update the code at least once a year.

Examples of topics typically addressed in codes of ethics include: dressing appropriately; avoiding illegal drugs; following the instructions of superiors; being reliable and prompt; maintaining confidentiality; not accepting personal gifts from stakeholders; avoiding discrimination based on race, gender, age or sexual orientation; avoiding conflicts of interest; complying with laws and regulations; not using the organization's property for personal use; and reporting illegal or questionable activity (McNamara, 1998).

TEACHING INFORMATION PROCESSING ETHICS

In direct and indirect ways people begin to learn ethical values from birth. While the family and religious institutions are assigned the primary responsibility for ethical education, schools have traditionally been charged with teaching and reinforcing moral values, especially those directly related to school behaviors. Since many of the ethical issues that surround technology deal with school behaviors, they are an appropriate and necessary part of the school curriculum. Schools must create technology environments that help students avoid temptations. Computer screens that are easily monitored, use of passwords, and logging in and out of secure network systems, along with videotaping of lab areas, all help remove the opportunities for technology misuse in the media center or classroom.

Teachers and leaders of student groups who want to promote good ethical behavior can use methods such as creating codes of ethics, using stories of good or bad ethical behavior as examples in discussions, inviting speakers, and using case studies, role playing, games, simulations, and mock trials. Of primary importance is the teacher's or student leader's own behavior, which should be exemplary. Technology privileges should not be given to students until they have demonstrated that they know and can apply ethical standards and school policies.

Finally, measures should be taken to improve the solutions to the ethical dilemmas that arise in information processing. There is a need for more specific professional guidelines and codes of ethics; research on ethical problems; education and training; and cooperation among all who are involved with information-processing ethics, including, but not limited to, theologians, philosophers, computer scientists, educators, business people, and attorneys.

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ANNETTE VINCENT
MELANIE A. MECHE

ETHICS IN LAW FOR BUSINESS

This article deals with ethical problems in law in the context of business operations. A lawyer is professionally qualified to give businesspersons advice on what the law is; judges are authorized to decide what the law is; and legislatures, within the limits of the Constitution, may make the law. Religious organizations and other organizations make many statements about what is ethical, but unless the ethical norms are written into law, they are not enforceable and, to some extent, remain a matter of personal opinion.

This article is intended to raise issues of ethics in law for business that may be discussed and debated. It also provides a framework from Aristotle to aid in the discussion of determining the most ethical course. In each case questions may be asked as follows:

1. What are the ethical choices in making this decision?
2. Does the law require the businessperson to make ethical choices?
3. Should the law require the businessperson to make ethical choices?

WHAT IS LAW?

Law for business consists of a set of required norms of behavior. The essence of law is that it commands behavior under threat of punishment or sanction. Tax law requires the payment of money to the government; there is no choice. Contracts are entered into voluntarily, but once entered into they may be enforced through the courts. Many laws have no particular ethical content. Many laws require ethical behavior, and, in rare cases, some laws may require unethical behavior. Frequently the law allows the businessperson the choice to be either ethical or unethical. In those cases the question arises: Should the law require ethical behavior?

WHAT IS ETHICS?

The Greek word *ethos* means "habit." The Greek philosopher Aristotle taught that the ethical person is one who has virtuous habits. Among the virtues are courage, temperance, honor, good temper, truthfulness and justice. Virtues can be learned through education and practice. Aristotle believed virtue and consequent ethical behavior can be learned. He went on to say that we all seek "the good life," which comes when we live in a society of ethical persons—that is, those who behave virtuously. This philosophy can serve as a model for our discussion. We must decide what the elements of "the good life" are (wealth, security, freedom, opportunity). Next, what in a given business situation would be ethical (virtuous behavior), and does the law require or should the law require ethical behavior? In the following paragraphs areas of business law that have ethical issues are considered. The reader is invited to examine the issues in light of the above ethical model.

CONTRACTS AND ETHICS

Business is about making and selling products and exchanging goods and services. When a contractor orders a load of bricks to build a house and then in turn sells the house or hires a worker, it is a constant process of making and fulfilling contracts. A contract is a promise to do something. It may be to deliver goods, to perform a service (say, to paint a house), or possibly to employ or be employed by another. The very process of business is making and fulfilling contracts. Without contracts, no business would be possible. There are many ethical issues involved in making contracts.

For most legal purposes, a person becomes an adult at age eighteen. Before that, a minor may disaffirm an otherwise legal agreement, a provision that exists to protect minors from abuse by overreaching adults. What should the rights and responsibilities of minors be? What about adults who are mentally incompetent or insane?

What about adults of normal intelligence and capacity? Suppose a loan is made on the following terms: "Here is a loan of $20. You will give me $21 back in a week." This is an interest rate of 5 percent a week, which is 5 percent × 52, or 260 percent a year. This contract is illegal in most states. Suppose a fast-talking but honest salesperson sells goods on credit in the buyer's home. Buyers must be told in writing that they have three days to change their minds. Is this ethical?

Under the law of contract, when a transaction is completed, it is final. Suppose a person buys a set of green towels and then decides a couple of days later that red towels would look better. The store could legally say, "you bought them, there's nothing wrong with them; they are yours." If a sign in the store said "All returns must be made within 30 days," that sign becomes part of the contract. Frequently signs warn "No returns on prom and party dresses." This reinforces what the contract already is. A good return policy is simply good business, but the law leaves the ethics of returns up to the store. What return policy is the most ethical for business?

WARRANTIES

A warranty is part of a business contract. It is essentially a binding promise that the product is fit for its intended purposes, is free of defects, and works. Most products of any complexity come with a "limited warranty," which most commonly warrants parts and labor for one year. Also common these days are the sales of extended warranties that extend the one-year warranty up to three or even five years. This allows manufacturers and sellers to write warranties in almost any fashion. The ethical questions are: To what extent should a company stand behind its products? At what point is it ethically correct for the customer to accept the risk of a defective product?

The way warranties are written can raise ethical problems. In an automobile, tires and batteries wear out and are subject to very limited warranties; however, a modern automobile consists of thousands of parts—any one of which may give out or be defective. Warranty descriptions, even when plainly written, can be confusing as to what is included and what is excluded. What, then, is an ethical automobile warranty?

ADVERTISING

Everyone is aware that there is much criticism of the ethics of advertising. False advertising is against the law, and all would agree it is unethical. Famous cases involve a product that was beneficial in many ways but was falsely claimed to prevent colds. In another case, an aspirin company claimed its aspirin was more effective than others.

If a store advertises "apples—5 pounds for $2.50," it must have a "reasonable quantity" on hand; it is considered good business practice to give "rain checks," but doing so is not legally required. It is also against the law to advertise a product at a very low price with the intention of trying to talk customers into higher-priced products. This is known as "bait and switch."

The law allows what is known as sales "puffery." This is an emphasis on subjective qualities, such as that a car is beautiful and will make you "feel good," or that a high-fat food "tastes good" without mentioning the health risks of excess fat. It is easy to look at advertisements and identify sales puffery and half-truths. What is the ethical line?

It is against the law to advertise illegal products, such as controlled substances. But what about legal products that are harmful? Cigarettes may not now be advertised on television or on billboards. Should the ban be extended to advertising in magazines?

Truthful advertising is part of freedom of speech. What other restrictions, if any, should be part of law? What about advertisements for alcohol?

EMPLOYMENT LAW

Few areas of law mix law and ethics as much as employment law. Surely employment is critical to our welfare and thus is of keen interest and subject to much emotional debate.

Employment-at-Will While government employees and unionized workers enjoy more job protection, most employees in the United States are employed at will. The law allows them to be fired for cause or for no cause. A boss, under the law, may fire even a long-term employee simply because the boss does not like the person. In most other industrialized countries employees, after a probationary period, can be fired only for cause (e.g. they are incompetent or steal company property). American law seems to be less ethical. What arguments can be made for American law?

Employment Discrimination Law The United States made a major commitment to putting ethics into law through the Civil Rights Act of 1964, which forbids employment discrimination based on race, religion, creed, national origin, or sex. Other categories, including age and disability status, have been added since then. Most people agree that the United States had great problems of employment discrimination and that today, despite substantial progress, many problems remain. There are many ethical questions. Virtually everyone would agree that it is unethical to discriminate both because it is wrong and because it violates the law. Should the law compel businesses to be ethical and not discriminate?

Jobs Overseas Since almost everyone agrees the American civil rights laws serve an ethical purpose, should American business voluntarily implement these laws as policy in their operations in foreign countries that do not have similar laws?

Wages are substantially lower in many countries, such as Mexico, than in the United States. Many companies have moved all or part of their operations to Mexico. The law allows this. What ethical obligation does a company have to American workers who in many cases will not find comparable employment? What do managers ethically owe to workers and what to the shareholders or owners? What, then, are the ethical obligations to potential Mexican workers who may be eager to take the jobs even though the pay, benefits, and protection are well below U.S. standards? This, in fact, is a whole area of ethical discussion. What standards of employment (pay, benefits, job protection) should American companies and consumers demand when we make or buy goods produced in a foreign country?

ENVIRONMENT

Along with civil rights, the environmental movement has been another great crusade. The purpose of environmentalism is to protect the planet not only for ourselves but also for those who come after us. Compliance with environmental law would seem a basic ethical norm. How far should environmental law go? Chemical companies that make products we all use everyday, by the nature of their business, pollute the environment. What is the ethical position of a chemical company in spending money lobbying the public and Congress on new laws and enforcement of existing ones? Automobiles still pollute the atmosphere, although much less than in the past. Gasohol is a motor fuel made in part from ethanol, which is made from corn, but it is more expensive than gasoline. What are the ethical issues surrounding ethanol?

Global warming is an important environmental issue. According to some, our planet is gradually growing warmer due to pollutants. This could end or radically change life on earth. Others say that the earth naturally warms and cools and that there is no evidence to suggest that there has been any significant change because of pollution. What should be the ethical position of citizens, especially companies that stand to either lose or gain by governmental measures taken?

As with civil rights law, many countries have less stringent laws than the United States regarding environmental issues. American companies with operations in these countries can pollute much more than in the United States. It is also an important point that pollution does not respect national borders. What are the ethical norms that a company should consider in making its policy?

CONCLUSIONS

Aristotle said that deciding what is the best ethical course is not easy. Reasonable people will disagree on what is right. This article is intended to raise questions, not to provide answers. Many more issues of ethics in law for business could be considered. The ultimate, overreaching questions are: What is an ethical company and to what extent should law require ethics?

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CARSON VARNER

ETHICS IN MANAGEMENT

Managers in today's business world increasingly need to be concerned with two separate but interrelated concerns—business ethics and social responsibility.

BUSINESS ETHICS

Perhaps the most practical approach to view ethics is as a catalyst that causes managers to take socially responsible actions. The movement toward including ethics as a critical part of management education began in the 1970s, grew significantly in the 1980s, and is expected to continue growing. Hence, business ethics is a critical component of business leadership. Ethics can be defined as our concern for good behavior. We feel an obligation to consider not only our own personal well-being but also that of other human beings. This is similar to the precept of the Golden Rule: Do unto others as you would have them do unto you. In business, ethics can be defined as the ability and willingness to reflect on values in the course of the organization's decision-making process, to determine how values and decisions affect the various stakeholder groups, and to establish how managers can use these precepts in day-to-day company operations. Ethical business leaders strive for fairness and justice within the confines of sound management practices.

Many people ask why ethics is such a vital component of management practice. It has been said that it makes good business sense for managers to be ethical. Without being ethical, companies cannot be competitive at either the national or international levels. While ethical management practices may not necessarily be linked to specific indicators of financial profitability, there is no inevitable conflict between ethical practices and a firm's emphasis on making a profit; our system of competition presumes underlying values of truthfulness and fair dealing.

The employment of ethical business practices can enhance overall corporate health in three important areas. The first area is productivity. The employees of a corporation are stakeholders who are affected by management practices. When management considers ethics in its actions toward stakeholders, employees can be positively affected. For example, a corporation may decide that business ethics requires a special effort to ensure the health and welfare of employees. Many corporations have established employee advisory programs (EAPs) to help employees with family, work, financial, or legal problems, or with mental illness or chemical dependency. These programs can be a source of enhanced productivity for a corporation.

A second area in which ethical management practices can enhance corporate health is by positively affecting "outside" stakeholders, such as suppliers and customers. A positive public image can attract customers. For example, a manufacturer of baby products carefully guards its public image as a company that puts customer health and well-being ahead of corporate profits, as exemplified in its code of ethics.

The third area in which ethical management practices can enhance corporate health is in minimizing regulation from government agencies. Where companies are believed to be acting unethically, the public is more likely to put pressure on legislators and other government officials to regulate those businesses or to enforce existing regulations. For example, in 1990 hearings were held on the rise in gasoline and home heating oil prices following Iraq's invasion of Kuwait, in part due to the public perception that oil companies were not behaving ethically.

A CODE OF ETHICS

A code of ethics is a formal statement that acts as a guide for how people within a particular organization should act and make decisions in an ethical fashion. Ninety percent of the *Fortune* 500 firms, and almost half of all other firms, have ethical codes. Codes of ethics commonly address such issues as conflict of interest, behavior toward competitors, privacy of information, gift giving, and making political contributions. According to a recent survey, the development and distribution of a code of ethics within an organization is perceived as an effective and efficient means of encouraging ethical practices within organizations (Ross, 1988).

Business leaders cannot assume, however, that merely because they have developed and distributed a code of ethics an organization's members have all the guidelines needed to determine what is ethical and will act accordingly. There is no way that all situations that involve ethical decision making an organization can be addressed in a code. Codes of ethics must be monitored continually to determine whether they are comprehensive and usable guidelines for making ethical business decisions. Managers should view codes of ethics as tools that must be evaluated and refined in order to more effectively encourage ethical practices.

CREATING AN ETHICAL WORKPLACE

Business managers in most organizations commonly strive to encourage ethical practices not only to ensure moral conduct but also to gain whatever business advantage there may be in having potential consumers and employees regard the company as ethical. Creating, distributing, and continually improving a company's code of ethics is one usual step managers can take to establish an ethical workplace.

Another step managers can take is to create a special office or department with the responsibility of ensuring ethical practices within the organization. For example, management at a major supplier of missile systems and aircraft components has established a corporate ethics office. This ethics office is a tangible sign to all employees that management is serious about encouraging ethical practices within the company.

Another way to promote ethics in the workplace is to provide the work force with appropriate training. Several companies conduct training programs aimed at encouraging ethical practices within their organizations. Such programs do not attempt to teach what is moral or ethical but, rather, to give business managers criteria they can use to help determine how ethical a certain action might be. Managers then can feel confident that a potential action will be considered ethical by the general public if it is consistent with one or more of the following standards:

1. *The Golden Rule*: Act in a way you would want others to act toward you.
2. *The utilitarian principle*: Act in a way that results in the greatest good for the greatest number.
3. *Kant's categorical imperative*: Act in such a way that the action taken under the circumstances could be a universal law, or rule, of behavior.
4. *The professional ethic*: Take actions that would be viewed as proper by a disinterested panel of professional peers.
5. *The TV test*: Always ask, "Would I feel comfortable explaining to a national TV audience why I took this action?"
6. *The legal test*: Ask whether the proposed action or decision is legal. Established laws are generally considered minimum standards for ethics.
7. *The four-way test*: Ask whether you can answer "yes" to the following questions as they relate to the decision: Is the decision truthful? Is it fair to all concerned? Will it build goodwill and better friendships? Will it be beneficial to all concerned?

Finally, managers can take responsibility for creating and sustaining conditions in which people are likely to behave ethically and for minimizing conditions in which people might be tempted to behave unethically. Two practices that commonly inspire unethical behavior in organizations are giving unusually high rewards for good performance and unusually severe punishments for poor performance. By eliminating such factors, managers can reduce much of the pressure that people feel to perform unethically. They can also promote the social responsibility of the organization.

SOCIAL RESPONSIBILITY

The term *social responsibility* means different things to different people. Generally, corporate social responsibility is the obligation to take action that protects and improves the welfare of society as a whole as well as organizational interests. According to the concept of corporate social responsibility, a manager must strive to achieve both organizational and societal goals. Current perspectives regarding the fundamentals of social responsibility of businesses are listed and discussed through (1) the Davis model of corporate social responsibility, (2) areas of corporate social responsibility, and (3) varying opinions on social responsibility.

A model of corporate social responsibility developed by Keith Davis (1975) provides five propositions that describe why and how businesses should adhere to the obligation to take action that protects and improves the welfare of society and the organization:

> *Proposition 1*: Social responsibility arises from social power.
>
> *Proposition 2*: Business shall operate as an open system, with open receipt of inputs from society and open disclosure of its operation to the public.
>
> *Proposition 3*: The social costs and benefits of an activity, product, or service shall be thoroughly calculated and considered in deciding whether to proceed with it.
>
> *Proposition 4*: Social costs related to each activity, product, or service shall be passed on to the consumer.
>
> *Proposition 5*: Business institutions, as citizens, have the responsibility to become involved in certain social problems that are outside their normal areas of operation (pp. 20-23).

The areas in which business can become involved to protect and improve the welfare of society are numerous and diverse. Some of the most publicized of these areas are urban affairs, consumer affairs, environmental affairs, and employment practices. Although numerous businesses are involved in socially responsible activities, much controversy persists about whether such involvement is necessary or appropriate. There are several arguments for and against businesses performing socially responsible activities.

The best-known argument supporting such activities is that because business is a subset of and exerts a significant impact on society, it has the responsibility to help improve society. Since society asks no more and no less of any of its members, why should business be exempt from such responsibility? Additionally, profitability and growth go hand in hand with responsible treatment of employees, customers, and the community. However, studies have not indicated any clear relationship between corporate social responsibility and profitability (Aupperle, Caroll, and Hatfield, 1985; McGuire, Sundgren, and Schneeweis, 1988).

One of the better known arguments against such activities is advanced by the distinguished economist Milton Friedman. Friedman (1989) argues that making business managers simultaneously responsible to business owners for reaching profit objectives and to society for enhancing societal welfare represents a conflict of interest that has the potential to cause the demise of business. According to Friedman, this demise almost certainly will occur if business continually is forced to perform socially responsible behavior that is in direct conflict with private organizational objectives. He also argues that to require business managers to pursue socially responsible objectives may be unethical, since it requires managers to spend money that really belongs to other individuals.

Regardless of which argument or combination of arguments particular managers might support, they generally should make a concerted effort to perform all legally required socially responsible activities, consider voluntarily performing socially responsible activities beyond those legally required, and inform all relevant individuals of the extent to which their organization will become involved in performing socially responsible activities.

Federal law requires that businesses perform certain socially responsible activities. In fact, several government agencies have been established to develop such business-related legislation and to make sure the laws are followed. The Environmental Protection Agency has the authority to require businesses to adhere to certain socially responsible environmental standards. Adherence to legislated social responsibilities represents the minimum standard of socially responsible performance that business leaders must achieve. Managers must ask themselves, however, how far beyond the minimum they should attempt to go—a difficult and complicated question that entails assessing the positive and negative outcomes of performing socially responsible activities. Only those activities that contribute to the business's success while contributing to the welfare of society should be undertaken.

Social Responsiveness Social responsiveness is the degree of effectiveness and efficiency an organization displays in pursuing its social responsibilities. The greater the degree of effectiveness and efficiency, the more socially responsive the organization is said to be. The socially responsive organization that is both effective and efficient meets its social responsibilities without wasting organizational resources in the process. Determining exactly which social responsibilities an organization should pursue and then deciding how to pursue them are perhaps the two most critical decision-making aspects of maintaining a high level of social responsiveness within an organization. That is, managers must decide whether their organization should undertake the activities on its own or acquire the help of outsiders with more expertise in the area.

In addition to decision making, various approaches to meeting social obligations are another determinant of an organization's level of social responsiveness. A desirable and socially responsive approach to meeting social obligations involves the following:

- Incorporating social goals into the annual planning process
- Seeking comparative industry norms for social programs
- Presenting reports to organization members, the board of directors, and stockholders on progress in social responsibility
- Experimenting with different approaches for measuring social performance
- Attempting to measure the cost of social programs as well as the return on social program investments

S. Prakash Sethi (1975) presents three management approaches to meeting social obligations: (1) the social obligation approach, (2) the social responsibility approach, and (3) the social responsiveness approach. Each of Sethi's three approaches contains behavior that reflects a somewhat different attitude with regard to businesses performing social responsible activities. The social obligation approach, for example, considers business as having primarily economic purposes and confines socially responsible activity mainly to conformance to existing laws The social responsibility approach sees business as having both economic and societal goals. The social responsiveness approach considers business as having both societal and economic goals as well as the obligation to anticipate upcoming social problems and to work actively to prevent their appearance.

Organizations characterized by attitudes and behaviors consistent with the social responsiveness approach generally are more socially responsive than organizations characterized by attitudes and behaviors consistent with either the social responsibility approach or the social obligation approach. Also, organizations characterized by the social responsibility approach generally achieve higher levels of social responsiveness than organizations characterized by the social obligation approach. As one moves from the social obligation approach to the social responsiveness approach, management becomes more proactive. Proactive managers will do what is prudent from a business viewpoint to reduce liabilities whether an action is required by law or not.

Areas of Measurement To be consistent, measurements to gauge organizational progress in reaching socially responsible objectives can be performed. The specific areas in which individual companies actually take such measurements vary, of course, depending on the specific objectives of the companies. All companies, however, probably should take such measurements in at least the following four major areas:

1. *Economic function*: This measurement gives some indication of the economic contribution the organization is making to society.
2. *Quality of life*: The measurement of quality of life should focus on whether the organization is improving or degrading the general quality of life in society.
3. *Social investment*: The measurement of social investment deals with the degree to which the organization is investing both money and human resources to solve community social problems.
4. *Problem solving*: The measurement of problem solving should focus on the degree to which the organization deals with social problems.

The Social Audit: A Progress Report A social audit is the process of taking measurements of social responsibility to assess organizational performance in this area. The basic steps in conducting a social audit are monitoring, measuring, and appraising all aspects of an organization's socially responsible performance. Probably no two organizations conduct and present the results of a social audit in exactly the same way. The social audit is the process of measuring the socially responsible activities of an organization. It monitors, measures, and appraises socially responsible performance.

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THOMAS HAYNES

ETHICS IN MARKETING

Ethics are a collection of principles of right conduct that shape the decisions people or organizations make. Practicing ethics in marketing means deliberately applying standards of fairness, or moral rights and wrongs, to marketing decision making, behavior, and practice in the organization.

In a market economy, a business may be expected to act in what it believes to be its own best interest. The purpose of marketing is to create a competitive advantage. An organization achieves an advantage when it does a better job than its competitors at satisfying the product and service requirements of its target markets. Those organizations that develop a competitive advantage are able to satisfy the needs of both customers and the organization.

As our economic system has become more successful at providing for needs and wants, there has been greater focus on organizations' adhering to ethical values rather than simply providing products. This focus has come about for two reasons. First, when an organization behaves ethically, customers develop more positive attitudes about the firm, its products, and its services. When marketing practices depart from standards that society considers acceptable, the market process becomes less efficient—sometimes it is even interrupted. Not employing ethical marketing practices may lead to dissatisfied customers, bad publicity, a lack of trust, lost business, or, sometimes, legal action. Thus, most organizations are very sensitive to the needs and opinions of their

CAMEL
SURGEON GENERAL'S WARNING: PREGNANT WOMEN WHO SMOKE RISK FETAL INJURY AND PREMATURE BIRTH.
TOYOTA
84903-N

Tobacco marketing has been the target of government regulation.

customers and look for ways to protect their long-term interests.

Second, ethical abuses frequently lead to pressure (social or government) for institutions to assume greater responsibility for their actions. Since abuses do occur, some people believe that questionable business practices abound. As a result, consumer interest groups, professional associations, and self-regulatory groups exert considerable influence on marketing. Calls for social responsibility have also subjected marketing practices to a wide range of federal and state regulations designed to either protect consumer rights or to stimulate trade.

The Federal Trade Commission (FTC) and other federal and state government agencies are charged both with enforcing the laws and creating policies to limit unfair marketing practices. Because regulation cannot be developed to cover every possible abuse, organizations and industry groups often develop codes of ethical conduct or rules for behavior to serve as a guide in decision making. The American Marketing Association, for example, has developed a code of ethics (which can be viewed on its Web site at www.ama.org). Self-regulation not only helps a firm avoid extensive government intervention; it also permits it to better respond to changes in market conditions. An organization's long-term success and profitability depends on this ability to respond.

Several areas of concern in marketing ethics are explored in the remainder of the article.

UNFAIR OR DECEPTIVE MARKETING PRACTICES

Marketing practices are deceptive if customers believe they will get more value from a product or service than they actually receive. Deception, which can take the form of a misrepresentation, omission, or misleading practice, can occur when working with any element of the marketing mix. Because consumers are exposed to great quantities of information about products and firms, they often become skeptical of marketing claims and selling messages and act to protect themselves from being deceived. Thus, when a product or service does not provide expected value, customers will often seek a different source.

Deceptive pricing practices cause customers to believe that the price they pay for some unit of value in a product or service is lower than it really is. The deception might take the form of making false price comparisons, providing misleading suggested selling prices, omitting important conditions of the sale, or making very low price offers available only when other items are purchased as well. Promotion practices are deceptive when the seller intentionally misstates how a product is constructed or performs, fails to disclose information regarding pyramid sales (a sales technique in which a person is recruited into a plan and then expects to make money by recruiting other people), or employs bait-and-switch selling techniques (a technique in which a business offers to sell a product or service, often at a lower price, in order to attract customers who are then encouraged to purchase a more expensive item). False or greatly exaggerated product or service claims are also deceptive. When packages are intentionally mislabeled as to contents, size, weight, or use information, that constitutes deceptive packaging. Selling hazardous or defective products without disclosing the dangers, failing to perform promised services, and not honoring warranty obligations are also considered deception.

OFFENSIVE MATERIALS AND OBJECTIONABLE MARKETING PRACTICES

Marketers control what they say to customers as well as and how and where they say it. When events, television or radio programming, or publications sponsored by a marketer, in addition to products or promotional materials, are perceived as offensive, they often create strong negative reactions. For example, some people find advertising for all products promoting sexual potency to be offensive. Others may be offended when a promotion employs stereotypical images or uses sex as an appeal. This is particularly true when a product is being marketed in other countries, where words and images may carry different meanings than they do in the host country.

When people feel that products or appeals are offensive, they may pressure vendors to stop carrying the product. Thus, all promotional messages must be carefully screened and tested, and communication media, programming, and editorial content selected to match the tastes and interests of targeted customers. Beyond the target audience, however, marketers should understand that there are others who are not customers who might receive their appeals and see their images and be offended.

Direct marketing is also undergoing closer examination. Objectionable practices range from minor irritants, such as the timing and frequency of sales letters or commercials, to those that are offensive or even illegal. Among examples of practices that may raise ethical questions are persistent and high-pressure selling, annoying telemarketing calls, and television commercials that are too long or run too frequently. Marketing appeals created to take advantage of young or inexperienced consumers or senior citizens—including advertisements, sales appeals disguised as contests, junk mail (including electronic mail), and the use and exchange of mailing lists—may also pose ethical questions. In addition to being subject to consumer-protection laws and regulations, the Direct Marketing Association provides a list of voluntary ethical guidelines for companies engaged in direct marketing (available at their Web site at www.the-dma.org).

ETHICAL PRODUCT AND DISTRIBUTION PRACTICES

Several product-related issues raise questions about ethics in marketing, most often concerning the quality of products and services provided. Among the most frequently voiced complaints are ones about products that are unsafe, that are of poor quality in construction or content, that do not contain what is promoted, or that go out of style or become obsolete before they actually need replacing. An organization that markets poor-quality or unsafe products is taking the chance that it will develop a reputation for poor products or service. In addition, it may be putting itself in jeopardy for product claims or legal action. Sometimes, however, frequent changes in product features or performance, such as those that often occur in the computer industry, make previous models of products obsolete. Such changes can be misinterpreted as planned obsolescence.

Ethical questions may also arise in the distribution process. Because sales performance is the most common way in which marketing representatives and sales personnel are evaluated, performance pressures exist that may lead to ethical dilemmas. For example, pressuring vendors to buy more than they need and pushing items that will result in higher commissions are temptations. Exerting influence to cause vendors to reduce display space for competitors' products, promising shipment when knowing delivery is not possible by the promised date, or paying vendors to carry a firm's product rather than one of its competitors are also unethical.

Research is another area in which ethical issues may arise. Information gathered from research can be important to the successful marketing of products or services. Consumers, however, may view organizations' efforts to gather data from them as invading their privacy. They are resistant to give out personal information that might cause them to become a marketing target or to receive product or sales information. When data about products or consumers are exaggerated to make a selling point, or research questions are written to obtain a specific result, consumers are misled. Without self-imposed ethical standards in the research process, management will likely make decisions based on inaccurate information.

DOES MARKETING OVERFOCUS ON MATERIALISM?

Consumers develop an identity in the marketplace that is shaped both by who they are and by what they see themselves as becoming. There is evidence that the way consumers view themselves influences their purchasing behavior. This identity is often reflected in the brands or products they consume or the way in which they lead their lives.

The proliferation of information about products and services complicates decision making. Sometimes consumer desires to achieve or maintain a certain lifestyle or image results in their purchasing more than they need or can afford. Does marketing create these wants? Clearly, appeals exist that are designed to cause people to purchase more than they need or can afford. Unsolicited offers of credit cards with high limits or high interest rates, advertising appeals touting the psychological benefits of conspicuous consumption, and promotions that seek to stimulate unrecognized needs are often cited as examples of these excesses.

SPECIAL ETHICAL ISSUES IN MARKETING TO CHILDREN

Children are an important marketing target for certain products. Because their knowledge about products, the media, and selling strategies is usually not as well developed as that of adults, children are likely to be more vulnerable to psychological appeals and strong images. Thus, ethical questions sometimes arise when they are exposed to questionable marketing tactics and messages. For example, studies linking relationships between tobacco and alcohol marketing with youth consumption resulted in increased public pressure directly leading to the regulation of marketing for those products.

The proliferation of direct marketing and use of the Internet to market to children also raises ethical issues. Sometimes a few unscrupulous marketers design sites so that children are able to bypass adult supervision or control; sometimes they present objectionable materials to underage consumers or pressure them to buy items or provide credit card numbers. When this happens, it is likely that social pressure and subsequent regulation will result. Likewise, programming for children and youth in the mass media has been under scrutiny for many years.

In the United States, marketing to children is closely controlled. Federal regulations place limits on the types of marketing that can be directed to children, and marketing activities are monitored by the Better Business Bureau, the Federal Trade Commission, consumer and parental groups, and the broadcast networks. These guidelines provide clear direction to marketers.

ETHICAL ISSUES IN MARKETING TO MINORITIES

The United States is a society of ever-increasing diversity. Markets are broken into segments in which people share some similar characteristics. Ethical issues arise when marketing tactics are designed specifically to exploit or manipulate a minority market segment. Offensive practices may take the form of negative or stereotypical representations of minorities, associating the consumption of harmful or questionable products with a particular minority segment, and demeaning portrayals of a race or group. Ethical questions may also arise when high-pressure selling is directed at a group, when higher prices are charged for products sold to minorities, or even when stores provide poorer service in neighborhoods with a high population of minority customers. Such practices will likely result in a bad public image and lost sales for the marketer.

Unlike the legal protections in place to protect children from harmful practices, there have been few efforts to protect minority customers. When targeting minorities, firms must evaluate whether the targeted population is susceptible to appeals because of their minority status. The firm must assess marketing efforts to determine whether ethical behavior would cause them to change their marketing practices.

ETHICAL ISSUES SURROUNDING THE PORTRAYAL OF WOMEN IN MARKETING EFFORTS

As society changes, so do the images of and roles assumed by people, regardless of race, sex, or occupation. Women have been portrayed in a variety of ways over the years. When marketers present those images as overly conventional, formulaic, or oversimplified, people may view them as stereotypical and offensive.

Examples of demeaning stereotypes include those in which women are presented as less intelligent, submissive to or obsessed with men, unable to assume leadership roles or make decisions, or skimpily dressed in order to appeal to the sexual interests of males. Harmful stereotypes include those portraying women as obsessed with their appearance or conforming to some ideal of size, weight, or beauty. When images are considered demeaning or harmful, they will work to the detriment of the organization. Advertisements, in particular, should be evaluated to be sure that the images projected are not offensive.

CONCLUSION

Because marketing decisions often require specialized knowledge, ethical issues are often more complicated than those faced in personal life—and effective decision making requires consistency. Because each business situation is different, and not all decisions are simple, many organizations have embraced ethical codes of conduct and rules of professional ethics to guide managers and employees. However, sometimes self-regulation proves insufficient to protect the interest of customers, organizations, or society. At that point, pressures for regulation and enactment of legislation to protect the interests of all parties in the exchange process will likely occur.

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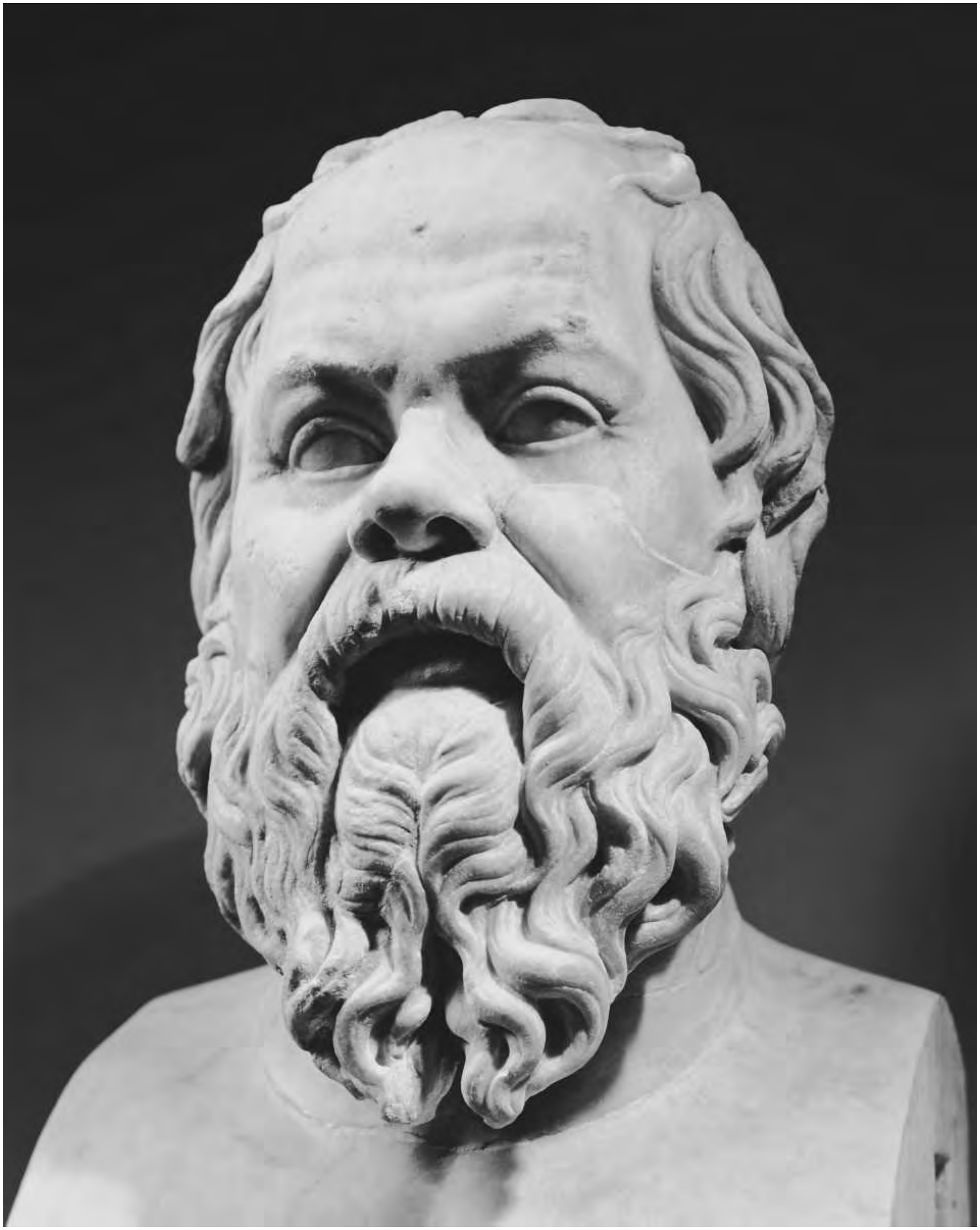
JOHN A. SWOPE

ETHICS OVERVIEW

Ethics is the study of questions of morality, the search to understand what is right, wrong, good, and bad. It is the branch of philosophy that systematically studies moral ideals and goals, motives of choice, and patterns of good and bad conduct. *Ethics* is derived from the Greek *ethikos*, meaning "character." Issues of personal character, and the search for the best patterns for living, were at the core of Greek ethical philosophy. In contrast, *moral* is from the Latin *more* (MOR-ay). The Romans used this term to describe the customary ways that people tended to act. Thus, though the two terms are often used interchangeably today, *morality* has evolved to mean the social norms that people are taught and conditioned to follow, while ethics has come to refer to



Greek philosopher Socrates was a pioneer in virtue-ethical thinking.

the rational investigating and questioning of these norms. This view of ethics is said to be *normative*, since it assumes the existence of at least some universal moral principles and standards.

Ethics tends to be a cross-disciplinary field of study. Theologians study ethics and morality in light of religious teachings and divine commands. Psychologists seek to understand how people's values influence their thinking, behavioral motivations, and personal development. Sociologists attempt to identify and explain varying cultural norms and practices. Business educators try to help companies, employees, and professionals avoid expensive and counterproductive ethical misdeeds. However, the study of normative ethics has historically been dominated by philosophers, who have applied rules of reason and logic to find answers to humanity's perplexing moral questions.

One apparent obstacle to this process is that logical reasoning, at least at first glance, does not seem to lead different people to the same ethical conclusions and answers. If people, ideally, used reason correctly, what would it tell us about ethics? This search for the best, most logical principles to follow is the realm of general ethics. The end results of this search are *ethical systems* or theories—groups of systematically related ethical principles that attempt to describe and prescribe human morality. Scholars in applied ethics then take these ethical systems and principles and apply them to contemporary moral questions, dilemmas, and life-situations. Examples of specific studies in applied ethics include business, government, and professional ethics (medical, legal, etc.).

RELIGIOUS AND PHILOSOPHICAL ETHICS

Perhaps the greatest continual struggle related to ethics throughout history has been between followers of religious ethics and proponents of philosophical ethics. Religious ethics gives preeminence to divine authority. Actions that conform to the will or teachings of this authority are considered good or right; actions that do not conform are seen as bad, wrong, or evil. It is believed that people can find or discover this divine will through sacred scriptures, the teachings of religious leaders, prayer, and personal revelation. On the other hand, philosophical ethics places its primary emphasis on rational thought and the rules of logic. This view assumes that individuals can use reason to find answers to moral questions, making religious authority unnecessary.

This conflict can reach critical proportions. Many philosophers who have challenged the religious authorities of their times have been branded as dangerous heretics. Foreshadowing the pattern that would repeat itself for centuries, the central charge leading to the conviction and eventual execution of Socrates was that he questioned the gods of Athens and taught others to do the same. However, it is also worth noting that some of history's most influential ethical thinkers have argued that this perceived conflict between reason and faith may only be illusionary; that faith and reason need not be adversaries, but can support and even validate each other.

ETHICAL SYSTEMS

There have been about as many different philosophical viewpoints on ethics as there have been people thinking about them. But these can be roughly grouped into three main families of ethical systems. The first are *virtue-ethics theories*, founded on the teachings of the three great lights of ancient Greek philosophy—*Socrates* (469-399 B.C.), *Plato* (427?-347? B.C.), and *Aristotle* (384-322 B.C.). Most attempts to chronicle Western ethical thinking begin with these three men because of their emphasis on reason and logic as essential tools for finding answers to ethical questions. This assumption has been the cornerstone of philosophical thinking ever since. The central focus in virtue-ethics is personal character. The ancient Greeks believed it was a mandate from nature itself that the purpose of life for humans was to achieve happiness and fulfillment. The goal of ancient Greek ethics, then, was the search for "the good life," the pattern of specific character traits (virtues) that people should integrate into their lives to make happiness and fulfillment most likely. Plato and Aristotle wrote that the virtues of wisdom, courage, temperance, and justice were the most logical choices to help people achieve this goal.

One evidence of the profound influence of these Greek thinkers is that so many other philosophers have adopted and adapted their approach. *Cicero* (106-43 B.C.), the most well known of the Roman intellectuals, leaned heavily on Aristotle's principles and concepts. The Catholic theologian *Thomas Aquinas* (1225?-1274) took Aristotle's writings about the essential roles of reason and nature in ethics and integrated them with medieval Roman Catholic dogma. In doing so, he helped to usher in the Enlightenment, revolutionizing Catholic thinking and doctrine in ways still evident today. Aquinas's ethical system (*natural law*) remained the most influential view throughout much of the Middle Ages, supported in no small part by the power of the Church. This domination continued until the seventeenth and eighteenth centuries, when philosophers began attempting to restore the preeminence of reason over religious authority, perhaps the most significant event in the development of ethical thinking since the time of Plato.

One early leader was the British philosopher *John Locke* (1632–1704). Locke stretched natural law's tenets to include the assumption that all humans are endowed by nature (or God) with certain basic human rights. This fact gives people a clear moral duty to respect the rights of others. Thus, violating the rights of others becomes the only real moral wrong, and all actions that do not violate the rights of other persons must be ethically permissible. Among the most ardent supporters of Locke's *natural rights* system were the founders of the United States, who viewed his principles and assumptions as the moral bedrock of their new republic. These principles, evident throughout the Declaration of Independence and Constitution, remain at the heart of the American legal system.

The second family of ethical sytems is made up of *deontology* theories. These approaches share the view that ethics should be based primarily on moral duty. This approach is probably best exemplified by the writings of the great German philosopher and writer *Immanuel Kant* (1724–1804). Kant maintained that at the heart of ethics lies the moral duty to obey the dictates of reason. People can know what reason commands through intuition and moral reason. Kant's central ethical principle is the *categorical imperative*, which says that the only moral actions are those consistent with the moral standards that we would want everyone else to follow. For example, Kant argued that lying is always wrong, since no rational person would want lying to become the moral standard for everyone. (Kant recognized no exceptions, arguing that even lying to save a life was immoral.) A corollary to this principle is Kant's *respect for persons*, the maxim that it is always wrong to exploit others. People, he argued, must be treated as ends (goals) in themselves, not merely as means to our own ends.

The third major family of ethical systems comprises the *utilitarian* theories. This approach sees the proper goal of ethics as producing good, pleasure, or happiness. Early proponents of utilitarianism were the British philosophers *Jeremy Bentham* (1748–1832) and *John Stuart Mill* (1806–1873). According to utilitarian reasoning, the morally right (or best) action is the one that produces the greatest possible happiness for the greatest possible number. Thus, behaviors are not always moral or always immoral. Instead morality is based on specific variables unique to each situation. In some situations, lying might produce more overall good than telling the truth (e.g., deceiving a kidnapper to save a child). In other situations, truth would clearly produce more good.

BUSINESS AND PROFESSIONAL CODES OF ETHICS

These classical ethical systems are expressed and affirmed in contemporary society in many ways. Codes of ethics are practical examples. A code of ethics is a written document intended to serve as a guideline to those who would follow it. Most larger businesses and corporations have codes of ethics for their employees, as do most professions for their members. Professional codes are usually written by members of the profession through a central national organization. For example, it is generally understood that American doctors are subject to the American Medical Association code of ethics, and American lawyers follow their bar association codes. But many other professions have codes of ethics as well, including such diverse fields as journalism, pharmacy, business management, education, accounting, engineering, nursing, law enforcement, and psychology. Even the best codes of ethics cannot guarantee ethical behavior. Indeed, many codes do not even contain methods of enforcement, but merely express the ideals and values of their respective corporations and professions. The decision to act ethically or unethically is, as it has been through the ages, up to the individual.

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KEITH GOREE

EUROPEAN UNION

The European Union is an ever-evolving alliance of fifteen European countries designed to foster economic cooperation among its members. With its roots stretching back to just after World War II, this alliance has the ultimate goal of unifying the economic interests of these countries in order to reduce the chance of widespread armed conflict returning to the European continent.

HISTORY

In the early 1950s, Germany and France spearheaded the establishment of the European Coal and Steel Community. At this time, West Germany was in the process of rebuilding its war-ravaged steel industry under the direction of the United States and Great Britain. This was an understandable source of concern for France, as German industrial might had been used against the French in the two world wars earlier in the century. Consequently, a federation that would govern these important economic resources won the approval of both the French and Germans. They were also joined by Italy, Belgium, Luxembourg, and the Netherlands as the original six founding nations of what would eventually become the European Union.

The European Coal and Steel Community was later followed by the establishment of the European Economic Community under the Treaty of Rome, which was signed by the same six countries in 1957. This treaty established the framework for the six member countries to pursue an economic and monetary union by creating a single market to further their economic development. The European Economic Community established a customs union for removing trade barriers, such as tariffs and quotas, between member countries over a period of several years. Also, common external tariffs were phased in for goods entering the union.

The single market established by the European Economic Community also opened the door for the free movement of workers, businesses, and capital throughout the community. Border stops and customs checks were eliminated, companies expanded across national borders, and financial institutions expanded with them.

Romano Prodi (right), president of the European Union Commission.

THE EURO

To further facilitate trade within this single market, European leaders felt a single currency should be created to eliminate foreign-exchange hurdles encountered by companies doing business across European borders. After several intervening rounds of negotiations and agreements, the Treaty on European Union was signed in Maastricht in December 1991. The European Union was formally established as the successor to the European Economic Community, and the treaty laid the groundwork for the completion of the economic and monetary union by calling for a new European currency.

The European Union introduced this new currency on January 1, 1999, christening it the "euro." Like many other changes implemented by the European Union, the euro was not launched without difficulties. By the time the euro was introduced in 1999, nine more countries had joined the original six members. The European Union had added Denmark, Ireland, and the United Kingdom to its ranks in 1973; Greece in 1981; Portugal and Spain in 1986; and Austria, Finland, and Sweden ratified membership in 1995. During the launch of the euro, the United Kingdom, Sweden, and Denmark all chose to "opt out" of participation due to political pressures in each country. One other member, Greece, failed to satisfy the economic criteria for convergence, which required members of the "euro zone" to meet targets for price stability, long-term interest rates, government budget deficits, and government debt. Consequently, the conversion to the euro was initiated in only eleven of the fifteen member states in 1999.

Transactions in member states beginning in 1999 could be denominated in euros. The actual euro currency and coins will begin circulation in 2002. In the "interim period," transactions can be carried out in either euros or the former national currencies of the member states.

GOVERNANCE

The governance of the European Union is quite complex. The European Commission, based in Brussels, introduces legislation and negotiates all trade agreements between the European Union and other countries. The five largest countries in the union appoint two members and other countries one member to the European Commission. The European Parliament, which is the only elected body, also has legislative and veto authority in some specific areas. The Council of Ministers, comprised of civil servants from each country, acts on the legislation proposed by the European Commission. Most decisions are by a majority vote, but some require unanimity.

Monetary policy in the countries adopting the euro is governed by the European Central Bank. The primary mission of this independent institution is to maintain stable prices. It is also responsible for foreign-exchange operations and managing foreign reserves in the euro zone. Although it is a relatively new currency, the euro has joined the U.S. dollar and Japanese yen as a reserve currency held by central banks.

INTERNATIONAL TRADE

The fifteen members of the European Union in 1999 have a combined population 40 percent larger than that of the United States, creating an attractive business marketplace without internal trade barriers. Many American companies—from Ford, which sells 15 million vehicles a year in Europe, to Coca-Cola, Inc., which serves 209 million of its beverages to European customers every day—have a long-established presence in Europe. Other companies, such as software giant Microsoft, have entered the European market in recent years and been successful in the European Union's single market. If the European Union continues to add new members, it may be only a matter of time before the European marketplace begins to challenge the United States as the premier business market in the world.

European companies, with their enhanced size due to expansion across Europe, have also set their sights across the Atlantic. The purchases of Chrysler by Daimler-Benz and Amoco by British Petroleum in the late 1990s were but two of the many examples of large European companies strengthening their positions in the American marketplace. With the majority of foreign investment in the United States coming from members of the European Union, economic interests have continued to become more intertwined as multinational companies now operate on both sides of the Atlantic.

FUTURE EXPANSION

In the future, the size of the European Union will likely expand because numerous other countries, primarily in Central and Eastern Europe, have expressed an interest in joining the union. Many of these countries are in the process of making the structural changes needed to meet the criteria for membership in the European Union. Admitting these countries would add to the European Union's stature in global trade negotiations, further the cause of social stability in the region, and add yet another chapter to the story of this dynamic union.

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DAVID MCGRADY

EXECUTIVE COMPENSATION

(SEE: *Employee Compensation*)

EXPECTANCY THEORY

(SEE: *Motivation*)

EXPORT-IMPORT BANK

(SEE: *Financial Institutions*; *International Trade*)

EXPORTS

(SEE: *International Trade*)

F

FACSIMILE REPRODUCTION

Facsimile reproduction means making an exact copy of anything imprinted on paper by using electronic devices such as copiers, fax machines, and scanners. Material may be reproduced electronically on a computer's monitor (soft copy), or reproduced on paper (hard copy). In reproducing information either electronically or on paper, one wants a quality copy that will be acceptable for the task at hand.

HISTORICAL PERSPECTIVE

The first method used to make a printed copy was carbon paper. Although a Britain named J. W. Swan invented carbon tissue paper coated with gelatin about 1862, it didn't come into general use for office work until the mid-1920s. It provided a somewhat less than perfect copy of typed material. At that time one could choose between very messy carbon paper that made several copies or single-use carbon paper that was much easier to use. The first reverberations of the death knell for carbon paper occurred in 1937 when Chester Carlson invented the xerography process of duplication.

In the late 1890s the mimeograph machine began to be used to produce copies. This process involved typing on a lightly oiled surface called a "master," which involved retyping a preexisting original—a very time-consuming process. As time passed, however, the mimeograph machine was improved enough to permit masters to be reused if stored properly.

In 1906 the Haloid Company was founded to sell photographic paper for its early version of today's copier. This early piece of reprographic equipment was hardly an office tool—it was very expensive, very cumbersome, and very difficult to use. Trained operators were scarce.

In 1913 Edouard Belin invented the Belinograph, a portable facsimile machine capable of using ordinary telephone lines.

In the 1920s, the Gestetner office duplicating machine was considered to be one of the first modern examples of efficient industrial design.

In 1937 an electrostatic copying process known as "xerography" was invented by an American law student named Chester Carlson. This process, which involved the effect of light on photoconductivity, led to the unprecedented success of the "Xerox" commercial copy machine, introduced in 1959. The major problem with this copier was that it was heat-sensitive and resulted in paper scorching.

After World War II, 3M and Eastman Kodak introduced the Thermo-Fax and verifax copiers into the workplace. The copies were of poor quality and continued to darken long after having been pulled from the machine. Although these office machines were relatively inexpensive and easy to use, they required special paper that was extremely expensive.

Chester Carlson invented the xerography process.

As computer use continued to develop, additional copying methods such as fax, Ditto, and Mimeograph appeared.

In 1971 dot-matrix printers were introduced, providing a reasonably efficient way to reproduce computer-generated information on paper.

In 1974 the first international fax standard was set by the United Nations, allowing for fax messages to be transmitted at a rate of one page every six minutes. Special paper was required for these early fax machines. Today's fax equipment will accept either special fax paper of a greatly-improved quality or plain paper. In 1990 facsimile machines (commonly called fax machines) that could transmit in color became available.

In 1975 IBM introduced the first laser printer. Using light lasers in the process of copying greatly improved both the process and the product.

Today's evolving technology provides reprographic-related equipment. Scanners are used in conjunction with digital cameras to reproduce pictures, sounds, and other images electronically and on paper.

COPIERS TODAY

Today's copiers are advancing rapidly, consistent with continuing advances in technology. Although using a copier today is a simple process, choosing one is not. Training is required, along with knowledge of what is best in an individual situation. Cost is a major factor in determining the most appropriate copier to use, as is the type of material that is to be reproduced.

COPIER FEATURES

Copiers are sold by a variety of vendors who offer an array of products to meet individual needs. When selecting a copier for possible lease or purchase, individual features and individual needs should be studied and matched carefully. Doing so can save time and money in the long run.

Copy Speed: The number of copies that can be produced in a minute is an important feature. Most copiers can make from twelve to fifty copies per minute, depending on the model. Most of today's copiers are also capable of creating transparencies, address labels, and letterheads. However, the quality of paper is important because poor-quality paper can cause jamming.

Paper Trays: Only specified amounts of paper can be loaded at one time into today's copiers. Paper can be loaded from the front using either a specified tray or a "bypass" tray. A bypass tray permits two-sided copies or copies on special paper stock or paper sizes to be made by programming the size individually.

Enlargement Options: Copiers today often come with a choice of preset enlargement ratios. For example, one copier's enlargement ratios are preset at 65, 77, 129, and 155 percent. Other models allow one to reduce or enlarge from 65 to 165 percent in 1 percent increments. This feature can save time and money if one has predetermined the common enlargement needs and preset the ratio to assist in copying.

Book Copying: Copiers with a book-copying feature allow copying from books or bound documents without distortion of copy.

Sorting: Copiers are available that can sort with a variety of bin configurations. As paper moves through the copier, it can be sorted into a bin and then stacked, collated, and stapled. This option can save immense time.

Control Panel and Servicing: The easy-to-read control panels on today's copiers permit copying decisions to be made easily. Copiers are often designed with a front opening that allows unobstructed access for easy servicing, including changing toner for the copier. An increasing number of copiers are now designed so that they use toner cartridges, a feature that eliminates messy, time-consuming toner changes.

COPIER COSTS

The cost of a copier is determined by the model selected and the options desired. Prices range from a few hundred dollars to more than $100,000. One modern copier has a suggested list price of $120,000 for the standard configuration and $137,500 for a model equipped with additional options. These options include digital service capabilities such as permitting taking of a photo, putting it on a scanner, bringing it up on the computer and sending out copies.

The Xerox 5800 is suited for use in general office copy rooms, an application encouraged by its user-friendly touch-screen control panel. Additional trays are available that automatically combine a variety of different paper stocks, including full-color offset pages, color covers, specialty stocks, mylar tabs, and heat-sensitive materials in a single document.

It also includes an exclusive computer-based service capability called Xerox Sixth Sense. This remote service system uses leading-edge communications technology and specially developed software to enable rapid diagnosis and resolution of equipment service needs. A copier of this type is truly state of the art.

SCANNERS

A scanner is a small machine that makes a photocopy of virtually any printed matter or illustration and stores it in a computer.

Scanners have a wide variety of applications. For personal use, for example, they can be used for copying photographs and sending them to friends and relatives over the Internet.

Businesses make extensive use of scanners. They are used in doctors' and dentists' offices to photocopy patients' health insurance data for storage in their computer. Manufacturers may use a scanner to store copies of technical matter in a computer for later retrieval. Lecturers may use scanners not only to provide illustrations for brochures advertising their appearance but also to enhance overhead transparencies they may use during their lectures. People who use communications a great deal in their work find scanners invaluable in enriching the e-mails they transmit.

Selection of a scanner should involve consideration of the ease of placing the image into the user's application. One begins the operation of some scanners by merely pressing a button; others require drawing a box around a preliminary scan. Some scanners automatically make the correct setting by recognizing the difference between a photograph and printed material; others require the setting to be done by the operator. Some scanners automatically select the correct file type for the software program being used; others must have this procedure handled by the operator.

Image quality is another criterion to be studied when selecting a scanner. It is important to have good resolution and bit-depth. But additional factors are large lenses, good optics, and strong light sources. Some scanners have automatic functions that bring these good results; others require considerable adjustments or rescanning of the image.

Image quality can also be observed in color line art. Some scanners leave uneven color line-art halftones; others correct automatically for such a deficiency. In working with black-and-white line art, some scanners bring about perfect edges automatically. Other scanners must resort to rescanning.

Another factor to take into consideration when purchasing a scanner is the manufacturer. What is the manufacturer's reputation? If a question arises about a scanner, it is easy to get a satisfactory answer quickly from technical support? And is prompt service available in the event of a problem?

Finally, thought must be given to resolution. It is not true that the larger the number of dots per inch (dpi), the higher the quality of the image. Rather, the dpi must be appropriate for the scanning project. Most scanning projects require less than 300 dpi. If you could scan an image at 9600 dpi, only a small portion would show on a computer monitor.

Judging a scanner involves studying its ease of operation, the quality of the image, the reputation of the manufacturer, and the resolution of the image.

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DOROTHY MAXWELL

FACTORS OF PRODUCTION

Land, labor, capital, and entrepreneurship: These are four generally recognized factors of production. Of course, in a literal sense anything contributing to the productive process is a factor of production. However, economists seek to classify all inputs into a few broad categories, so standard usage refers to the categories themselves as factors. Before the twentieth century, only three factors making up the "classical triad" were recognized: land, labor, and capital. Entrepreneurship is a fairly recent addition.

The factor concept is used to construct models illustrating general features of the economic process without getting caught up in inessential details. These include models purporting to explain growth, value, choice of production method, income distribution, and social classes. A major conceptual application is in the theory of production functions. One intuitive basis for the classification of the factors of production is the manner of payment for their services: rent for land, wages for labor, interest for capital, and profit for entrepreneurship. A discussion of each of the factors follows.

LAND

This category sometimes extends over all natural resources. It is intended to represent the contribution to production of nonhuman resources as found in their original, unimproved form.

For the French physiocrats led by Francois Quesnay in the 1750s and 1760s, land was the only factor yielding a reliable gain to its owner. In their view, laborers and artisans were powerless and in excess supply, and hence they earned on average only a subsistence-level income; and in the same way what they produced outside of agriculture fetched enough to cover only their wages and input costs with no margin for profit. Only in agriculture, due to soil fertility and other "gifts of nature," could a laborer palpably produce more than required to cover subsistence and other costs, so only in agriculture could proprietors collect surplus. Thus the physiocrats explained land rent as coming from surplus produced by the land. They recommended taxes on land as the only sound way to raise revenue and land-grabbing as the best means to increase the government's revenue base.

Joseph Schumpeter contrasted the entrepreneur from the capitalist.

In 1821 David Ricardo, in *The Principles of Political Economy and Taxation*, stated what came to be known as the classical view: that rent reflects scarcity of good land. The value of a crop depends on the labor required to produce it on the worst land under cultivation. This worst land yields no rent—as long as some of it remains unused—and rent collected on better land is simply its yield in excess of that on the worst land. Ricardo saw rent as coming from differences in land quality (including accessibility) and scarcity. The classical economists assumed only land—understood as natural resources—could be scarce in the long term.

Marginalism, as expounded in 1899 by John Bates Clark in *The Distribution of Wealth*, takes a different approach. It declares that rent reflects the marginal productivity of land—not, as with

Ricardo, the productivity of good versus marginal land. Marginal productivity is the extra output obtained by extending a *constant* amount of labor and capital over an *additional* unit of land of uniform quality. Marginalists held that any factor of production could be scarce. Their theory is based on the possibility of substituting among factors to design alternative production methods, whereby the optimal production method allocates all the factors to equalize their marginal productivity with their marginal costs.

Long thought of as a self-sustaining input, land might depreciate just like produced assets do. In 1989 Herman Daly and Jonathan Cobb, in *For the Common Good*, distinguished between nonrenewable resources that are consumed or depreciate irretrievably, and renewable resources where the rate of natural renewal is important. One consequence of this work in environmental economics is that natural resource accounting increasingly resembles capital accounting.

LABOR

The classical "labor theory of value" was an innovative theory in response to the physiocratic doctrine that only land could yield surplus. In 1776 Adam Smith, in *The Wealth of Nations*, observed that with expansion of production and trade, enterprises were making profits over long periods of time, although they either had nothing to do with agriculture or else as agricultural enterprises. Classical economists tried to answer the question: Where does profit come from? Their answer was that it came from labor. At prevailing prices, labor can yield a surplus over subsistence costs in many industries.

The question arises of why proprietors, but not laborers, earn profit. Ricardo arrived at one answer: Technical innovation increases labor productivity. Owners of innovative equipment, until its general adoption, get the premium from reduced costs. In 1867 Karl Marx in *Capital*, added that wages reflect the cost of subsistence, not what laborers can produce, and that profit is the difference between the two. Even without innovation proprietors would reap surpluses, Marx held, since laborers lack market power and cannot afford their own equipment.

Why do wages differ for different types of labor? Marx's answer was that higher wages cover costs, beyond personal subsistence, of training and cultivation of skills, acknowledging that one kind of "equipment," now known as human capital, was available at least to some laborers.

Marginalist economists noticed the advance of technology, which according to classical and Marxist views made labor ever more productive, continually throws laborers out of work. This led them to attribute productivity to equipment rather than only to labor. Referring to equipment as capital, they developed production functions featuring labor and capital as substitutes for each other. Choice among production techniques involving different combinations of labor and capital became a major theme in marginalist growth theory.

CAPITAL

This most controversial of factors is variously defined as produced equipment; as finance used to acquire produced equipment; as all finance used to begin and carry on production, including the "wage fund"; and as the assessed value of the whole productive enterprise, including intangibles such as "goodwill." In 1960 Piero Sraffa, in *Production of Commodities by Means of Commodities*, showed that capital in the sense of produced equipment can fail to behave as expected in marginalist production functions when an entire economy is modeled. Specifically, equipment adopted to replace labor after wages rise from a low level, relative to interest on capital, may be abandoned again in favor of labor as wages rise still higher. This counterintuitive "reswitching" can happen because the equipment used is itself a product of labor and equipment, and because the ratio of labor to equipment varies for different products.

Frequently capital is treated as finance, associated with the payment of interest. Yet the connection with equipment, in spite of Sraffa's demonstration, has never been severed entirely. One still studies capital depreciation, distinguishing wear-and-tear from obsolescence, and from the present value of investments in capital. Increasingly, theory has come to treat any investment as a capital investment. Furthermore, acquired skills (as opposed to "know-how," an attribute of society rather than individuals) have come to be viewed as analogous to physical equipment, capable of yielding their owners a return. This analogy suggests their current designation as human capital. Thus capital is a concept still mired in confusion, and care must be taken in its use to be sure what it means.

ENTREPRENEURSHIP

Until the twentieth century, this function was assigned to the capitalist and frequently conflated with capital. In the classical view, profit rather than interest was attributed to ownership of capital. In the marginalist view, capital earned interest, and profit was a mere residual after all the factors of production were compensated. In his *Principles of Economics*, first published in 1890, Alfred Marshall made extensive references to "organization" and "management," referring to the coordination function of entrepreneurship but to neither risk-assuming nor innovation. But in 1912 Joseph Schumpeter, in *The Theory of Economic Development*, featured the revolutionary role of organizer and innovator and contrasted it with that of the conservative financier, thus vividly distinguishing the entrepreneur from the capitalist. The entrepreneur's role in this view is not merely that of manager and risk-taker, but also of visionary—someone who seeks as much to destroy the old order as to create something new. Since innovation usually requires destroying old ways of doing things, Schumpeter gave it the name "creative destruction." Profit is now assigned to entrepreneurship, to innovation. With the rise of "venture capitalists" and other financiers willing to take on more risk and do more for innovation in the hope for supernormal returns, the distinction between capitalist and entrepreneur has again become fuzzier. Now there are entrepreneurial financiers as well as entrepreneurial producers and distributors.

Although in business usage stock dividends are distributed profits, in economic analysis they figure as returns to capital, a kind of interest payment, since they are a return to finance rather than to entrepreneurship. The fact that stocks are legally equity rather than debt shares is thereby ignored. Similarly, salaries of corporate executive officers are treated as profit, a return to entrepreneurship, rather than as wages for labor services.

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Michael Brun

FADS

The Hula Hoop, Pet Rock, and Cabbage Patch Kid were all crazes known as fads. These products, like most fads, entered the market quickly, created a consumer obsession, sold millions of units in a short amount of time, and declined just as rapidly. Their special product life cycle of quick, dramatic sales and a sharp, drastic decline differs from the five stage product life cycle con-

Hula Hoopers enjoy one of the current fads of their day.

cept of product development, introduction, growth, maturity, and decline. Fads have a limited following and tend to die quickly because they do not satisfy a strong consumer need.

THE PRODUCT LIFE CYCLE

The course that a product's sales and profits take over its lifetime is the product life cycle (PLC). Marketers know that all products will have some type of life cycle, but the shape and length is not known in advance. In the first stage of the cycle, *product development*, an idea for a product is formulated and development of the product begins. During this stage sales are zero, consumer research begins, and promotion consists of public relations.

The next stage, *introduction*, is characterized by a period of slow sales growth, but no profits are made because of the high initial investment and promotional costs. The company begins to inform consumers about the product through advertising, and distribution of the product is selective.

The third stage of the PLC, *growth*, is a time of rapid market acceptance and increasing profits. Product distribution becomes more widespread, and advertising shifts from being informative to being persuasive. Realizing the opportunity for profit, competitors will enter the market, creating market expansion. Promotional spending remains the same or increases slightly. Prices may be lowered during the growth stage to attract new customers.

The fourth stage of the PLC, *maturity*, is a period of slow sales growth and leveling-off or declining profits. Most potential buyers have been reached, so no new customers are buying the product. This stage presents the greatest challenges to marketers. To prevent entering the decline stage, research and development departments may make product modifications to meet the changing needs of consumers, distribution becomes selective again, and advertising becomes competitive because of the number of competitors who have entered the market.

Sales slow and profits drop in the *decline* stage, usually because of advances in technology, a shift in consumer taste, or increased competition. Distribution becomes exclusive, and sales promotions are developed. Products in the decline stage should have their sales, market share, costs, and profit trends regularly reviewed so that managers can decide whether to maintain the product, harvest the product (reduce various costs associated with the product), or drop the product from the product line. Now let's examine and discuss the product life cycle of fads.

THE PRODUCT LIFE CYCLE OF FADS

The Hula Hoop has been called the "greatest fad of them all." Developed in 1957 by Wham-O creators Richard Knerr and Arthur "Spud" Melin, it was modeled after an Australian toy. A prototype was developed and tested on U.S. playgrounds and was found to have the longest "play value." After only four months on the market, 25 million Hula Hoops had been sold. In less than a year, sales had almost completely stopped and competition was increasing, so Wham-O entered foreign markets and its success continued. Collectively, toy manufacturers made $45 million off the Hula Hoop.

The life cycle of the Hula Hoop was not typical of most products. A prototype was developed and tested during the product development stage, but the Hula Hoop bypassed the introduction stage and, with rapid sales, the toy quickly entered the growth stage. Again, the Hula Hoop skipped the maturity stage and went directly into the decline stage, with sales coming to an almost immediate halt. Other fads' life cycles have followed this model.

Gary Dahl created the Pet Rock in the 1970s, complaining that dogs, cats, and other pets were too messy, misbehaved, and expensive. Instead, Dahl had a pet rock that was easy to care for and cheap; it also had a great personality. Dahl wrote the *Pet Rock Training Manual* and created the Pet Rock out of a Rosarita Beach Stone that cost him a penny. In October 1975, Dahl packaged the Pet Rock in a gift box shaped like a pet carrying case, included the training manual, and sold it for $3.95. Within a few months, Dahl had sold a million rocks and became an instant millionaire. By the next February, sales had stopped.

Unlike the Hula Hoop, the Pet Rock was not tested during the product development stage. Dahl had the idea for the product and quickly produced it with no market testing. Similar to the Hula Hoop, the Pet Rock caught on quickly with consumers, reached its life-cycle peak at the growth stage, and dipped down into the decline stage in a very short period of time.

Artist Xaiver Roberts created Cabbage Patch Kids, originally called "Little People," in 1977. The cloth doll was "delivered" at BabyLand General Hospital, a former medical clinic in Cleveland, Georgia, where Roberts had his employees dress in white nurses' and doctors' uniforms.

Sales of the dolls were termed "adoptions," and each doll came with a birth certificate and adoption papers. Roberts sold 250,000 dolls at prices ranging from $125 to $1000. National Cabbage Patch mania struck when Roberts signed a contract with Coleco in 1982, and $25 models started selling all over the United States. Approximately 2.5 million Cabbage Patch Kids were sold in the first year on the market. But, like the fads before it, the Cabbage Patch Kid had lost its dominating position in the market by 1985.

The Cabbage Patch Kid had a standard product development stage, but its introduction stage was short. Shortly after hitting the toy store shelves, sales skyrocketed and the product entered the growth stage with full force. It entered the maturity stage when sales starting leveling off and the supply was greater than the demand. In an effort to prevent the product from entering the decline stage, marketers at Coleco experimented with product extensions—but to no avail. Eventually, profits began to drop and the Cabbage Patch Kid fell into the decline stage. Figure 1 shows the product life cycle of fads.

Fads are generally mysterious both to their creators and to the public. Although their products were unique, Wham-O, Dahl, and Roberts had no idea they would experience such rapid success. Past fads have included the Rubik Cube, Beanie Babies, and Furbee. Most fads never really completely die, but they never regain their initial popularity. To understand consumer obsessions with fads, marketers must understand consumer buying behavior.

CONSUMER BUYING BEHAVIOR

There are four types of buying behavior: complex buying behavior, dissonance-reducing buying behavior, habitual buying behavior, and variety-seeking buying behavior. Complex buying behavior occurs when the consumer is purchasing something expensive or risky, such as a personal computer. The consumer must learn about the product line, is highly involved in the buying process, and perceives significant differences among brands. Marketers must differentiate their products' features from other brands. Dissonance-reducing buying behavior occurs when an expensive or risky purchase is being made, but the consumer perceives no difference in brands. They may purchase the brand that offers the best price or that is the most convenient to buy. Habitual buying behavior involves low consumer involvement and little concern for brand differences. Variety-seeking buying behavior is characterized by low consumer involvement but significant differences in brands. Consumers displaying this type of buying behavior often switch brands to experience variety rather than because of dissatisfaction.

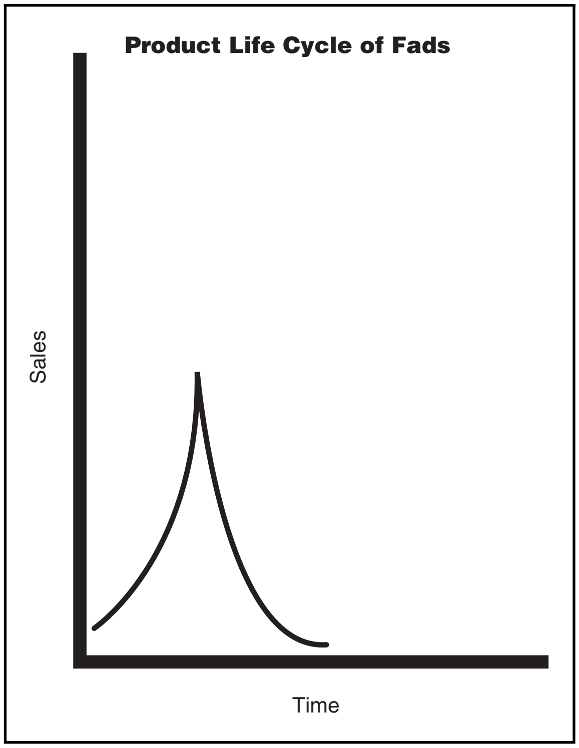

Figure 1

Fad purchasers display variety-seeking buying behavior. Buyers of Beanie Babies are loyal to the Ty brand; they will not buy competing brands. Many consumers who buy Beanie Babies switch to the next craze when it hits the shelves. PokeMon became the latest fad in 2000, and the variety-seekers shifted again to this latest trend. Until consumer demands and obsessions cease to exist, fads are here to stay.

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JENNIFER L. JENNESS

FAIR PACKAGING AND LABELING ACT OF 1966

Many consumer problems have been, and in some instances still are, caused by incorrect and even fraudulent information disclosure on products and through advertising. The Fair Packaging and Labeling Act of 1966 was passed during the Johnson administration to ensure that consumers have the information they need to choose wisely among competing products. The act directs businesses to disclose necessary information truthfully. Product labels must include such basic information as ingredients and contents, quantity, and maker of the product. Therefore, any business engaged in producing and distributing consumer products must comply with the Fair Packaging and Labeling Act of 1966. This act comes under the consumer-protection charge of the Federal Trade Commission, which bears the primary responsibility for making sure that labeling is not false and misleading. Textiles and food products are two examples of products regulated under this act, which not only prevents consumer deception but also provides consumers with the opportunity to compare value.

Amendments to the Fair Labeling and Packaging Act of 1966, passed in 1992 and enforced beginning in 1994, require labels to include conversion of quantities into a metric measurement in addition to the customary U.S. system of weights and measures. There was a great deal of opposition to this act from both private and public-sector manufacturers that sold their products only in the United States. For example, some paint manufacturers said that labeling contents in pints and gallons should be sufficient since their paint was sold only in the United States. The minimum federal penalty for not including metric measurements was established at $10,000. State regulators have the authority to remove products from store shelves if they were not compliant with the established guidelines.

Under the Bush administration, the Nutrition Labeling and Education Act of 1990 was passed, which requires detailed information on labels and standardized descriptive phrases such as "low fat" and "light." Manufacturers had to comply with this act by 1994. Since the passage of the Nutrition Labeling and Education Act, people are better satisfied with the information printed on food and drug labels (Kristal et al., 1998). While manufacturers were initially opposed to the new nutrition labeling, mainly because of cost, it was predicted that consumer health benefits would exceed the cost.

In 1993 the Food and Drug Administration issued additional regulations to the Nutrition Labeling and Education Act, stating that restaurant menus must comply with regulations for nutrient and health claims that appear on signs, placecards, and menus. The rule was finalized in 1996, establishing criteria under which restaurants must provide nutrition information for menu items. Thus healthier or "low-fat" menu choices must be highlighted with claims such as "no more than 5 grams of fat per serving." Restaurants are getting excellent customer response—better than expected—to providing healthy food choices. Consumers today are demanding higher quality. Fair labeling and packaging help assure consumers that they are getting the high quality they are demanding.

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PHYLLIS BUNN

FEDERAL RESERVE SYSTEM

To promote the development of a sound economy and a reliable banking system, Congress passed, and President Woodrow Wilson signed, the Federal Reserve Act on December 23, 1913. The act was a response to the recurring bank failures and financial panics that had plagued the nation.

After much disagreement, but eventual compromise, all parties to the discussions—the government, banks, other financial institutions, and a few business and labor leaders—agreed that a central U.S. bank was essential for the economic health of the country. Starting with the goal of stabilizing the nation's monetary and financial system, the Federal Reserves System (Commonly called the Fed) has undertaken a number of responsibilities that are described later in this article.

STRUCTURE OF THE SYSTEM

Designed by Congress and subject to congressional authority, the Fed is a politically independent and financially self-sufficient federal agency. It consists of the following components:

1. A central bank, sometimes called the government's bank, located in Washington, D. C.
2. Twelve regional Reserve Banks, located in the following cities: Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, San Francisco, and St. Louis. Each Reserve Bank relies on advisory groups for information and suggestions. Some of the more important ones concern operations, small business and agriculture, and thrift institutions (savings banks, savings and loan associations, and credit unions). Reserve Bank officials also meet periodically to discuss mutual problems. These groups include the Conference of Presidents, the Conference of First Vice Presidents, the Conference of Chairmen, and the Financial Services Policy Committee.
3. Twenty-five branch banks, located within defined areas of the Reserve Banks. For example, branch banks within the San Francisco Reserve Bank area are located in Los Angeles, Portland (Oregon), Salt Lake City, and Seattle.
4. Member banks, located throughout the country. Some are national banks (all of which are commercial banks) chartered by the federal government and, by law, are members of the Fed. Others are state commercial banks that have chosen to be members. Of the more than 9000 commercial banks in the country, more than 3700 are members of the Fed. Other depository institutions, including nonmember commercial banks and thrift institutions, are subject to many of the Fed's rules and regulations. A member bank is required to purchase stock from its Reserve Bank in an amount equal to 3 percent of its combined capital and surplus. However, this investment does not represent control of or a financial interest in the Reserve Bank. In return for its investment, however, a member bank receives a 6 percent annual dividend and the right to vote in elections of directors of its Reserve Bank.

GOVERNANCE OF THE SYSTEM

These are three basic components in the governance structure of the Fed:

1. The Fed's primary policy-making group is the seven-member Board of Governors. Appointed by the president and confirmed by the Senate, members serve for one fourteen-year term only. A member who is appointed to fill an unexpired term may be appointed for an additional

The Federal Reserve building.

full term. From among the seven members, the Board's chairman and vice chairman are also appointed and confirmed by the president and the Senate for four-year terms.

2. There are three advisory groups that aid the Board of Governors:
   a. Federal Advisory Council, consisting of one member from each Reserve Bank. Its major concerns involve banking and economic issues.
   b. Consumer Advisory Council, consisting of thirty specialists in consumer and financial matters.
   c. Thrift Institutions Advisory Council, consisting of people representing thrift institutions. This Council is concerned with issues affecting those institutions.
3. The Federal Open Market Committee (FOMC) consists of the seven-member Board of Governors, the New York Federal Reserve Bank president, and an additional four Reserve Bank presidents who serve on a one-year rotating basis. By tradition, the Committee elects the Board of Governors chairman as its chairman and the New York Reserve Bank president as its vice chairman. Although all twelve Reserve Bank presidents attend the FOMC's eight-times-a-year formal meetings, only the Board, the New York Reserve Bank president, and the four rotating presidents are voting members.

ACTIVITIES AND RESPONSIBILITIES OF THE FEDERAL RESERVE SYSTEM

In conjunction with the FOMC and the twelve Reserve Banks, the Board of Governors' main concern is the development of monetary policy, which it carries out through three means:

1. The establishment of reserve-level rates; that is, amounts that member banks must

Woodrow Wilson created the Federal Reserve.

set aside to be reserved against deposits. These amounts depend on the nation's economic activity status, with emphasis placed on price levels and the volume of business and consumer expenditures. By the lowering of the required reserve-level rate, banks can increase the proportion of funds they are able to lend to customers. By raising the required reserve-level rate, the opposite effect takes place. Thus, the Fed can influence such factors as economic activities, the money supply, interest rates, credit availability, and prices. However, a change in a reserve-level rate usually causes banks to change their strategic plans. In addition, a reserve-level rate increase is costly to banks. Consequently, changes in reserve-level rates are uncommon.

2. The approval of discount rates (interest rates at which member banks may borrow short-term funds from their Reserve Bank). When inflation threatens, a discount-rate increase tends to dampen economic activity because then banks charge higher interest rates to borrowers. On the other hand, a discount-rate decrease is designed to stimulate business activity. The term "discount window" is often used when describing a Reserve Bank facility that extends credit to a member bank.

   Another rate, the federal funds rate, is an important factor affecting day-to-day bank operations. This is the rate charged by one depository institution to another for the overnight loan of funds. This happens when one bank is short of funds while another has a surplus. The rate is not fixed; it may change from day to day and from bank to bank.

3. Open-market operations (the purchase and sale of U.S. government securities in the open market). These activities are conducted by the FOMC, of which the Board of Governors comprises the majority. The Fed buys and sells U.S. government securities such as Treasury bills from banks and others several times a week. As a result, the amounts banks have available to lend to borrowers are affected. For example, when the Fed buys securities, banks have more funds, so interest rates tend to drop. The opposite occurs when the Fed sells its securities. By and large, open-market operations comprise the most powerful tool the Fed has to influence monetary policy.

Other activities and responsibilities of the Federal Reserve System include the following:

1. Supervision of the twelve Reserve Banks and their branches. With regard to the latter, the Board of Governors, through the Reserve Banks, uses both on- and off-site examinations to maintain awareness of each member bank's activities. These activities include the quality of loans, capital levels, and the availability of cash.

2. Cooperative efforts of the U.S. Treasury and the Fed. For example, the Fed acts as the Treasury's fiscal agent by putting paper money and coins into circulation, handling Treasury securities, and maintaining a checking account for the Treasury's receipts and payments.
3. Oversight of banking organizations, such as bank holding companies (companies that own or control one or more banks).
4. Provision of an efficient payments system; for example, check collections and electronic transactions. With billions of checks in circulation each year, the Fed plays a major role in assuring their efficient processing. By arrangements among the Reserve Banks, member banks and nonmember banks, checks are credited or debited (added to or subtracted from) to depositors' accounts speedily and accurately. Electronic methods are being used increasingly to transfer funds (and securities, too). One such method, involving very large sums, is called "Fedwire." Another is the Automated Clearinghouse (ACH), which is used by the government, businesses, and individuals for the receipt or payment of recurring items, such as Social Security.
5. Enforcement of consumer credit protection laws. These laws include the Community Reinvestment Act, which promotes community credit needs; the Equal Credit Opportunity Act, which prohibits discrimination in credit transactions on the basis of marital status, race, sex, and so forth; the Fair Credit Reporting Act, which allows consumers access to their credit records for the purpose of correcting errors; and the Truth in Lending Act, which enables consumers to determine the true amount they are paying for credit.
6. Establishment of banking rules and regulations.
7. Determination of margin requirements (the amount of credit granted investors for the purchase of securities, such as shares of stock). The borrowed funds are usually secured from a bank or a brokerage firm (a company that sells stocks and/or bonds). Margin requirements that are too liberal can damage the stock market and the economy.
8. Approval or disapproval of applications for bank mergers (two or more banks joining together to form one new bank). The Fed also acts if the new bank is to become a state member bank of the Federal Reserve System.
9. Approval and supervision of the Edge Act (named for Senator Walter Edge of New Jersey) and "agreement corporations." Both cases involve corporations that are chartered to engage in international banking. Edge Act corporations are chartered by the Fed, while "agreement corporations" secure their charters from the states. The latter are so named because they must agree to conform to activities permitted to Edge Act corporations. The Fed is also responsible for approving and regulating foreign branches of member banks and for developing policies regarding foreign lending by member banks.
10. Issuance and redemption of U.S. savings bonds. Regardless of how the bonds are purchased—for example, through an employer savings plan or a bank—it is the Fed that processes the applications and sends the bonds.

SUMMARY

Since it holds substantial U.S. government securities, the Federal Reserve System earns sufficient interest to operate without government appropriations. Consequently, it is both a financially self-sufficient and politically independent agency that exerts great influence on the nation's economy. It bolsters domestic consumer confidence and is a major player in global economic activities.

(SEE ALSO: *Financial Institutions*)

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MELVIN MORGENSTEIN

FEDERAL TRADE COMMISSION ACT OF 1914

The Federal Trade Commission Act of 1914 prohibits unfair methods, acts, and practices of competition in interstate commerce. It also created the Federal Trade Commission, a bipartisan commission of five presidential appointees, confirmed by the Senate, to police violations of the act. The Federal Trade Commission's (FTC) function is to counter deceptive acts and practices and anticompetitive behavior by businesses. The FTC enforces the Clayton and Federal Trade Commission Acts as well as a number of other antitrust and consumer-protection laws. The FTC's rulemaking authority enables it to issue rules interpreting the antitrust laws that govern either all members of industry or apply to specific business practices. When a rule is violated, the FTC can initiate civil proceedings in a federal district court to obtain injunctive relief and civil damages.

The FTC (and the provisions of the antitrust acts that preceded it) promotes free and fair trade competition by investigating and preventing violations of the law. Key areas covered by the Federal Trade Commission Act of 1914, as well as other antitrust laws, include the following:

Price fixing: There are two types of price fixing: vertical and horizontal. Vertical price fixing occurs when manufacturers make express or implied agreements with their customers obligating them to resell at a price dictated by the manufacturer. Manufacturers can suggest retail prices but not fix them by agreement. Few sellers are caught vertically fixing prices; instead, they intimidate retailers by cutting off sales (Garman, 1997). Horizontal price fixing occurs when competitors make direct agreements about the quantity of goods that will be produced, offered for sale, or bought. According to Garman (1997), in one case, an agreement by major oil refiners to purchase and store the excess production of small independent refiners was found to be illegal because the purpose of the agreement was to affect the market price for gasoline by artificially limiting the availability of supply. The government can take action, civil and/or criminal, in cases of price fixing.

Unfair competition: The FTC and antitrust policies that preceded it are in agreement on concepts of unfair competition. Examples of unfair competition are larger businesses using their size or market power to gain lower prices from suppliers or a manufacturer granting discounts for the same products sold to larger firms without granting similar discounts to smaller businesses when selling costs do not vary.

Merger prohibition: A merger is the acquisition of one company by another. The FTC established guidelines and criteria that challenge mergers that lessen competition. The judgment of the courts is that a restraint of trade occurring through a merger must be undue and unreasonable before it is held illegal.

Deceptive practices: False advertising is one example of deceptive practice. The FTC considers an advertisement deceptive if it contains misrepresentation or omission

> that is likely to mislead consumers acting reasonably under the circumstances to their detriment.

Even though there are differences of opinion as to the effectiveness of antitrust policy, everyone—consumers, competitors, and prospective business owners—benefits from a more competitive economy. Thus, antitrust policy is an important element in public policy regarding business. Unfortunately, there are limits to what is accomplished mainly because the amount of funds provided by Congress for antitrust issues has a significant impact on enforcement. One case, such as the 1999 Microsoft case, can make a major dent in the FTC budget.

(SEE ALSO: *Antitrust Legislation*)

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PHYLLIS BUNN

FEEDBACK

(SEE: *Operations Management*)

FINANCE

Corporate or *Business Finance* is basically the methodology of allocating financial resources, with a financial value, in an optimal manner to maximize the wealth of a business enterprise. There are three major decisions to be made in this allocation process: capital budgeting, financing, and dividend policy. *Capital budgeting* is the decision regarding the choice of which investments are to be made with the resources that have been brought into the business or earned and retained by the business. The choice depends on the returns to be made from the investment exceeding the cost of capital. The method used to do this is the discounted time-value of money of the cash flow from the investment. This value is the *internal rate of return (IRR)*, a measure of return on investment. When the IRR exceeds the required return, which is equal to the cost of the funds invested—see *weighted average cost of capital*, below—then the investment should be made. If such a required return is used as the *discount rate*, then that is the same as saying the investment will yield a positive *net present value (NPV)*. If there are two or more investments that can be made, but they are mutually exclusive, then they must be ranked; and the one with the highest NPV should be chosen. If there is a limited amount of funds to be invested, then some bankers or advisers who obtain additional funds for a business may require that the business choose among the investments so as not to exceed the limited level of funds available. This selection process, which is called *capital rationing*, should be done in a similar manner to rank the projects by selecting the combination of investments that do not exceed the total funds available and that yield the maximum total net present value.

Financing is the decision of which resources or funds are to be brought into the business from external investors and creditors in order to be invested in profitable projects. The first external source of finance is *debt*, which includes *loans* from banks and *bonds* purchased by bondholders. The debt creditors take less risk of nonrepayment because the business must repay them if there are funds available to do so when the debt becomes due. The second external source of finance is *equity*, which includes *common stock* and *preferred stock*. The equity investors in the business take more business risk and may not receive payment until the creditors are repaid and the management of the business decides to distribute funds back to the investors. The goal of the financing decision is to obtain all the resources necessary, to make all the investments that yield a return in excess of the cost of the funds invested or the required rate of return, and to obtain these funds at the lowest average cost, so as to reduce the required rate of return and increase the net present value of the projects selected.

Dividend policy is the decision regarding funds to be distributed or returned to the equity investors. This can be done with *common stock dividends*, *preferred stock dividends*, or *stock repurchase* by the business of its own stock. The aim of this decision is to retain the resources in the business that are required to run the business or make additional investments in the business, as long as the returns earned exceed the required return. In theory, management should return or distribute all resources that cannot be invested in the business at levels in excess of the required return. In practice, however, dividends are often maintained at or changed to certain levels in order to convey the proper signals to the investors and the financial markets. For example, dividends can be maintained at moderate levels to demonstrate stability, maintained at or reduced to low levels to demonstrate the growth opportunities for the business, or increased to higher levels to demonstrate the restoration of a strong financial (capital) structure (debt and equity capital) for the business.

Capital is the total of financial resources invested in the business. In terms of the sources, there are two types of capital: *interest-bearing debt* funds, such as loans, bonds, short-term notes, and interest-bearing payables to trade suppliers; and *equity*, such as common and preferred stock and the earnings retained in the business that add to stockholders' share of the entities. In terms of uses, there are also two types of capital: *net working capital*, such as operating cash, inventory, and receivables, less interest-free payables to trade suppliers; and *fixed capital*, such as property, plant and equipment. Capital is managed to maximize wealth by maximizing the rates of return on investments of capital and thus maximizing the total net present value of the business. This can be done by minimizing the amount of capital used for given business investments with given business returns.

Weighted average cost of capital is the weighted average of the returns on investment or future dividends for the stockholders and interest rates on debt for the creditors. This average return should be used as the required return for investments, as mentioned earlier, because it represents the weighted average of the required returns of all the different debt creditors and equity investors. It also represents the weighted average of the costs that can be saved by the business if the resources or financial funds are returned to the creditors and investors instead of being used for investments within the business.

Capital structure is represented by the types of sources of capital funds invested in the business. A common measure of sources is the percentage of debt relative to equity that appears on a company's balance sheet. Usually, the cost or required returns for the debt is much less than the equity, especially on an after-tax basis. Thus, the total cost of capital declines when some debt funds from creditors are substituted for equity funds from investors. Yet as more debt is added, the business becomes riskier because of the higher amount of fixed payments that must be made to creditors, whether or not the business is generating adequate funds from earnings; and then the costs of both the debt and equity funds are increased to the point where the weighted-average cost increases.

Acquisitions, which are purchases of other businesses, are merely another type of capital budgeting investment for a business. Such purchases should be evaluated in the same manner as any other capital investment, as outlined earlier, to obtain the maximum positive net present value, though the issues and data are often more complex to analyze.

Price/earnings ratio is often used in making acquisitions as an abbreviated measure of valuation. This ratio is of the value or price of a business or its stock to its earnings. Yet the actual decision to make an acquisition is a capital budgeting decision; the resultant determination of price or net present value can then be described in relative terms to the earnings in the price/earnings ratio.

Returns for any business or particular debt or investment made in the business are merely the cash flows that will ultimately be earned by the business or particular creditors and stockholders. These can be expressed in dollar terms or as percentages, with the latter being the average annual percentage of the cash flows relative to the overall investment in the business or the particular amounts of debt or stock involved. For debt instruments, these percentage rates are called *interest rates.* For specific investment decisions, the returns used should be those that are incremental of the specific investment.

Return/interest rates are based on three components: *pure return* for the investor or creditor providing funds; coverage of *inflation rates*, so that the purchasing power of the proceeds is maintained apart from the true return; and additional return for additional *risk*, such as an equity investment in a risky business as opposed to a bond from the U.S. government. These components are then compounded with each other, rather than merely added together, to obtain the overall interest rate or required return on equity investment. When calculating return or interest rates, any additional up-front money, such as closing costs, must also be added to the investment; this amount increases or reduces the return, depending on who pays for it.

Residual values are a portion of the returns to be earned in an investment that is returned to the business when the investment is sold or the project is terminated. This can be most important in the liquidation of inventory and receivables when operations of a portion of a business are terminated or when real estate ceases to be required and thus can be sold, for example, when a factory is closed or when a lease term is complete.

Maturities of debt instruments, such as bonds, loans, or notes payable, are the amounts of time outstanding before the debt becomes due. The financial management rule with respect to maturities is to match the duration of the funds being borrowed by the debtor, or invested by the creditor, with the timing of his or her own business needs for funds in the future. Thus, the financing of a new business—with the likely future expansions of property, plant, equipment, inventory, and receivables—can be done with longer-term debt funds. Yet the financing of a specific shorter-term need, such as the outlays on a construction project before completion payments are made, should be comparably shorter in maturity. Similarly, the investment of temporary excess cash should be in shorter-term instruments, such as short-term CDs or Treasury bills. If maturities are not matched, then the additional time before the debt becomes due from or to you becomes a period of speculation on the rise or fall of future interest rates.

International finance is concerned with the same methodology of allocating financial resources, but with modifications or areas of emphasis required by the restrictions of currency and capital movements among countries and the differences in the currencies used in different countries. The following paragraphs represent some of the major changes to the basic financial decisions:

1. *Foreign capital budgeting* requires the use of foreign cash flows and local tax rates, but U.S. inflation rates and U.S. dollars at the current exchange rates can be used. The required return or cost of capital then need only be adjusted, as with any investment, for the greater or lesser risk of the project in which the investment is made, which includes the greater or lesser risk of the country in which the investment is being made.
2. *Foreign capital markets* are a source for both debt and equity funds, for both foreign subsidiary operations and the general needs of the overall business. *Foreign subsidiary capital structures* often utilize more local debt when legally and practically available in order to reduce the risk of blockages of earned funds from repatriation to the parent company in another country. In addition, local-currency debt reduces the risk for the parent company if the exchange rates for the local currency change adversely.
3. *Foreign-exchange* rates can change dramatically and therefore pose a significant

risk for the value of assets held in or future payments from foreign countries. These exposures may be in dealings with third parties or within a company's own foreign subsidiaries. *Forward currency contracts* or *currency options*, instruments used to purchase one currency for another currency in the future at guaranteed exchange rates, can be used to protect against such risk. While these contracts are often also used to make profits by managers who believe the exchange rates will change in a manner different from the expectations implicit in the overall currency market, such use should be viewed as risky speculation.

4. *Personal finance* is concerned with the same methodology of allocating resources, but with a greater emphasis on allocating some of them to obtain the maximum consumption satisfaction at the lowest cost, as opposed to earning income and cash flow returns on the investments.
5. *Budgeting* and *financial planning* are the processes used by financial managers to forecast future financial results for a business, a person, or a particular investment. Usually, the major components of earnings, cash flow, and capital are projected in the form of *forecasted income statements*, *cash-flow statements*, and *balance sheets*. The latter show where the capital funds are invested in the components of fixed and working capital, as well as the sources of these capital funds in terms of the debt, stock, and retained earnings.

ISSUES IN APPLIED CORPORATE FINANCE AND VALUATION

Estimation of the Cost of Capital. In recent decades, theoretical breakthroughs in such areas as portfolio diversification, market efficiency, and asset pricing have converged into compelling recommendations about the cost of capital to a corporation. The cost of capital is central to modern finance, touching on investment and divestment decisions, measure of economic profit, performance appraisal, and incentive systems. Each year in the United States, corporations undertake more than $500 billion in expenditures, so how firms estimate the cost is not a trivial matter. A key insight from finance theory is that any use of capital imposes an opportunity cost on investors; namely, funds are diverted from earning a return on the next-best equal risk investment. Since investors have access to a host of financial market opportunities, corporate use of capital must be benchmarked against these capital market alternatives. The cost of capital provides this benchmark. Unless a firm can earn in excess of its cost of capital, it will not create economic profit or value for investors. A recent survey of leading practitioners reported the following best practices:

- Discounted cash flow (DCF) is the dominant investment-evaluation technique.
- Weighted average cost of capital (WACC) is the dominant discount rate used in DCF analyses.
- Weights are based on market, not book, value mixes of debt and equity.
- The after-tax cost of debt is predominantly based on marginal pretax costs, as well as marginal or statutory tax rates.
- The capital asset pricing model (CAPM) is the dominant model for estimating the cost of equity.

Discounted cash flow valuation models. The parameters that make up the DCF model are related to risk (the required rate of return) and the return itself. These models use three alternative cash-flow measures: dividends, accounting earnings, and free cash flows. Just as DCF and asset-based valuation models are equivalent under the assumption of perfect markets, dividends, earnings, and free cash-flow measures can be shown to yield equivalent results. Their implementation, however, is not straightforward. First, there is inherent difficulty in defining the cash flows used in these models. Which cash flows and to whom do they flow? Conceptually, cash flows are defined differently depending on whether the valuation objective is the firm's equity or the value of the firm's debt plus equity. Assuming that we can define cash flows, we are left with another issue. The models need future cash flows as inputs. How is the cash-flow stream estimated from present data? More important, are current and past dividends, earnings, or cash flows the best indicators of that stream? These pragmatic issues determine which model should be used. Although the dividend model is easy to use, it presents a conceptual dilemma. Finance theory says that dividend policy is irrelevant. The model, however, requires forecasting dividends to infinity or making terminal value assumptions. Firms that presently do not pay dividends are a case in point. Such firms are not valueless. In fact, high-growth firms often pay no dividends, since they reinvest all funds available to them. When firm value is estimated using a dividend discount model, it depends on the dividend level of the firm after its growth stabilizes. Future dividends depend on the earnings stream the firm will be able to generate. Thus, the firm's expected future earnings are fundamental to such a valuation. Similarly, for a firm paying dividends, the level of dividends may be a discretionary choice of management that is restricted by available earnings. When dividends are not paid out, value accumulates within the firm in the form of reinvested earnings. Alternatively, firms sometimes pay dividends right up to bankruptcy. Thus, dividends may say more about the allocation of earnings to different claimants than valuation. All three DCF approaches rely on a measure of cash flows to the suppliers of capital (debt and equity) to the firm. They differ only in the choice of measurement, with the dividend approach measuring the cash flows directly and the others arriving at them in an indirect manner. The free cash-flow approach arrives at the cash-flow measure (if the firm is all-equity) by subtracting investment from operating cash flows, whereas the earnings approach expresses dividends indirectly as a fraction of earnings.

The capital asset pricing model. This is a set of predictions concerning equilibrium expected returns on risky assets. Harry Markowitz established the foundation of modern portfolio theory in 1952. The CAPM was developed twelve years later in articles by William Sharpe, John Lintner, and Jan Mossin. Almost always referred to as CAPM, it is a centerpiece of modern financial economics. The model gives us a precise prediction of the relationship that we should observe between the risk of an asset and its expected return. This relationship serves two vital functions. First, it provides a benchmark rate of return for evaluating possible investments. For example, if we are analyzing securities, we might be interested in whether the expected return we forecast for a stock is more or less than its "fair" return given its risk. Second, the model helps us to make an educated guess as to the expected return on assets that have not yet been traded in the marketplace. For example, how do we price an initial public offering of stock? How will a new investment project affect the return investors require on a company's stock? Although the CAPM does not fully withstand empirical tests, it is widely used because of the insight it offers and because its accuracy suffices for many important applications. Although the CAPM is a quite complex model, it can be reduced to five simple ideas:

- Investors can eliminate some risk (unsystematic risk) by diversifying across many regions and sectors.
- Some risk (systematic risk), such as that of global recession, cannot be eliminated through diversification. So even a basket with all of the stocks in the stock market will still be risky.
- People must be rewarded for investing in such a risky basket by earning returns above those that they can get on safer assets.
- The rewards on a specific investment depend only on the extent to which it affects the market basket's risk.
- Conveniently, that contribution to the market basket's risk can be captured by a single measure—"beta"—that expresses the relationship between the investment's risk and the market's risk.

Finance theory is evolving in response to innovative products and strategies devised in the financial market-place and in academic research centers.

(SEE ALSO: *Financial Institutions*; *Financial Markets*; *Securities and Exchange Commission*)

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SURENDRA K. KAUSHIK
LAWRENCE M. KRACKOV
MASSIMO SANTICCHIA

FINANCE: HISTORICAL PERSPECTIVES

Corporate finance, which is the acquisition and use of funds by business entities, has evolved as the scope of business enterprises has changed and as American society has become increasingly successful in achieving its economic goals. The history of finance in the United States is a story that began with rudimentary, unregulated means of securing funds in the early years of the newly established nation and reached in the closing decades of the twentieth century, a level of advanced innovation that made the United States the financial leader in the global community. The success of the finance function in corporate America is the result of a combination of business innovation in the design and strategies of securing funds and of governmental regulations that assure integrity in financial markets. Significant aspects in this development are discussed in the sections that follow.

EARLY AMERICAN FINANCE

In the colonial United States, businesses were, for the most part, small and self-financed. However, the first settlers, who had been British subjects, were well acquainted with the corporate form of organization. As Davis (1917) noted, "before the end of the colonial period a considerable number of truly private corporations had been established for ecclesiastical, education, charitable, and even business purposes" (p. 4).

Many of these early efforts were unsuccessful, and those individuals who invested in them often lost their total contributions. The nature of financing problems in these early efforts is illustrated by the story of an organization called *The Society for Establishing Useful Manufacturers*. In November 1791, the legislature of New Jersey passed an act incorporating this enterprise, which likely manufactured various products including paper, textiles, pottery, and wire. Davis (1917) identified this company as "one of the pioneer industrial corporations of the United States and the largest and most pretentious of these" (p. 349). Plans for the new corporation were publicly announced, including the much-criticized strategy of raising capital by issuing public stocks. The emphasis on developing domestic industry and reducing dependence on imports was appealing to potential investors, and private citizens were getting encouragement from the newly formed federal government to undertake business activity on a broader scale than had been common at the time. At the time the prospectus for this new enterprise was being circulated, Alexander Hamilton, the secretary of the Treasury, presented his *Report on Manufacturers*, which was prepared in response to President Washington's direction "to prepare and report to the House, a proper plan for the encouragement and promotion of such manufactories as will tend to render the United States independent of other nations" (quoted in Davis, 1917, p. 362).

The requisite capital was indeed raised, with most of the subscriptions secured in New York. Shortly thereafter, panic ensued because the new enterprise was not progressing as intended. The leading offices and directors were deeply involved in the speculative boom that was widespread at the time and had not given attention to the actual business of the new enterprise. Thereafter, the leaders, who were in possession of most of the paid-in funds, went bankrupt. This story reveals the lure of becoming wealthy quickly and of general incompetence among leadership. There were virtually no rules to restrain the behavior of the leaders, and they appropriated the funds for their own personal use.

The society was saved by a loan of $10,000 from the Bank of New York, and there is evidence that the secretary of Treasury was critical in securing this financing. However, there continued to be serious finance problems, throughout the period when facilities for the envisioned textile mills were being constructed. The newly appointed treasurer was supposed to be bonded, but he refused. He continued in the position nonetheless. When he retired in 1796, the treasurer's books and the funds were supposed to be left with the deputy-governor. The books, though, were never recovered. It is not clear whether all the funds were recovered. The operations were unprofitable and were discontinued in the same year.

FINANCE IN THE 1800s

On the brink of the nineteenth century the United States had a dismal record of successful corporations, as illustrated by the effort in New Jersey discussed above. The country was a world of small mercantile businesses. As of 1790, for example, there were only three banks, three bridge companies, a few insurance associations, and a dozen canal companies (Williamson, 1951). However, some businesspeople began to see the value of the corporation: The risks of manufacturing made the limited liability of the corporation appealing. Several states enacted useful laws. In 1811 New York enacted a law that allowed for the incorporation of certain kinds of manufacturing concerns with less than $100,000 of capital. Connecticut, in 1817, and Massachusetts, in 1830, granted limited liability, which was the first step in movement for general incorporation acts. The intent of such acts was to encourage the financing of entities through the corporate structure and to protect the public that might be inclined to invest in these new enterprises. In the same period, the government was significantly involved in the financing of businesses. As Cochran (1966) noted:

> *The capital needs of banking and transportation brought state participation in business organization. Few such pioneer enterprises seemed possible without substantial state, county, or municipal purchases of stocks and bonds. The credit of the state was generally substituted in part for that of the private company by issuance of state bonds and use of the proceeds to buy the company's securities.* (p. 219)

At the same time, Cochran (1966) noted some of the serious drawbacks of the new ownership:

> *Free and secret transferability of corporate ownership encouraged grave abuses on the part of unscrupulous financiers. It was possible for managing groups to profit personally by ruining great companies and then selling out before the situation became known.* (p. 219)

However, there were conscientious men who were interested in productive efficiency as well as the quest for wealth. Among the individuals Cochran (1966) identified was Nathan Appleton:

> *Nathan Appleton . . . turning from mercantile pursuits in 1813, joined with some of the Lowells and Jacksons, put his capital into large-scale textile manufacture. . . . Appleton came to be looked upon as the business leader of Massachusetts. . . . By 1840 he and his Boston associates had created in eastern Massachusetts a miniature of the corporate industrial society of the twentieth century. They controlled banking, railroad, insurance, and power companies as well as great textile mills scattered all over the state. It was the large "modern" corporation controllable by strategically organized blocs of shares, and virtually self-perpetuating boards of directors that made*

> *this concentration of power possible, but it must be remembered that it was also this device for gathering together the savings of thousands of small investors that had produced the great development.* (p. 220)

There had been remarkable developments throughout the 1800s. Baskin and Miranti (1997), for example, pointed out that the "last quarter of the eighteenth century saw the start of a great economic expansion that changed corporate finance in fundamental ways" (p. 127). It was during this period that there was extensive development of railroads, which independently became strong bastions of finance capitalism. During this period, preferred stock and debt became popular means of financing corporations. During the final decades of the 1800s, relatively widely distributed financial journals and newspapers began to appear.

THE ROLE OF BANKS FROM THE LATE 1800s THROUGH THE 1920s

Bankers are critical to economic development. Schumpeter, in his theory of economic development, highlighted the role of bankers as the source of funds for enterpreneurs, who themselves often lack financial resource. Schumpeter (1934) noted: "In an economy without development there would be no such money market . . . the kernel of the matter lies in the credit requirements of new enterprises . . . thus, the main function of the money or capital market is trading in credit for the purpose of financing development" (p. 122-127).

Schumpeter undoubtedly was fully aware of the U.S. experience and the influence of American bankers in the impressive growth of the American economy from the mid-1800s through the early decade of the twentieth century. Possibly the most impressive of the bankers were the Morgans. As Chernow (1990), in his history of the Morgans, concluded: "The old pre-1935 House of Morgan was probably the most formidable financial combine in history. It financed many industrial giants, including U.S. Steel, General Electric, General Motors, Du Pont, and American Telephone and Telegraph" (p. xi).

At the end of the 1800s, banks were the critical source of funds for U.S. enterprises. Their role, however, changed during the twentieth century, as businesses became larger and the types of financial institutions increased.

CHANGES IN FINANCIAL STRUCTURE

The financial structure in the United States changed during the twentieth century. Goldsmith's (1969) study provided a comparison of the main types of U.S. financial institutions in 1900 and 1963, shown in Table 1.

As Table 1 shows, in 1900, 62.9 percent of total assets of all the financial institutions were held by commercial banks; by 1963 that percentage was 32.2. While thrift institutions, including mutual savings banks, savings and loan associations, credit unions, and postal savings systems, maintained approximately the same percentage of total assets (18.2 percent in 1900; 16.9 percent in 1963), mutual savings banks held 15.1 percent of total assets in 1900 but only 5.1 percent in 1963. Savings and loan associations, which had 3.1 of total assets in 1900, held 10.9 percent in 1963. In 1900 a group of institutions identified as "miscellaneous" included only mortgage companies and security dealers. By 1963, the "miscellaneous" category included those that had existed in 1900, plus finance companies, investment companies, land banks, and government lending institutions (Goldsmith, 1969).

Goldsmith's analysis revealed that financial superstructure grows more rapidly than the infrastructure of national product and national wealth. He noted that in less than two hundred years within the world community there had developed what he identified as a financial system of the modern type, characterized by:

> *the existence of several basic forms of financial institutions (banks of issue and deposit, savings banks, mortgage banks, and insurance companies) and of financial instruments (scriptural [nonmetallic] money, bills of exchange, accounts receivable and payable, bank deposits and loans made by financial institutions, life insurance and pension contracts, mortgages, government and corporate bonds, and corporate stock.)* (Goldsmith, 1969, 99. 10-11)

Financial Institutions in 1900 and 1963

Type of institution	Distribution of total assets of financial institutions	
	1963	1900
	%	%
Federal Reserve Banks	5.9	---
Commercial banks	32.2	62.9
Mutual savings banks	5.1	15.1
Savings and loan associations	10.9	3.1
Credit unions	0.8	---
Postal savings system	0.1	---
Insurance organizations	32.0	13.8
Miscellaneous institutions	13.0	5.1
Total	100.0	100.0

Table 1

SOURCE: Goldsmith, Raymond. (1969). *Financial Structure and Development.* New Haven: Yale University Press.

A parallelism between economic and financial development is observable if periods of several decades are considered. Goldsmith's (1969) data showed that "as real income and wealth increase, in the aggregate and per head of the population, the size and complexity of the financial superstructure grow" (p. 48).

Shares of assets held by banks and thrift institutions continued to decline. While the two types of financial institutions held 55.0 percent of total assets in 1963, the two types held only 22.7 percent by the end of 1999, as reported by the Federal Reserve Board.

IMPETUS FOR REGULATION OF SECURITIES IN THE UNITED STATES

Prior to 1929, there was little support for federal regulation of securities markets in the United States. The optimism of the post-World War I period, with promises of easy credit and instant wealth, was not a time of restraints imposed by regulation. As noted by the Securities and Exchange Commission (SEC), "During the 1920s, approximately 20 million large and small shareholders took advantage of post-war prosperity and set out to make their fortunes in the stock market. It is estimated that of the $50 billion in new securities offering during this period, half became worthless." (SEC, www.sec.gov/)

Public confidence shifted dramatically with the stock market crash of 1929. For the economy to recover, the public's faith in the capital markets needed to be restored. The outcome was the passage of two acts by Congress, the Securities Act of 1933 and the Securities Exchange Act of 1934. These laws were established to provide structure in the functioning of financial markets and to provide government oversight.

THE SECURITIES AND EXCHANGE COMMISSION

The Securities Exchange Act of 1934 included the establishment of the Securities and Exchange Commission, which was charged with enforcing the newly passed securities laws, promoting stability in the markets, and protecting investors.

The Securities and Exchange Commission operates on the premise that all investors should have access to certain basic facts about investments prior to purchase. The key means of achieving this is through requiring that all publicly owned companies disclose relevant financial and other information to all citizens.

The SEC oversees key participants in the financial world, including stock exchanges, broker-dealers, and investment advisers. Through its enforcement authority, the SEC brings civil enforcement actions against individuals and companies that violate securities laws. Typical infractions relate to insider trading, accounting fraud, and providing false or misleading information about securities and the companies that issue them.

THE ROLE OF STOCK EXCHANGES

Stock exchanges have played a significant role in the financing of U.S. business enterprises through providing a means of buying and selling securities. The first stock exchange in the United States was established in 1790 in Philadelphia. Two years later, in 1792, the New York Stock Exchange was formed when twenty-four stockbrokers signed an agreement to trade with one another beneath a buttonwood tree outside what is now 68 Wall Street. The New York Stock

Exchange (NYSE) is the largest stock exchange in the world.

The NYSE's first client, in 1792, was the Bank of New York, and its first office, set up in 1817, was a rented room at 40 Wall Street. It achieved its first million-share day on December 15, 1886, and its first billion-share day on October 28, 1997.

A study of all securities markets by the SEC in 1961 revealed that the over-the-counter securities market was fragmented and obscure, leading the SEC to propose to the National Association of Securities Dealers, that it develop an automated over-the-counter securities system. Such a system was completed and began operations in February 1971; it is known as the National Association of Securities Dealers Automated Quotation—or NASDAQ—system. The world's first electronic stock market, by the end of 1999 it ranked second, below the New York Stock Exchange, among the world's securities markets in terms of dollar volume.

CLOSING DECADES OF THE TWENTIETH CENTURY

With the passage of new laws, the financial industry is being restructured. The scope of services provided by type of institution is not as limited as was the case earlier.

The impact of technology. As the twenty-first century got under way, the ways in which stocks were bought and sold began to receive intensive attention. Stock markets, including the regional ones in the United States, began considering the ways in which current and emerging technologies would affect how they function.

The Federal Government also became involved in assessing the implications of electronic commerce during the final years of the twentieth century. Hearings were held by committees in both the House of Representatives and the Senate. Among those making presentations at hearings of the Senate Banking Committee were leaders of banks and stock exchanges. Traditional firms in these industries assured the members of such committees that they could meet the challenges of the new technology and continue to be viable players in the financial marketplace.

One example of the appeal of electronic commerce in financial services is the extent of such commerce as of mid-2000. On-line spending in financial services, primarily the buying and selling of securities, was 28.9 percent of all expenditures in this category. A year earlier, the extent of such transactions was 14.6. (as reported in *The Wall Street Journal*, July 17, 2000. "Clicks and Mortar." William M. Bulkeley, p.R4. Source was cited as Boston Consulting Group).

There is considerable interest in developing the rules and regulations to enhance the effectiveness and efficiency of financial transactions electronically. An important new ruling for e-commerce that will allow on-line signatures was passed by Congress in June 2000 and will take effect as of October 1, 2000.

Continuing development of the theory of finance. In the final third of the twentieth century, there were impressive developments in the theory of finance. Although the Nobel Prize was first awarded in 1901, the category "economic science" was not added until 1969. Several leading theorists in the field of finance have been among the recipients of the Nobel Prize in economic science.

The globalization of financial activity. The transformation of capital markets from the national level to the global level increased considerably during the final decade of the twentieth century, fueled by economic progress and supported by rapidly developing technological capabilities. Leadership was provided by an association of the world's securities regulators, the International Organization of Securities Commissions (IOSCO), which was organized in the early 1970s. The IOSCO in 1993 described a core set of standards that would be needed to provide a comprehensive body of accounting principles for companies undertaking cross-border securities offerings. In May 2000, the IOSCO approved the core standards developed by the International Accounting Standards Committee (IASC). In the meantime, the International Accounting Standards Committee designed a new structure for an international accounting standard-setting body, which was accepted by the membership in May 2000 with implementation anticipated in January 2001.

These developments are promising for the development of a functioning global financial marketplace.

(SEE ALSO: *Finance*)

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MARY ELLEN OLIVERIO

FINANCIAL ACCOUNTING STANDARDS BOARD

The United States has a longstanding tradition of accounting standards being set by the private sector (as opposed to the government). Although the federal government's Securities and Exchange Commission (SEC) has the legal authority to establish accounting standards for public companies, the SEC has historically looked to the private sector to set accounting standards.

The first two standard-setting organizations in the United States were the Committee on Accounting Procedure (CAP), which was established in 1938, and the Accounting Principles Board (APB), which replaced the CAP in 1959. Both organizations were committees of the American Institute of Certified Public Accountants (AICPA) and included approximately twenty representatives of the accounting profession who served on a part-time basis. Pronouncements issued by those two bodies are still considered to be generally accepted accounting principles (GAAP) today unless they have been specifically amended or replaced by a subsequent pronouncement.

Largely as a result of criticisms concerning the perceived lack of independence of the APB and the part-time involvement of its members, a major reconsideration of the standard-setting structure in the United States occurred in the early 1970s. This led to the creation in 1973 of a new standard-setting body designed to be independent of all other business and professional organizations. That new group was the Financial Accounting Standards Board (FASB).

The FASB is funded by revenues from the sales of its publications and by voluntary contributions, primarily from public accounting firms and corporations. The board consists of seven full-time members. The usual composition of the board is three members with extensive public accounting experience, two from a corporate background, one academic, and one financial analyst.

The three pillars on which the FASB was built are independence, openness (or "sunshine"), and neutrality. Although independence can never be totally assured, the FASB charter did attempt to protect the board from as much external pressure as possible. The charter gives the FASB exclusive authority to set its own agenda and establish accounting standards. Board members are insulated from external pressures by fixed five-year terms (with a two-term maximum), by the requirements to end all past employment relationships, and by disclosure of (and certain limitations on) investments and outside activities that might create a conflict of interest.

"Sunshine" characterizes the open process that the board follows. It means that all its technical business is conducted in meetings that are announced in advance and are open to the public. Because the board's Rules of Procedure require a supermajority of five votes to approve the issuance of any new standard, no more than four board members can meet privately to discuss technical issues.

Neutrality means that accounting standards should be designed to provide the best possible information for economic decision making without regard to how that information may affect economic, political, or social behavior. Putting it another way, accounting standards should not be intentionally biased for the purpose of promoting either private special interests or government policy goals. Neutrality has been reinforced by adoption and adherence to a broad set of principles called the conceptual framework. That framework was designed to produce standards that result in neutral information that is useful in decision making.

An independent group, the Financial Accounting Foundation, oversees the activities of the FASB. It is responsible for selecting members of the FASB, raising money to fund the FASB's operations, and providing general oversight of the FASB to assure that it is performing its mission. The foundation is composed of a sixteen-member board of trustees that represent the majority of the groups interested in, or affected by, the accounting standard-setting process.

The FASB has the authority to establish GAAPs but has no authority to enforce its standards. The SEC and the AICPA are the organizations that provide the enforcement mechanism. The SEC requires compliance with FASB standards by all public companies, that is, those whose securities are traded in public markets—on stock exchanges or over-the-counter. The AICPA requires public accounting firms that audit either public or private companies to express an opinion as to whether those companies' financial statements conform with GAAPs.

STANDARD-SETTING PROCESS

Within this overall structure, the FASB has developed an extensive structure of due process to conduct its standard-setting activities. The process usually starts by determining what financial reporting issues are sufficiently pervasive and important that they warrant consideration by the board.

The FASB has a professional staff of approximately forty-five persons; once a project is added to the agenda, staff members are assigned to begin research on the topic. On most larger projects, a task force of outside advisers is appointed; they assist in the staff's research and the board's deliberations by providing expertise, a diversity of viewpoints, and a mechanism for communication with those who may be affected by the proposed standard.

The FASB sometimes asks for written comments from constituents during the research phase through the issuance of a Discussion Memorandum. Such a document analyzes the problem in depth, delineates the issues, identifies alternative solutions, and discusses the merits of those solutions in an objective way. Or the board may issue what is known as a Preliminary Views document, which includes tentative decisions on a few basic issues and again seeks input from constituents.

After completion of initial research by the staff and consideration of comments on a Discussion Memorandum or Preliminary Views, if one of those documents is issued, the board members begin deliberating the issues in earnest. This process can take anywhere from a few months to several years, depending on the number and complexity of the issues involved as well as the strength of the convictions of individual board members. Once at least five board members agree on an overall answer, the board issues an Exposure Draft (ED) of a proposed standard for public comment. The comment period is at least ninety days.

While the ED is out for public comment, the FASB will often conduct a field test, which is designed to test the application of the proposed standard using actual financial information provided by volunteering companies.

The number of comment letters received on an ED can range from a few dozen to more than a thousand, depending on how pervasive and how controversial the proposal is. Comment letters are received primarily from corporations, large public accounting firms, government regulators, academics, and financial analysts, although any interested party is free to express his or her views. After reading the letters, the board redeliberates all the issues in the ED and any additional issues that may have arisen in the comment and field-test processes. At the end of those deliberations, the board again votes; if there is sufficient support among the board members, it issues a final Statement of Financial Accounting Standards.

The steps described above are just an overall outline of the process. Throughout a project's life, discussions are held with the FASB's advisory council, the project task force, and various other interested parties. In addition, the process does not end with the issuance of a Statement. The FASB monitors the application of a Statement to ensure that it is working as planned. Should the standard not work in practice, then the board may consider amending it to provide clarification, issuing additional interpretive guidance, or taking some other action to address problems that arise.

Most FASB projects are controversial. For example, pronouncements on topics such as accounting for employee stock options, postretirement health care benefits, and derivative financial instruments were strongly opposed by many corporations and other affected parties. The board does its best to consider the reasonable arguments expressed by all parties. But in the final analysis, the FASB endeavors to act in the public interest by issuing accounting standards that will result in the most informative and unbiased financial statements possible. Thus investors, creditors, and all others who use financial statements in making economic decisions can take comfort in the fact that the FASB puts the general public interest above any concerns of individual corporations or other self-interested parties.

Despite disagreement over some specific pronouncements, the board's various constituents remain generally supportive. They know that their views are carefully weighed during the FASB's deliberations, but they also recognize that the ultimate determinant of a new standard must be the board's judgment. As the FASB's mission statement states, "The FASB is committed to following an open orderly process for standard setting that precludes placing any particular interest above the interests of the many who rely on financial information."

COMMUNICATING WITH THE FASB

In addition to the Statements, EDs, Discussion Memoranda, and Preliminary Views documents referred to above, the FASB publishes a variety of other documents that provide guidance on financial accounting and reporting. For example, its Emerging Issues Task Force (EITF) develops consensus positions on accounting matters that demand prompt solutions. EITF materials and other FASB publications can be ordered by individual item or through a variety of subscription programs that the organization offers. Special discounts on publications are available to parties who make voluntary contributions to support the overall work of the FASB.

More information on publications or any other related matters is available from the FASB at 401 Merritt 7, Norwalk, CT 06856; (203)847-0700; or at http://www.fasb.org.

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DENNIS R. BERESFORD

FINANCIAL FORECASTS AND PROJECTIONS

Business entities need to plan for the future; they must also consider alternative management strategies and prepare capital and operating budgets; they must also consider alternative funding and cash budget possibilities. An important part of the planning process is the preparation of prospective financial statements that attempt to predict the outcome of the business entity's activities in future periods.

Financial forecasts and *financial projections* are prospective financial statements that present an entity's expected financial position, results of operations, and cash flows in future periods under two different conditions. Financial forecasts assume that the entity will continue to function in the manner in which it is currently functioning. For example, if the entity is a retail store chain, that it will continue to do business in the manner in which it is currently engaged. The financial forecast presents the predicted results for the next year. Financial projections, on the other hand, make one or more hypothetical assumptions about an entity's future course of action. For example, if the retail store chain were considering a Web site at which it would also sell merchandise—in addition to the merchandise sold in the stores—a financial projection would provide expected results. Financial forecasts and projections should be distinguished from *pro forma* financial statements, which show the effect of a hypothetical future event on the historical financial statements results.

PREPARATION OF PROSPECTIVE FINANCIAL STATEMENTS

The preparation of prospective financial statements requires considerable knowledge of the entity's business and the factors that are likely to determine its future results. The following key factors related to future results must be considered in the preparation of such statements:

- Factors related to the specific entity
- Factors related to the industry
- Factors related to the market
- Factors related to the economy

Factors Related to the Specific Entity. The principal cost elements of the entity's doing business must be considered. Depending on the entity, these elements may include such costs as payroll and benefits, needed employees, raw materials, products the entity sells, freight or shipping, and advertising.

Another consideration is the availability of resources. For example, are the expert, specialized, or skilled workers available to meet the needs of the entity under the plan as initially proposed? Are the raw materials and/or products for resale available? Can the delivery system be organized to accomplish the task? Are the company's physical facilities sufficient for the uses and for the capacities contemplated?

Factors Related to the Industry. Factors related to the industry in which the entity is operating must be considered. Is the industry one in which companies are very competitive? Are competitive industries emerging? Is obsolescence emerging within the industry? Are there regulatory considerations and requirements? Is new technology being introduced into the industry? What are the economic conditions within the industry?

Factors Related to the Market. Market factors must be considered. What are the trends in business or consumer demand related to the services or goods being sold by the entity? Are competitive companies emerging, perhaps with new or different products? Is unique marketing required? Are there pricing developments to be factored into the forecast?

Factors Related to the Economy. Numerous factors related to the economy must be considered. What are the economic conditions in the country? What are critical economic trends? Is the economy inflationary, deflationary, or stable? What is the trend with regard to labor availability? What are the financing considerations in relation to the economy? What are interest rates? Are there significant factors related to long-term versus short-term financing? Is a public stock offering a possible financing option?

ATTESTATION SERVICES PROVIDED FOR FINANCIAL FORECASTS AND FINANCIAL PROJECTIONS

Forecasts and projections are important in an organization. They are also of great interest to financial analysts and others in the business environment who make decisions about future business behavior. Because of outsider interest, public accountants are engaged to provide professional services. There are three types of engagements that a certified public accountant may undertake in relation to financial forecasts and projections:

1. Examination: An accountant evaluates the preparation, underlying support, and presentation of the financial statements, and expresses an opinion on them.
2. Applying agreed-upon procedures: Users establish the nature and scope of the engagement, and only the results of the procedures performed are provided.
3. Compilation: An accountant prepares the prospective statements from information and assumptions provided, and no assurance is given.

Examination. The American Institute of Certified Public Accountants (AICPA) has prepared guidelines for prospective financial statements engagements. The person or persons who prepare the financial statements, called the responsible party, are usually the management of the company but may be outsiders, such as the management of an entity considering acquiring the company. The accountants who examine such statements must consider whether the sources of information used by the client are sufficient to support the assumptions reflected in the prospective statements. For example, external sources that should be considered include industry and government publications; reports on new information; digital, electronic, and mechanical technology; reports on new scientific developments; micro and macroeconomic forecasts; and reports on present and proposed legislation. Examples of internal sources that accountants consider include strategic plans, budgets, contractual agreements, purchase and sale agreements and commitments, intellectual property rights such as copyrights and patents, royalty and commission agreements, employee contracts and labor agreements, and financing and debt agreements.

When the examination is of a financial projection, the accountants must determine whether the hypothetical condition or course of action (which will not necessarily occur) is consistent with the purpose of the projection. The accountants must evaluate the support underlying assumptions in the same manner as is done for a forecast.

Upon completion of a financial forecast examination, assuming the accountants have collected sufficient evidence to provide a reasonable basis for the standard report to be issued, that report will state in part:

> *In our opinion, the accompanying forecast is presented in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants, and the underlying assumptions provide a reasonable basis for management's forecast.*

Upon completion of a financial projection examination, the standard report would include a description of the hypothetical assumption and the opinion would state that the underlying assumptions provide a reasonable basis for management's forecast assuming the occurrence of the hypothetical assumption. The report will state in part:

> *In our opinion, the accompanying projection is presented in conformity with guidelines for presentation of a projection established by the American Institute of Certified Public Accountants, and the underlying*

> *assumptions provide a reasonable basis for management's projection [then the hypothetical assumption would be described and assumed to have occurred, for example, "assuming the establishment of a Web site which will . . ."]*

Financial forecasts are considered general-purpose financial statements that may be distributed to any interested party, whereas financial projections are considered limited-purpose financial statements only to be used by the responsible party who prepared the statements or by knowledgeable third parties. In both forecasts and prospective financial statement opinions, a warning must be included in the opinion that the prospective results may not be achieved.

If, in the accountants' opinion, the prospective financial statements depart from AICPA guidelines, or one of the significant assumptions does not provide a reasonable basis for the prospective statements, or the accountants could not apply some procedures that were considered necessary, the report would have to be modified.

Applying Agreed-Upon Procedures. Another type of engagement that certified public accountants may undertake is to apply only some procedures, which have been specified by the users, to the financial forecast or projection. An example of such an engagement might be to review the forecast in regard to sales, or payroll costs, or both. Limiting the procedures to only one item, or some of the items, on the prospective financial statements does not enable the accountants to provide an overall opinion. Because of the limitation in regard to the procedures performed, the report is restricted to the users who specified the procedures to be applied.

The standard applying agreed-upon procedures report will state in part:

> *At your request, we have performed certain agreed-upon procedures, as enumerated below,. . .we make no representation regarding the sufficiency of the procedures described . . . [a list of the procedures performed and related findings would be stated] . . . we do not express an opinion on whether the prospective financial statements . . . provide a reasonable basis for the presentation.*

Compilation. A compilation of prospective financial statements by certified public accountants involves only the service of preparing the statements in whole or part from information and significant assumptions provided by the responsible party, usually a member of management. Because such an activity does not envision an examination or even applying agreed-upon procedures, no assurance is provided.

The standard compilation report on a forecast would state in part:

> *We have not examined the forecast and, accordingly, do not express an opinion or any other form of assurance on the accompanying statements or assumptions.*

IMPORTANCE OF FORECASTS AND PROJECTIONS

Forecasts and projections have assumed extraordinary significance in U.S. business. The release of corporate managers' earnings forecasts has become common. Management forecasts have become an important source of information for financial analysts and investors. Stock prices show significant movements after the release of information that shows earnings will be higher or lower than current expectations.

However, some skepticism in regard to these forecasts exists on the part of financial analysts and governmental agencies, such as the Securities and Exchange Commission, because of the fear that forecasts may be biased at times in order to influence capital markets or may simply be inaccurate. In addition, prospective financial information is considered vital in relation to mergers and acquisitions as well as to such business entity management activities as budgeting. In these circumstances, it would appear advisable to obtain certified public accountant examinations and reports before the public release of prospective financial information.

(SEE ALSO: *Assurance Services*; *Auditing*)

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BERNARD H. NEWMAN

FINANCIAL INSTITUTIONS

A financial institution is one that facilitates allocation of financial resources from its source to potential users. There are a large number of different types of financial institutions in the United States, creating a rich mosaic in the financial system. Some institutions acquire funds and make them available to users. Others act as middlemen between deficit and surplus units. Still others invest (manage) funds as agents for their clients. The key categories of financial institutions are the following: deposit taking; finance and insurance; and investment, pension, and risk management. There are also government and government-sponsored institutions that carry out regulatory, supervisory, and financing functions. Historically, each type has performed a specialized function in financing and investment management.

DEPOSIT TAKING

Deposit-taking institutions take the form of commercial banks, which accept deposits and make commercial and other loans; savings and loan associations and mutual savings banks, which accept deposits and make mortgage and other types of loans; and credit unions, which are cooperative organizations that issue share certificates and make member (consumer) and other loans. Altogether there are more than 15,000 deposit taking institutions with more than 100,000 branches spread across the economy.

The U.S. commercial banking system practiced competition through a large number of firms in the industry from 1776 to 1976. It was designed to be a unit-banking system in which state charters of banks allowed only one-office banking. The system also encouraged thrift and use of local savings for investment in the local economy. The unit-banking system not only forced competition among existing and new banks in a given banking market; it deliberately avoided the emergence of monopolies in the industry. The founding fathers in the original thirteen states understood the harm monopolies could inflict on the economic and financial systems. In due course the U.S. Congress passed the Sherman Antitrust Act of 1890, making monopoly and monopolistic practices unacceptable and therefore illegal.

The commercial banking industry dominated the U.S. financial industry from the beginning to the 1970s, when financial product innovation and the resulting business and consumer financial choices exploded to create competition across financial services industries. The commercial banking industry and its limited product offerings on both sides of the balance sheet were the only choices available to the general public. This is because the commercial banks specialized in taking checking account deposits on the liability side and making commercial loans on the asset side. They relied for safety of their operations on maturity-based hedging of mostly short-term liabilities with short-term self-liquidating commercial loans assets. This also meant that households, farmers, students, and other groups did not have access to financial capital.

Savings and loan associations, mutual savings banks and credit unions, and money market mutual funds are other deposit-taking institutions. Savings and loan associations take savings deposits and primarily make mortgage loans throughout the country. They have provided funds to create millions of housing units in the county. Their key function is maturity intermediation when they accept short-term deposit and make long-term mortgage loans. Mutual savings banks exist mainly in the eastern part of the

United States. Like savings and loan associations, they, too, accept short-maturity deposits and make long-term mortgage loans. They also issue consumer and other loans, making then somewhat more diversified and therefore less risky in terms of loan defaults. Credit unions specialize in member savings and loans, although they also make mortgage-type loans and other investments similar to other deposit-taking institutions.

FINANCE AND INSURANCE INSTITUTIONS

Finance (credit) companies are different from deposit-taking banking institutions in that their sources of funds are not deposits. They acquire funds in the market by issuing their own obligations, such as notes and bonds. They, however, make loans on the other side of the balance sheet in full competition with deposit-taking and other types of financial institutions, such as insurance companies. Finance companies specialize in business inventory financing, although they also make consumer loans, mostly indirectly through manufacturers and distributors of goods and services. Some of the finance companies are huge and operate in domestic as well as foreign markets. Several are bigger than most of the commercial banks in the United States.

Insurance companies provide the dual services of insurance protection and investment. There are two types of insurance companies: life insurance companies and casualty and property insurance companies. Insurance companies' sources of funds are primarily policy premiums. Their uses of funds range from loans (thus competing with finance companies, commercial banks, and savings and loan associations) to creation of investment products (thus competing with investment companies). Life insurance companies match their certain mortality-based needs for cash outflows with longer-term riskier investments such as stocks and bonds. Casualty and property insurance companies have more uncertainty of cash outflows and their timing. Therefore they have more conservative investment policies in terms of maturity and credit risk of their investments.

INVESTMENT, PENSION, AND RISK MANAGEMENT

Investment companies pool together funds and invest in the market to achieve goals set for various types of investments, matching liquidity, maturity, return, risk, tax, and other preferences of investors on the one hand and users of funds on the other. Investment companies are organized as open-end or closed-end mutual funds. Open-end funds accept new investments and redeem old ones, while closed-end funds accept funds at one time and then do not take in new funds. Investment companies have become very popular with investors in recent decades, and thus they have mobilized trillions of dollars.

Another investment type of company is investment banks, which provide investment and fund-raising advice to potential users of funds, such as commercial, industrial, and financial companies. They also create venture capital funds or companies. Some of them also have brokerage and dealerships in securities. Many of them underwrite securities and then place them in the market or sell them to investors.

Pension funds in the private and the government sectors collect pension contributions and invest them according to goals of the employees for their funds. Increasingly, employees are able to indicate their personal preferences for risk and reward targets with respect to their own and sometimes their employers' contributions.

Other institutions that are significant parts of the financial system are the stock, bond, commodity, currency, futures, and options exchanges. The various types of exchanges make possible not only creation and ownership of financial claims but also management of liquidity and risk of price changes and other risks in underlying commodities in the market. They greatly expand investment opportunities for savers and access to funds by small, medium, and large business enterprises. They have deepened and broadened markets in financial products and services, helped manage price risk, and improved allocation efficiency in financial markets where every attribute desired in a financial product has a counter party to trade with. The banking and investment intermediaries have extended their services to the global saver-investor with the cross-border flow of funds and trading of financial products facilitated by cross-border investing, listing, and trading of securities in home and foreign markets in home and foreign currencies.

HISTORICAL DEVELOPMENT OF THE U.S. FINANCIAL SYSTEM

Specialization and division of labor, identified as sources of creativity and efficiency by Adam Smith, led to the creation of other specialized deposit-taking and investment-type financial institutions that began to meet the demand not fulfilled by the commercial banking industry. Similar institutions were created to finance agriculture and housing in rural areas, public works, and education. Laws and regulations recognized and strengthened the separation, and thus specialization, of the financial function different intermediaries performed in the financial system.

The system was further strengthened by establishing government and semi-government intermediaries to increase liquidity in the market, manage maturity risk, and broaden the sharing of the market (price) risk through secondary markets for mortgages, agency (government and sponsored) securities, and other asset-based securities. Examples of institutions are: Commodity Credit Corporation, Farm Credit Banks, Farm Credit Financing Assistance Corporation, Farmers Home Administration, Federal Home Loan Mortgage Corporation (FEDMAC), Federal Financing Corporation, Federal National Mortgage Association (FNMA), Federal Housing Administration (FHA), Federal Home Loan Banks, Government National Mortgage Association (GNMA), Resolution Funding Corporation, Small Business Administration, and Student Loan Marketing Association (SLMA).

THE MONETARY SYSTEM

The U.S. monetary system is based on credit. The U.S. currency is issued by its central bank, the Federal Reserve System, as a liability on itself. The value of the currency is based on its purchasing power in the economy and around the world and has not been linked to or defined in terms of any particular commodity or an index since 1968. The issuance of currency was tied to the U.S. gold holdings prior to 1968. The U.S. money supply consists of currency and coins and checkable public deposits in the banking system. The measures of money are M1, M2, M3, and L.

The Federal Reserve System, created in 1913, was established to furnish elastic currency to the economy and to supervise the banking system. Prior to 1913 there had been financial crises that were due to absence of a systematic way to provide money and credit in the economy. There had also been large bank failures due to fraud and mismanagement, as well as economic fluctuations and boom and bust in commodity prices.

The Federal Reserve System consists of the Board of Governors of the Federal Reserve and the twelve regional or district Federal Reserve banks. The Board of Governors in Washington is the central decision point organization in a decentralized system. The board has seven members who are nominated by the president and confirmed by the Senate. Each board member has a fourteen-year appointment so as to make the board immune from political influence of any administration in office. The board is set up as an independent agency; it does not report to the president, but it does report to Congress. However, it actively coordinates its research and analysis with the White House and the Treasury Secretary in formulating policy. The regional Federal Reserve banks' Board of Directors is also structured to represent banking, industry and commerce, and the general public. There is a formal statutory requirement to have three directors from the three groups in the area on the board.

The monetary policy-making body within the Federal Reserve is the Federal Open Market Committee (FOMC), which meets regularly (generally eight times a year). Its voting members are the seven governors of the Board of Governors and five presidents of the regional banks. The president of the Federal Reserve Bank of New York is a permanent member of FOMC, and the other four serve on annual rotation from among four groups formed from the remaining eleven regional banks. The regional banks are located in Boston, New York, Philadelphia, Richmond, Atlanta, Cleveland, Chicago, Dallas, St. Louis, Kansas City, Minneapolis, and San Francisco. These cities were chosen because they represented the hub of the regional economy of each area of the United States in 1913. It was thought at the time that the regional economies had different characteristics in terms of the type and level of economic activity, so they needed different accommodation with respect to supply of money and finance, rediscounting mechanisms, and interest rates. In other words, it was thought that there were twelve different money markets in the U.S. economy, so each one needed special attention for its needs. This structure of the Federal Reserve System continues to this day, but the money market has become one market due to institutional and technological advancements. Now there are truly national financial institutions, not just in terms of their national charter, with interstate deposit taking and lending of commercial and numerous other types of loans to businesses and households.

The Federal Reserve policy serves the needs of the entire economy and all its parts by taking into account economic and financial information concerning all economic segments and activities in the U.S. economy. There are many advisory committees, such as the Federal Advisory Committee representing the interests of the banking industry, the Consumer Advisory Committee representing consumer interests, and similar other committees representing interests of other segments to the Federal Reserve System. Legislative, regulatory, monetary policy, and day-to-day operations of the central bank consider relevant details in their deliberations and policy decisions, including research from a wide variety of sources, private and public, about the economy.

LEGAL AND REGULATORY STRUCTURE

The key laws governing the U.S. financial institutions are: National Bank Act of 1863; Federal Reserve Act of 1913; McFadden Act of 1927; Banking Act (Glass-Steagall) of 1933 and 1935; Securities Act of 1933; Securities Exchange Act of 1934; Federal Credit Union Act of 1934; Investment Advisors Act of 1940; Investment Company Act of 1940; Bank Holding Company Act of 1956 and Douglas Amendment of 1970; Bank Merger Act of 1966; Employment Retirement Income Security Act of 1974; Depository Institutions Deregulation and Monetary Control Act of 1980; Depository Institutions (Garn-St. Germain) Act of 1982; Competitive Equality in Banking Act of 1987; Financial Institutions Reform, Recovery, and Enforcement Act of 1989; Federal Deposit Insurance Corporation Improvement Act of 1991; Interstate Banking and Branching Efficiency Act of 1994; and Financial Modernization Act of 1999.

The federal agencies that regulate depository institutions are: Office of the Comptroller of the Currency, Federal Reserve System, Federal Deposit Insurance System, National Credit Union Administration, and Office of Thrift Supervision. The Securities and Exchange Commission, Commodity Futures Trading Commission, and the Justice Department monitor and enforce relevant laws and regulations concerning securities and futures markets. State authorities regulate, monitor, and enforce laws concerning depository, insurance, finance companies and other financial institutions. The laws and regulations on financial institutions in the United States have made them competitive, efficient, fair, safe and sound, and transparent with the use of both carrots and sticks.

FINANCIAL SERVICES MODERNIZATION ACT 1999

The U.S. financial system in the twenty-first century has evolved into the largest, most developed, most efficient, and most sophisticated financial system in the world. The financial system has grown enormously since the founding of the first insurance company by Benjamin Franklin, as Philadelphia Contributionship, in 1752. The first banks in the United States were the Bank of New York, founded by Alexander Hamilton in 1784; Bank of Boston, also founded in 1784; and the First Bank of the United States, chartered in 1791. The economic structures and forces that have made this success possible are the concepts (or the foundation stones) of competition, specialization, thrift, entrepreneurial zest, and innovation. These concepts were just as well understood and vigorously practiced in the American colonies as they were expounded on by Adam Smith in Scotland in 1776 in *An Inquiry into the Nature and Causes of the Wealth of Nations*, his synthesis of a competitive market system. The United States has structured its economic and financial systems on Smith's economic model since its founding in 1776.

Some of the key concepts that have been the foundation stones of this financial architecture are: competition, efficiency, entrepreneurial culture, financial capital, innovation, regulation/deregulation/liberalization, reform, risk management, savings, specialization, and thrift.

The Financial Services Modernization Act, signed into law by the president on October 12, 1999, removes many of the restrictions on the banking and securities institutions imposed in the 1920s and 1930s. For example, financial conglomerates will again be able to organize commercial banking, insurance business, investment banking, securities underwriting, and other financial services under the umbrella of a holding/parent company. The McFadden Act and the Glass-Steagall Act are now in the history books. Financial innovation made possible by computer and communications technologies and spawned by competition and deregulation has brought U.S. financial institutions and the entire financial system to the exciting financial structure of the twenty-first century.

(SEE ALSO: *Capital Markets; Finance*)

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SURENDRA KAUSHIK

FINANCIAL MARKETS

(SEE: *Capital Markets*)

FINANCIAL STATEMENT ANALYSIS

Financial statement analysis is the process of examining relationships among financial statement elements and making comparisons with relevant information. It is a valuable tool used by investors and creditors, financial analysts, and others in their decision-making processes related to stocks, bonds, and other financial instruments. The goal in analyzing financial statements is to assess past performance and current financial position and to make predictions about the future performance of a company. Investors who buy stock are primarily interested in a company's profitability and their prospects for earning a return on their investment by receiving dividends and/or increasing the market value of their stock holdings. Creditors and investors who buy debt securities, such as bonds, are more interested in liquidity and solvency: the company's short- and long-run ability to pay its debts. Financial analysts, who frequently specialize in following certain industries, routinely assess the profitability, liquidity, and solvency of companies in order to make recommendations about the purchase or sale of securities, such as stocks and bonds.

Analysts can obtain useful information by comparing a company's most recent financial statements with its results in previous years and with the results of other companies in the same industry. Three primary types of financial statement analysis are commonly known as horizontal analysis, vertical analysis, and ratio analysis.

HORIZONTAL ANALYSIS

When an analyst compares financial information for two or more years for a single company, the process is referred to as *horizontal analysis*, since the analyst is reading across the page to compare any single line item, such as sales revenues. In addition to comparing dollar amounts, the analyst computes percentage changes from year to year for all financial statement balances, such as cash and inventory. Alternatively, in comparing financial statements for a number of years, the analyst may prefer to use a variation of horizontal analysis called *trend analysis*. Trend analysis involves calculating each year's financial statement balances as percentages of the first year, also known as the base year. When expressed as percentages, the base year figures are always 100 percent, and percentage changes from the base year can be determined.

VERTICAL ANALYSIS

When using vertical analysis, the analyst calculates each item on a single financial statement as a percentage of a total. The term *vertical analysis* applies because each year's figures are listed vertically on a financial statement. The total used by the analyst on the income statement is net sales revenue, while on the balance sheet it is total assets. This approach to financial statement analysis, also known as *component percentages*, produces *common-size financial statements*. Common-size balance sheets and income statements can be more easily compared, whether across the years for a single company or across different companies.

RATIO ANALYSIS

Ratio analysis enables the analyst to compare items on a single financial statement or to examine the relationships between items on two financial statements. After calculating ratios for each year's financial data, the analyst can then examine trends for the company across years. Since ratios adjust for size, using this analytical tool facilitates intercompany as well as intracompany comparisons. Ratios are often classified using the following terms: *profitability ratios* (also known as operating ratios), *liquidity ratios*, and *solvency ratios*. Profitability ratios are gauges of the company's operating success for a given period of time. Liquidity ratios are measures of the short-term ability of the company to pay its debts when they come due and to meet unexpected needs for cash. Solvency ratios indicate the ability of the company to meet its long-term obligations on a continuing basis and thus to survive over a long period of time. In judging how well on a company is doing, analysts typically compare a company's ratios to industry statistics as well as to its own past performance.

CAVEATS

Financial statement analysis, when used carefully, can produce meaningful insights about a company's financial information and its prospects for the future. However, the analyst must be aware of certain important considerations about financial statements and the use of these analytical tools. For example, the dollar amounts for many types of assets and other financial statement items are usually based on historical costs and thus do not reflect replacement costs or inflationary adjustments. Furthermore, financial statements contain estimates of numerous items, such as warranty expenses and uncollectible customer balances. The meaningfulness of ratios and percentages depends on how well the financial statement amounts depict the company's situation. Comparisons to industry statistics or competitors' results can be complicated because companies may select different, although equally acceptable, methods of accounting for inventories and other items. Making meaningful comparisons is also hampered when a company or its competitors have widely diversified operations.

The tools of financial statement analysis, ratio and percentage calculations, are relatively easy to apply. Understanding the content of the financial statements, on the other hand, is not a simple task. Evaluating a company's financial status, performance, and prospects using analytical tools requires skillful application of the analyst's judgment.

(SEE ALSO: *Analytical Procedures*)

MARY BRADY GREENAWALT

FINANCIAL STATEMENTS

Financial statements provide information of value to company officials as well as to various outsiders, such as investors and lenders of funds. Publicly owned companies are required to periodically publish general-purpose financial statements that include a balance sheet, an income statement, and a statement of cash flows. Some companies also issue a statement of stockholders' equity and a statement of comprehensive income, which provide additional detail on changes in the equity section of the balance sheet. Financial statements issued for external distribution are prepared according to generally accepted accounting principles (GAAP), which are the guidelines for the content and format of the statements. In the United States, the Securities and Exchange Commission (SEC) has the legal responsibility for establishing the content of financial statements, but it generally defers to an independent body, the Financial Accounting Standards Board (FASB), to determine and promote accepted principles.

The balance sheet, also known as the statement of financial position or condition, presents the assets, liabilities, and owners' equity of the company at a specific point in time. The assets are the firm's resources, financial or nonfinancial, such as cash, receivables, inventories, properties, and equipment. The total assets equal (balance) the sources of funding for those resources: liabilities (external borrowings) and equity (owners' contributions and earnings from firm operations). The balance sheet is used by investors, creditors, and other decision makers to assess the overall composition of resources, the constriction of external obligations, and the firm's flexibility and ability to change to meet new requirements.

Firms frequently issue a separate statement of stockholders' equity to present certain changes in equity, rather than showing them on the face of the balance sheet. The statement of stockholders' equity itemizes the changes in equity over the period covered, including investments by owners and other capital contributions, earnings for the period, and distributions to owners of earnings (dividends) or other capital. Sometimes companies present a statement of changes in retained earnings rather than a statement of stockholders' equity. The statement of changes in retained earnings, also known as the statement of earned surplus, details only the changes in earned capital: the net income and the dividends for the period. Then the changes in contributed capital (stock issued, stock options, etc.) must be detailed on the balance sheet or in the notes to the financial statements.

The income statement, also known as the statement of profit and loss, the earnings statement, or the operations statement, presents the details of the earnings achieved for the period. The income statement separately itemizes revenues and expenses, which result from the company's ongoing major or central operations, and the gains and losses arising from incidental or peripheral transactions. Certain irregular items (such as discontinued operations, extraordinary items, effects of accounting changes) are presented separately, net of tax effect, at the end of the statement. When revenues and gains exceed expenses and losses, net income is realized. Net income for the period increases equity. The results of the firm's operating activities for the period as presented in the income statement provide information that can be used to predict the amount, timing, and uncertainty of future cash flows. This statement is useful to investors, creditors, and other users in determining the profitability of operations. The income statement must also show earnings per share (EPS), where the net income is divided by the weighted average number of shares of common stock outstanding. Since EPS scales income by the magnitude of the investment, it allows investors to compare diverse companies of different sizes; hence, investors commonly use it as a summary measurement of firm performance.

In 1998, the FASB required that companies present a separate statement that classifies all items of other comprehensive income by their nature. Other comprehensive income includes all equity changes not recorded in the income statement or in the statement of changes in retained earnings and that do not result from contributions by owners. In addition to providing a separate statement, companies must display the total of other comprehensive income separately from retained earnings and additional paid-in capital in the equity section of the balance sheet.

The statement of cash flows replaced the statement of changes in financial position in 1987 as a required financial statement for all business enterprises. The statement of cash flows presents cash receipts and payments classified by whether they stem from operating, investing, or financing activities and provides definitions of each category. Information about key investing and financing activities not resulting in cash receipts or payments in the period must be provided separately. The cash from operating activities reported on the statement of cash flows must be reconciled to net income for the period. Because GAAP requires accrual accounting methods in preparing financial statements, there may be a significant difference between net income and cash generated by operations. The cash-flow statement is used by creditors and investors to determine whether cash will be available to meet debt and dividend payments.

Financial statements include notes, which are considered an integral part of the statements. The notes contain required disclosures of additional data, assumptions and methodologies employed, and other information deemed useful to users.

The financial statements of publicly owned companies also include an auditor's report, indicating that the statements have been audited by independent auditors. The auditor's opinion is related to fair presentation in conformity with GAAP.

The external financial statements required for not-for-profit organizations are similar to those for business enterprises, except that there is no ownership component (equity) and no income. Not-for-profit organizations present a statement of financial position, a statement of activities, and a statement of cash flows. The financial statements must classify the organization's net assets and its revenues, expenses, gains, and losses based on the existence or absence of donor-imposed restrictions. Each of three classes of net assets—permanently restricted, temporarily restricted, and unrestricted—must be displayed in the statement of financial position, and the amounts of change in each of those classes of net assets must be displayed in the statement of activities. Governmental bodies, which are guided by the Governmental Accounting Standards Board (GASB), present general-purpose external financial statements that are similar to those of other not-for-profit organizations, but they classify their financial statements according to fund entities.

(SEE ALSO: *Accounting*; *Financial Statement Analysis*)

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VICTORIA SHOAF

FISCAL POLICY

Fiscal policy is manifested in a government's policies on taxation and expenditures. To obtain funds for their operation, government units generally collect some form of taxes. The expenditure of these funds not only provides goods and services for constituents, but has a direct impact on the economy. For example, if expenditures are larger than the funds received by the government, the resulting deficit tends to stimulate the economy, as goods and services are produced for government purchase. In contrast, if a government runs a surplus by not spending all the funds it collects, economic growth will generally be curtailed, as the surplus funds are removed from circulation in the economy.

THE FEDERAL BUDGET

In the United States, the fiscal process of the federal government begins each February with the president sending to Congress a proposed federal budget for the coming fiscal year, which begins in October. Congress then develops a budget resolution, which is to be completed by April. The budget resolution contains overall revenue and spending budgets as well as the budgeted amount of discretionary and mandatory spending for each functional area, such as national defense. Mandatory spending is required by prior legislation, while discretionary spending must be approved during the current year's legislative process. The majority of all federal government spending is mandatory spending for established programs.

Using the budget resolution as a guide, bills that provide budget authority for annual discretionary spending must be completed by June each year. Legislative changes can also be made to mandatory spending or tax provisions at this time. However, any legislation that would cut taxes or increase mandatory spending must be accompanied by legislation that would raise revenue or cut spending in other areas to pay for these changes. Consequently, any new legislation in this area must be "budget-neutral."

In fiscal 1998, the federal government had receipts of $1,721 billion and expenditures of $1,651 billion, leaving a surplus of $70 billion. This was the first surplus recorded by the federal government since 1969, ending almost thirty consecutive years of deficits. During this time, the nonstop annual deficits forced the U.S. government to borrow additional money each year to make up the difference between the federal government's receipts and outlays. As a result, the outstanding federal debt reached roughly $5.5 trillion in 1998, representing more than $20,000 per citizen of the country. Paying the annual interest charges on this debt consumes a significant portion of the federal budget.

FEDERAL GOVERNMENT REVENUE

Individual income taxes have been the federal government's largest source of funds for many years. In 1998, $829 billion in individual income taxes were collected, comprising 48 percent of the federal government's receipts. Robust economic growth in the 1990s steadily increased individual income tax payments and was a large factor in turning the mushrooming deficits of the prior thirty years into a surplus in 1998, as tax collections grew faster than government spending.

Social Security taxes, which are paid by most workers in the United States, are the other major source of funds for the federal government. In 1998, payments of $540 billion were made into the Social Security system. These taxes, which are a percentage of a worker's wages, have increased substantially as a result of a growing work force in the 1990s with many workers in their peak earning years.

FEDERAL GOVERNMENT EXPENDITURES

The enormous impact of the Social Security system on the federal government's budget is demonstrated by the fact it is the largest outlay of the federal government each year. In 1998, almost 23 percent of federal government expenditures were payments of monthly benefits to families of retired and disabled workers. In 1940, in the early years of the Social Security program, there were only 222,000 beneficiaries receiving a total of $35 million a year in benefits. By 1998, the federal government was sending $379 billion to almost 45 million Social Security beneficiaries. When these payments are coupled with the burgeoning cost of Medicare, which generally provides health insurance for the same individuals who receive Social Security benefits, it means that the United States spent over 35 percent of the federal budget on this group of retired and disabled individuals in 1998. With the increased life expectancy of senior citizens and the large number of baby-boomers nearing retirement age, Social Security and Medicare will continue to consume a large part of the federal budget dollar in the foreseeable future.

Defense spending is the largest item of discretionary spending in the federal budget. In 1998, $270 billion, 16 percent of the federal budget, was spent on the armed forces of the United States. With an ever-larger portion of the federal budget being consumed by mandatory spending programs, defense spending has been the target of budget cuts since the resumption of normalized relations with the countries that constituted the former Soviet Union.

Interest on the federal government's debt is the other major federal government outlay, in 1998 requiring $243 billion in net interest payments on the federal debt, which exceeded $5 trillion. Declining interest rates and reduced federal government borrowing, however, have slowed the growth of this budget item.

IMPACT ON THE ECONOMY

As discussed previously, the federal government's policies on taxes and spending have a large impact on the economy. The economic theory of the famous English economist John Maynard Keynes advocates the use of the government's fiscal policy to offset imbalances in the economy. According to Keynes, a government should use fiscal policy to stimulate an economy slowed by a recession by running a deficit, that is, by spending more than it takes from the economy in taxes. On the other hand, to slow down an economy that is threatened by inflationary pressures, Keynes urged increasing taxes or cutting spending to create a budget surplus that would act as a drag on the economy.

Keynes thought fiscal policy could be an automatic stabilizer for the economy because it automatically responds to changes in economic activity. Government spending on items such as unemployment benefits generally increases during a recession, whereas government receipts such as income taxes will fall during a recession, moderating the extremes of the business cycle. Consequently, fiscal policy, along with monetary policy, which is dictated by the Federal Reserve, has an important influence on the health of the economy in the United States.

IMPACT ON FOREIGN COUNTRIES

The impact of fiscal policy in the United States extends far beyond the country's borders. For example, top marginal income tax rates in this country have declined substantially since the late 1970s, when they were as high as 70 percent. This reduction in top rates has made it difficult for Canadian companies to attract and retain key executives because Canadian income taxes on high-income individuals are now substantially greater than in the United States. Even Canadian hockey teams have found that higher income tax rates north of the border encourage many of their players to flee to teams based in the United States, where they can retain a larger portion of their earnings. Consequently, even the balance of power in the National Hockey League is influenced by the fiscal policy of the U.S. government.

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DAVID MCGRADY

FOOD AND DRUG ADMINISTRATION

The Food and Drug Act of 1906, which prohibited the interstate trade of misbranded or tainted food, drinks, and drugs, was passed by Congress on the same day as the Meat Inspection Act. At this time there was no Federal Drug Administration, but there was a Bureau of Chemistry. In 1927, a separate enforcement agency known as the Food, Drug and Insecticide Administration was created; in 1930, it was renamed the Food and Drug Administration (FDA). In 1938, after five years of battle with Congress, the Federal Food, Drug, and Cosmetic Act was passed. According to the FDA's Web site, it contained the following new provisions:

- Extending control to cosmetics and therapeutic devices.
- Requiring new drugs to be shown safe before marketing—starting a new system of drug regulation.
- Eliminating the Sherley Amendment requirement to prove intent to defraud in drug misbranding cases.
- Providing that safe tolerance is set for unavoidable poisonous substances.
- Authorizing standards of identity, quality, and fill-of-container for foods.
- Authorizing factory inspections.
- Adding the court injunctions to the previous penalties of seizures and prosecutions.

Later the FDA's jurisdiction was expanded to include microwaves and any radiation-emitting consumer products, as well as veterinary drugs and pet food. The agency monitors the manufacture, transportation, and sale of food and drugs. To ensure its efficiency, the FDA operates in 157 cities and employs approximately 9000 people. Among its employees are chemists, microbiologists, and investigators who visit 15,000 locations each year.

FDA inspectors visit businesses that are regulated by the FDA. If a problem exists, the FDA allows the company to voluntarily correct the problem or recall the faulty product. If the company refuses to cooperate, the FDA can go to court to force cooperation. Court action can include criminal prosecution if necessary.

In the area of drug control, the FDA does not conduct its own experiments but closely examines the results of the company's research. FDA inspectors conduct three types of inspections: study-oriented, investigation-oriented, and bioequivalence inspections. Study-oriented inspections are needed in case of new drug or new-product applications for approval. An investigator-oriented inspection may be ordered if other investigators looking at the same study think the findings are inconsistent. If one study is the sole basis for a marketer request, a bioequivalence study is conducted.

Once a drug or device is approved, the agency's responsibility does not end. The FDA monitors any complaints and looks for any adverse reactions associated with the product. As a result, approximately 3000 products are recalled each year.

In addition to ensuring the quality of the product itself, the FDA has had a major influence on businesses and the way goods are packaged; for example, medicines and products dangerous to children are now packaged in childproof bottles, and labels on containers of food products must list the nutritional contents and their amounts.

Any company that produces a product that is under the jurisdiction of the FDA has felt the pressure of its regulations, and complaints have been made about the slowness of the FDA's procedures. However, no country's citizens enjoy more protection regarding the products they use than U.S. citizens.

Should your refrigerator be condemned?
WHAT IS THE FDA TRYING TO FEED US?
STOP GENETICALLY ENGINEERED FOODS!
Sustain
DA:
Give Me TRU

Demonstrators protest against Food and Drug Administration (FDA) policies.

More information is available from the Food and Drug Administration, Fishers Lane, Rockville, MD 20852 or http://www.fda.gov.

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MARY JEAN LUSH
VAL HINTON

FOOD, DRUG, AND COSMETIC ACT OF 1938

The Food, Drug, and Cosmetic Act of 1938 is the most important of the pure food and drug acts passed and administered by the Food and Drug Administration (FDA) of the U.S. Department of Health and Human Services. Food and drug laws were enacted to ensure the safety, proper labeling, and purity of foods, drugs, vaccines, devices, and cosmetics. The 1938 act is a revision of the first food and drug law, enacted in 1906, which brought attention to many abuses in the form of poor health practices and excessive pricing. The 1938 revised law and subsequent amendments, give consumers greater protection from dangerous and impure foods and drugs; they require labeling that discloses the nature of the contents of the package when the buyer cannot see the product or judge its composition and value. They also provide safeguards against the introduction of untested new drugs (Versaware Technologies, 1999).

The Food, Drug, and Cosmetic Act of 1938 addressed the wholesomeness of the food supply by giving the FDA powers to engage in economic regulation, to set legally enforceable food standards, and to establish affirmative labeling requirements (Hardy, 1990). Consequently, the FDA examines food products' adulteration from the perspectives of both wholesomeness and safety. For example, the FDA has investigated several cases involving the alteration of fruit juices by dilution with sugarwater or less expensive juices that represent both reductions in wholesomeness and economic fraud.

Another condition of economic fraud covered by the Food, Drug, and Cosmetic Act is manufacturer misbranding of food: The food is not adulterated, but the consumer is deceived. In 1993, the FDA seized 2400 cases of Procter & Gamble's Citrus Hill orange juice because the label used the word "fresh" when the product was, in fact, produced from concentrate. (Colford, 1991).

Since the passing of the first food and drug law, food laws and regulations have evolved from (1) concerns centering around food fraud, (2) to concerns about food safety, (3) to protection of the nutritional integrity of food, (4) to truth in labeling, (5) to, most recently, concern about the relationship between health and food. Many amendments to the Food, Drug, and Cosmetics Act of 1938 and other food-related laws and acts have been passed by Congress and will continue to be enacted in response to future technological changes and developments.

Manufacturers of food, drugs, cosmetics, and their related products must comply with the law. Penalties for violations include seizure of illegal goods, injunctions, restraint of shipments that violate the law, and criminal prosecution of those responsible for the violation, with fines up to $500,000, imprisonment up to ten years, or both, for repeated offenses.

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PHYLLES BUNN

FORECASTING IN BUSINESS

Business leaders and economists are continually involved in the process of trying to forecast, or predict, the future of business in the economy. Business leaders engage in this process because much of what happens in businesses today de-

Procter and Gamble was the subject of an FDA investigation in 1993.

pends on what is going to happen in the future. For example, if a business is trying to make a decision about developing a revolutionary new automobile, it would be nice to know whether the economy is going to be in a recession or whether it will be booming when the automobile is released to the general public. If there is a recession, consumers will not buy the automobile unless it can save them money, and the manufacturer will have spent millions or billions of dollars on the development of a product that might not sell.

The process of attempting to forecast the future is not new. Most ancient civilizations used some method for predicting the future. Today, computers with elaborate programs are often used to develop models to forecast future economic and business activity. Contemporary models of economic and business forecasting have been developed in the last century. Today's forecasting models are considerably more statistical than they were hundreds of years ago when the stars, and other mystical methods, were used to predict the future. Almost every large business or government agency performs some type of formalized forecasting.

Forecasting in business is closely related to understanding the business cycle. The foundations of modern forecasting were laid in 1865 by William Stanley Jevons, who argued that manufacturing had replaced agriculture as the dominant sector in English society. He studied the effects of economic fluctuations of the limiting factors of coal production on economic development.

Forecasting has become big business around the world. Forecasters try to predict what the stock markets will do, what the economy will do, what numbers to pick in the lottery, who will win sporting events, and almost anything one might name. Regardless of who does it, forecasting is done to identify what is likely to happen in the future so as to be able to benefit most from the events.

QUALITATIVE FORECASTING MODELS

Qualitative forecasting models have often proven to be most effective for short-term projections. In this method of forecasting, which works best when the scope is limited, experts in the appropriate fields are asked to agree on a common forecast. Two methods are used frequently.

Delphi Method. This method involves asking various experts what they anticipate will happen in the future relative to the subject under consideration. Experts in the automotive industry, for example, might be asked to forecast likely innovative enhancements for cars five years from now. They are not expected to be precise, but rather to provide general opinions.

Market Research Method. This method involves surveys and questionnaires about people's subjective reactions to changes. For example, a company might develop a new way to launder clothes; after people have had an opportunity to try the new method, they would be asked for feedback about how to improve the processes or how it might be made more appealing for the general public. This method is difficult because it is hard to identify an appropriate sample that is representative of the larger audience for whom the product is intended.

QUANTITATIVE FORECASTING MODELS

Three quantitative methods are in common use.

Time-Series Methods. This forecasting model uses historical data to try to predict future events. For example, assume that you are interested in knowing how long a recession will last. You might look at all past recessions and the events leading up to and surrounding them and then, from that data, try to predict how long the current recession will last.

A specific variable in the time series is identified by the series name and date. If gross domestic product (GDP) is the variable, it might be identified as GDP2000.1 for the first-quarter statistics for the year 2000. This is just one example, and different groups might use different methods to identify variables in a time period.

Many government agencies prepare and release time-series data. The Federal Reserve, for example, collects data on monetary policy and financial institutions and publishes that data in the *Federal Reserve Bulletin.* These data become the foundation for making decisions about regulating the growth of the economy.

Time-series models provide accurate forecasts when the changes that occur in the variable's environment are slow and consistent. When large-degree changes occur, the forecasts are not reliable for the long term. Since time-series forecasts are relatively easy and inexpensive to construct, they are used quite extensively.

The Indicator Approach. The U.S. government is a primary user of the indicator approach of forecasting. The government uses such indicators as the Composite Index of Leading, Lagging, and Coincident Indicators, often referred to as Composite Indexes. The indexes predict by assuming that past trends and relationships will continue into the future. The government indexes are made by averaging the behavior of the different indicator series that make up each composite series.

The timing and strength of each indicator series relationship with general business activity, reflected in the business cycle, change over time. This relationship makes forecasting changes in the business cycle difficult.

Econometric Models. Econometric models are causal models that statistically identify the relationships between variables and how changes in one or more variables cause changes in another variable. Econometric models then use the identified relationship to predict the future. Econometric models are also called regression models.

There are two types of data used in regression analysis. Economic forecasting models predominantly use time-series data, where the values of the variables change over time. Additionally, cross-section data, which capture the relationship between variables at a single point in time, are used. A lending institution, for example, might want to determine what influences the sale of homes. It might gather data on home prices, interest rates, and statistics on the homes being sold, such as size and location. This is the cross-section data that might be used with time-series data to try to determine such things as what size home will sell best in which location.

An econometric model is a way of determining the strength and statistical significance of a hypothesized relationship. These models are used extensively in economics to prove, disprove, or validate the existence of a casual relationship between two or more variables. It is obvious that this model is highly mathematical, using different statistical equations.

For the sake of simplicity, mathematical analysis is not addressed here. Just as there are these qualitative and quantitative forecasting models, there are others equally as sophisticated; however, the discussion here should provide a general sense of the nature of forecasting models.

THE FORECASTING PROCESS

When beginning the forecasting process, there are typical steps that must be followed. These steps follow an acceptable decision-making process that includes the following elements:

1. *Identification of the problem.* Forecasters must identify what is going to be forecasted, or what is of primary concern. There must be a timeline attached to the forecasting period. This will help the forecasters to determine the methods to be used later.
2. *Theoretical considerations.* It is necessary to determine what forecasting has been done in the past using the same variables and how relevant these data are to the problem that is currently under consideration. It must also be determined what economic theory has to say about the variables that might influence the forecast.
3. *Data concerns.* How easy will it be to collect the data needed to be able to make the forecasts is a significant issue.
4. *Determination of the assumption set.* The forecaster must identify the assumptions that will be made about the data and the process.
5. *Modeling methodology.* After careful examination of the problem, the types of models most appropriate for the problem must be determined.
6. *Preparation of the forecast.* This is the analysis part of the process. After the model to be used is determined, the analysis can begin and the forecast can be prepared.
7. *Forecast verification.* Once the forecasts have been made, the analyst must determine whether they are reasonable and how they can be compared against the actual behavior of the data.

Each of the seven steps has substages; however, the steps that have been presented are the major concerns to the forecaster. Those with a deep interest in forecasting might pursue more in-depth treatments.

FORECASTING CONCERNS

Forecasting does present some problems. Even though very detailed and sophisticated mathematical models might be used, they do not always predict correctly. There are some who would argue that the future cannot be predicted at all—period!

Some of the concerns about forecasting the future are that (1) predictions are made using historical data, (2) they fail to account for unique events, and (3) they ignore coevolution (developments created by our own actions). Additionally, there are psychological challenges implicit in forecasting. An example of a psychological challenge is when plans based on forecasts that use historical data become so confining as to prohibit management freedom. It is also a concern that many decision makers feel that because they have the forecasting data in hand they have control over the future.

Regardless of the opponents to forecasting, the U.S. government, investment analysts, business managers, economists, and numerous others will continue to use forecasting techniques to predict the future. It is imperative for the users of the forecasts to understand the information and use the results as they are intended.

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Roger L. Luft

FOREIGN CORRUPT PRACTICES ACT OF 1977

The Foreign Corrupt Practices Act of 1977 (FCPA) evolved from investigations by the Office of the Special Prosecutor that provided evidence of illegal acts perpetrated by U.S. firms in foreign lands. More than 400 U.S. companies admitted to making questionable payments to various foreign governments and political parties as part of an amnesty program (U.S. Department of Justice http://www.usdoj.gov). Given the environment of the 1970s and the proliferation of white-collar crimes (e.g., insider trading, bribery, false financial statements, etc.), particularly the payments made to foreign officials by corporations, Congress felt obligated to introduce legislation that led to the act. Congress's objective was to restore confidence in the manner U.S. companies transacted business.

THE ACT

The FCPA is unique. Throughout history, governments have had laws making it illegal for governmental officials to *take* a bribe. One basic provision of the FCPA is that it prohibits U.S. partnerships, companies, and organizations from not only giving payments but also *offering* or authorizing payments to foreign officials or political parties with the objective of encouraging or assuring business relationships.

There are two types of bribery provisions. The first prohibits any bribes made directly by the U.S. company. The second prohibits any organization from knowingly arranging for a bribe through an intermediary. Many thought that the FCPA would place U.S. companies at a disadvantage in the international marketplace since they could no longer influence foreign governments, officials, political parties, or candidates through gifts or payments. There has been no conclusive evidence that this has actually happened.

The FCPA includes record-keeping provisions for companies not involved in criminal conduct. These provisions were an amendment to the Securities and Exchange Act of 1934. The FCPA amendment requires all firms under SEC jurisdiction to maintain an adequate system of internal control whether or not they have foreign operations. This provision of the act applies to issuers of registered securities and issuers required to file periodic reports with the SEC.

ACCOUNTING PROVISIONS

The accounting provisions require companies to "keep books and records, and accounts, which, in reasonable detail, accurately and fairly reflect the transactions and dispositions of assets". The purpose of this accounting provision is to make it difficult for organizations to "cook the books" or use slush funds to hide any corrupt payments. Representative means for transfer of corrupt payments included:

- Overpayments
- Missing records ("No receipt")
- Unrecorded transactions
- Misclassification of costs (bribes recorded as consulting fees or commissions)
- Retranscription of records

The accounting provisions include a requirement that companies design and maintain adequate systems of internal accounting controls that provide reasonable assurance that:

- Transactions are executed in accordance with management's authorization
- Transactions are recorded as necessary
- Access to assets is permitted only in accordance with management's authorization

Any internal document that misrepresents the actual nature of a financial transaction could be used as the basis for a charge that the "books and records" section of the FCPA has been violated.

ENFORCEMENT

Enforcement of the act is shared. Civil and criminal enforcement of the bribery provisions for those not required to file with the SEC rests with the Department of Justice. Responsibility for civil enforcement of the bribery provisions for those who have SEC filing requirements rests with the SEC.

In 1988 the FCPA was amended to allow for "facilitating payments" for expediting routine governmental action. These payments are distinguishable from corrupt payments in that these "grease payments" are for facilitating the performance of officials who are obligated to perform said duties. Questions regarding this amendment, affirmative defenses, or other provisions of the FCPA should be directed to counsel, or companies may wish to use the Department of Justice's Foreign Corrupt Practices Act Opinion Procedure. Under this procedure, upon receiving a question from a company or individual, the attorney general has thirty days to issue an opinion regarding the inquiry. The objective is to alleviate uncertainty regarding acts covered by the FCPA.

PENALTIES

The FCPA provides penalties for violations. Criminal penalties for bribery violations include fines of up to $2 million for firms; fines of up to $100,000 and imprisonment of up to five years for officers, directors, and stockholders; and fines of up to $100,000 for employees and agents (fines imposed on individuals cannot to be paid by companies). The SEC or attorney general may also bring actions that lead to civil penalties. Also, the act's penalties do not supersede penalties or fines levied under the provisions of other statutes. A violation of the bribery provisions of the FCPA may give rise to a private cause of action for treble damages under RICO (Racketeer Influenced and Corrupt Organizations Act).

The penalties can have long-term ramifications for companies. For example, a company found guilty of violating the FCPA may be barred from doing any business with the federal government. A company indicted for an FCPA violation may not be eligible to obtain various export licenses.

COMPLIANCE

Clearly, large multinational corporations cannot monitor every transaction of every dollar amount by every employee. However, companies do have a due-diligence obligation to implement adequate systems with sufficient internal controls. Key ways to avoid violation and liability include establishing policies and procedures that provide reasonable assurance that the business is adhering to the act's provisions. Suggested due-diligence steps for compliance with the FCPA include the following:

- Utilizing the compliance program under the Corporate Sentencing Guidelines Act (see next section)
- Performing a risk evaluation of locations known for unethical business practices
- Performing risk evaluation of employees/agents who operate out of the home country
- Assuring that personnel who work out of the home country are knowledgeable regarding the provisions of the FCPA
- Assessing internal controls to be assured they are sufficient
- Monitoring internal controls, including reviews by auditors
- Reviewing critical transactions, such as those related to consulting services

- Establishing a procedure requiring that critical employees, vendors, and contractors provide written statements that they are in compliance with the requirements of the FCPA

SUBSEQUENT DEVELOPMENTS

On November 1, 1991, the Corporate Sentencing Guidelines Act was enacted. The guidelines appear to be a direct descendent of the FCPA. The guidelines for organizations "are designed so that the sanctions imposed upon organizations and their agents will, taken together, provide just punishment, adequate deterrence, and incentives for organizations to maintain internal mechanisms for preventing, detecting, and reporting criminal conduct" (U.S. Sentencing Guidelines, chapter 8, intro. comm., appendix p. Al).

In most corporations, accountants and auditors have responsibility to prevent, detect, and report errors and irregularities. The Corporate Sentencing Guidelines are legislation to deter white-collar crime. The guidelines' major objective is requiring organizations to monitor business activities to detect criminal conduct within their own ranks.

The guidelines allow organizations to use mitigating factors to reduce their exposure to fines. One mitigating factor is maintaining a corporate compliance program. The corporate compliance program is to be the responsibility of an officer or high-level employee. Elements of the compliance program include:

- Established standards and procedures
- Communication of the standards to employees
- Systems designed to detect criminal conduct
- A reporting system in place whereby individuals may report criminal conduct
- Disciplinary mechanisms that are consistently enforced

FURTHER GUIDANCE

Information regarding the FCPA or the Foreign Corrupt Practices Act Opinion Procedure may be obtained from the Fraud Section of the Criminal Division, U.S. Department of Justice, Room 2424, Bond Building, 1400 New York Avenue, NW, Washington, DC 20530; (202)-514-0651.

(SEE ALSO: *Securities and Exchange Commission*)

CHARLES H. CALHOUN

FOREIGN EXCHANGE

(SEE: *Currency Exchange*)

FORMALIZATION

(SEE: *Organizational Structure*)

FRANCHISING

Franchising is an arrangement whereby a supplier, or *franchiser*, grants a dealer, or *franchisee*, the right to sell products in exchange for some type of consideration. It is a business arrangement involving a contract between a manufacturer or another supplier and a dealer that specifies the methods to be used in marketing a good or service. The franchiser may receive some percentage of total sales in exchange for furnishing equipment, buildings, management know-how, and market research. The franchisee supplies labor and capital, operates the franchised business and agrees to abide by the provisions of the franchise agreement.

Historically, franchising was a grant by a king to allow a citizen an exclusive right to sell a product or render a service. For this right, the sovereign protected the exclusivity and the subject paid the government an appropriate tribute in service, food, goods, or money. Franchising in the United States started shortly after the Civil War, when the Singer Company began to set up sewing-machine franchises. The concept became increasingly popular after 1900 in the automobile industry. Because of this, other automotive franchises developed for gasoline, oil, and tires. In the 1950s, food operations made a dramatic entrance into franchising with the development of Mc-

Donald's, currently one of the world's largest franchise organizations.

In 1999, franchising accounted for $916 billion in annual sales, with 533 outlets employing more than 7 million people. A new franchise opens somewhere in the United States every six minutes. Franchising accounts for approximately 40 percent of all United States retail sales. Because of changes in the international marketplace, shifting employment options in the United States, the expanding U.S. economy, and corporate interest in more joint-venture activity, franchising will continue to increase rapidly.

Franchising represents the small entrepreneur's best chance to compete with the giant companies that dominate the marketplace. Without franchising, thousands of businesspeople would never have had the opportunity to own their own businesses.

The largest percentages of franchise operations are in the recreation, entertainment, and travel fields, followed closely by business services, nonfood retailing, and automotive products and services. In 1999, the top ten franchises in descending order were Yogen Fruz Worldwide (first place), McDonald's, Subway, Wendy's International Inc., Jackson Hewitt Tax Service, KFC, Mail Boxes Etc., TCBY Treats, Taco Bell, and Jani-King.

Retail franchise agreements fall into three general categories. In one type of arrangement, a manufacturer authorizes a number of retail stores to sell a certain-brand name item. This franchise arrangement, one of the oldest, is common in the sales of cars and trucks, farm equipment, shoes, paint, earth-moving equipment, and gasoline. About 90 percent of all gasoline is sold through franchised independent service stations, and franchised dealers handle virtually all sales of new cars and trucks.

In the second type of retail franchise, a producer licenses distributors to sell a given product to retailers. This arrangement is common in the soft drink industry. Most national manufacturers of soft drinks—Coca-Cola, Dr. Pepper, PepsiCo—grant franchises to bottlers, which then service retailers.

In the third type of retail franchise, a franchiser supplies brand names, techniques, or other services, instead of complete products. The franchiser may provide certain production and distribution services, but its primary role in the arrangement is careful development and control of marketing strategies. This approach to franchising, very common today, is used by such organizations as Holiday Inn, AAMCO, McDonald's, Dairy Queen, KFC, and H&R Block.

A good franchise system can offer the prospective franchisee a diversified array of business savvy. In most instances, the franchisee enjoys the benefit of a nationally recognized trade name, national recognition, and the instant collective goodwill of the franchise. Standard quality and uniformity of a product or service coupled with an existing—and successful—system of marketing and accounting are other benefits. In addition, expert advice on location, design, capitalization, and operational issues is provided by the franchiser. Specialization on a national level is done in order to maintain the necessary research and market analysis that will enable the franchisee to remain competitive in an ever-changing marketplace. In other words, a business framework is supplied that reduces the number of risks that may arise when starting a new business. Most often these risks are associated with the financial investment involved. However, the franchise agreement often offers a cost savings by sharing a centralized purchasing system, and in some instances, direct financial assistance.

ADVANTAGES AND DISADVANTAGES OF FRANCHISING

Franchising offers several advantages to both the franchisee and the franchiser. It enables a franchisee to start a business with limited capital and to benefit from the business experience of others. Moreover, nationally advertised franchises, such as ServiceMaster and Burger King, are often assured of customers as soon as they open. If business problems arise, the franchisee can obtain guidance and advice from the franchiser at little or not cost. Franchised outlets are generally more successful than independently owned businesses.

Less than 10 percent of franchised retail businesses fail during the first two years of operation, whereas approximately half of independent retail businesses fail during that period. The franchisee also receives material to use in local advertising and can benefit from national promotional campaigns sponsored by the franchiser. At the turn of the twenty-first century, Taco Bell franchisees profited from a national advertising campaign featuring a Chihuahua demanding "Yo quiero Taco Bell" ("I want some Taco Bell"). The ads helped boost same-store sales at Taco Bell by 3 percent in an otherwise flat industry. The talking dog was especially popular among teenagers, who spend more than $12 billion per year at fast-food restaurants.

The franchiser gains fast and selective product distribution through franchise arrangements without incurring the high cost of constructing and operating its own outlets, thus giving it more capital for expanding production and advertising. It can also ensure, through the franchise agreement, that outlets are maintained and operated according to its own standards. The franchiser benefits from the fact that the franchisee, being a sole proprietor in most cases, is likely to be very highly motivated to succeed. Success of the franchise means more sales, which translate into higher income for the franchiser.

Despite these numerous advantages, franchise arrangements also have drawbacks for both parties. The franchiser can dictate many aspects of the business: decor, design of employees' uniforms, types of signs, and numerous other details of business operations. In addition, franchisees must pay to use the franchiser's name, products, and assistance. Usually franchisees must pay a one-time franchise fee as well as continuing royalty and advertising fees, often collected as a percentage of sales. For example, Subway requires franchisees to come up with $40,000 to $80,000 in start-up costs. Franchisees often must work very hard, putting in twelve-hour days, six or seven days a week. In some cases, franchise agreements are not uniform; one franchisee may pay more than another for the same services. The franchiser also gives up a certain amount of control when entering into a franchise agreement. Consequently, individual establishments may not be operated exactly the way the franchiser would like.

When entering into a franchise agreement, franchisees must be prepared to make major commitments of both money and time. They must be prepared to invest a substantial amount of money, both in the initial franchising fee and in start-up costs and carrying funds to provide a cash flow sufficient to operate the business during the beginning months or, if necessary, years. Most franchisees average a net profit of less than $30,000 a year.

The second commitment is that of time; in the beginning, the proprietor will be obliged to devote long hours to the details of the business operation. Experience has shown that this commitment is the common denominator to many successful franchise operations. Franchisees must rely to a large extent upon their own aptitude and drive in order to learn the business. They must also rely upon the product, services, and business skills of the franchiser.

In deciding whether or not to enter into a franchise agreement, there are several key points that need to be considered. The first consideration is price and costs. What is the total cost? What are the initial fees? What are the ongoing costs? Are there any hidden extras? Are you restricted in your right to purchase other goods?

The second consideration is the location. Where will the franchise be located? What is the territory that it will serve? What are the protections and limitations? Who can compete with you?

The third issue involves control and support. What controls will be in place? What policies and regulations govern the franchise agreement? What training and ongoing support will be supplied?

Advertising is the fourth consideration. The franchisee needs to determine what national and regional advertising will be supplied, as well as what the franchisee pays for and what the franchiser finances.

The last area of concern involves profits and losses, transfer and death, and duration and termination. Potential franchisees need to determine not only what protection they will receive for their earnings if they are successful but also what obligations they will be responsible for if the franchise fails. In addition, they need to find out whether, in the event of their death, the franchise agreement can be transferred to their heirs or automoatically reverts to the franchiser. Finally, they need to determine what stipulations, penalties, and other responsibilities are involved in terminating the contract with the franchiser should they no longer wish to continue in the business.

THE FRANCHISING SECTOR

A franchise is like any other business property in that it is the buyer's responsibility to know what he or she is buying. Poorly financed or poorly managed franchise systems are no better than poorly financed or poorly managed nonfranchise businesses. It is important to remember that there are trends in franchises, just as in other types of businesses. Growth areas for franchising in the 1990s included providing home care (finding nannies for children and nurses for homebound patients), catering to children (operating educational and child-care centers), tending people's homes (maid service), servicing cars, and, as always, operating fast food establishments.

The growth of the franchised fast-food industry has been truly spectacular. These franchise operations are second only to automobile dealerships and gasoline stations in gross volume of sales. Most often located at key intersections or on busy highways, fast-food enterprises enjoy a high visibility.

In this segment of the franchise industry, the majority of franchise operators have already owned other businesses before entering into a fast-food franchise. Many successful operators are college graduates, but the significant number of successful franchisees with only a high school education suggests that education alone is not a determining factor. A fast-food franchise is the type of venture in which both husband and wife can contribute to the success of the business.

Most fast-food franchisers consider geographic location to be an important factor in the success of the operation. And, like franchisers in other fields, they cite the importance of adequate capitalization, the efficient operation of the franchise system, good customer relations, quality employees, and the contributions of the franchisees, such as their management skills and especially their hard work.

According to Cassano's Pizza and Subs, a franchiser with twelve outlets in four states, the successful franchise operator must have several traits: (1) an excellent attitude toward customer service and customer relations; (2) an entrepreneurial ability and spirit combined with good business techniques; (3) a willingness to take a hands-on attitude toward the business. Newcomers to the Cassano's franchised fast-food business must have prior retail management experience and previous food service experience. All new franchisees are trained at the home office in Dayton, Ohio, for one month. After that, the franchise provides ongoing training and managerial assistance.

GLOBAL FRANCHISING

Franchising is growing rapidly abroad, with more than 370 franchise companies operating in about 40,000 outlets overseas. Canada is the largest of these markets, followed by Japan, Europe, Australia, and the United Kingdom. In 1995, Subway signed a deal with Japanese financiers to open 1000 franchise outlets in Japan. Subway tailored its products to fit the local tastes—for example, offering the Japanese market fried pork sandwiches.

Franchising can be a workable way for small firms to enter foreign markets, especially markets where there are few competitors. For example, Automation Paper Company, a small New Jersey-based supplier of high-technology paper products, used franchising to gain exclusive representation in target markets. The franchisees receive rights to the company's trademark, as well as training for local staffs and the benefit of the firm's experience, credit lines, and advertising budget.

The problems facing franchise companies in international transactions are relatively less formidable than those facing other service sectors. Franchisers must comply with the same local requirements as other businesses, and the franchise agreements must comply with local contract law, antitrust law, and trademark and licensing laws. Aside from language and cultural differences, many of the problems of conducting business in foreign countries are the same as those involved in the United States. The success or failure of foreign franchising will depend in large measure on the soundness of the franchiser's domestic market position and on the franchiser's ability to provide the necessary expertise to others in another part of the world.

Some franchises popular in the United States actually started in another country. For example, Molly Maid started in Canada in 1980 and came to the United States four years later.

All trends indicate that franchising will continue to expand both domestically and internationally, creating great opportunities for existing and new businesses; developing new entrepreneurs, new jobs, new products, new services; and providing export opportunities. Rising personal income, stable prices, high levels of consumer optimism, and increased competition for market share are turning many companies, both small and large, to franchising. Education will play an important role in the future of franchising, as both high schools and colleges increase the number of courses that are taught in marketing, business management, and entrepreneurship. In addition, changing patterns in American demographics, coupled with the increased number of women in the work force, are influencing the number of new franchises each year. In 1998, approximately 14 percent of franchisee-owned outlets are run by women, whereas 21 percent are run by female-male partners.

Furthermore, shifting demographic patterns and the use of new technology have intensified competition among franchise companies. These factors have increased the number of mergers and acquisitions in the franchising system, and it is expected that this merger/acquisition trend will persist for several years. Creativity and imagination in the treatment of goods and services are the focus of most business ventures today. Education, computers, and the ability to work with and manage people will be profitably utilized by new emerging businesses. All these developments suggest that franchising will be one of the leading methods of doing business in the first decade of the tweny-first century, even in an environment of mixed signals in the economy.

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PATRICIA A. SPIROU

FRAUDULENT FINANCIAL REPORTING

The equity and credit markets (capital markets) in the United States are considered to be among the most efficient in the economically developed world. One reason for the efficient operation of these markets is the public availability of creditable financial statements to individuals and institutions and the confidence in these statements by those using them as a basis for their investment and credit decisions. A potential serious threat to the efficient functioning of these markets is the incidence of fraudulent financial reporting.

Fraudulent financial reporting is intentional or reckless conduct, acts, or omissions, that result in materially misleading financial statements. Confidence in the operation of capital markets is diminished when the system of public disclosure is eroded by reported instances of fraudulent reporting.

John Dingell, chairman of the Subcommittee on Oversight.

In the mid-1980s, the failure of a number of financial institutions led various groups to determine possible causes, including the extent of fraudulent reporting involved in the failures. The Subcommittee on Oversight and Investigations of the U.S. House of Representative's Committee on Energy and Commerce held hearings concerning the accounting profession. The subcommittee's intent was to determine whether the system of public disclosure and reporting needed corrective action. In opening the hearings, the chairman, Representative John Dingell, questioned whether the public disclosure and audit system then in effect was meeting public expectations. In August 1986, Congressman Dingell and other members of the committee proposed legislation to amend the Securities and Exchange Act of 1934 to require independent public accountants (auditors) to include procedures for material financial fraud detection, to require reporting on internal control systems, and to require the reporting of fraudulent activities to appropriate enforcement and regulatory authorities. The legislative proposals were not accepted. There persisted the belief that the profession could respond successfully to the challenges without further legal requirements.

A private-sector response to these hearings, the National Commission on Fraudulent Financial Reporting (Treadway Commission)—jointly sponsored and funded by the American Institute of Certified Public Accountants (AICPA), the American Accounting Association (AAA), the Financial Executives Institute (FEI), the Institute of Internal Auditors (IIA), and the National Association of Accountants (NAA) (now the Institute of Management Accountants)—was formed in 1985 to identify factors contributing to fraudulent financial reporting and to develop recommendations to reduce its future occurrence. The Treadway Commission issued its report in October 1987.

TREADWAY COMMISSION REPORT

The Treadway Commission concluded that the responsibility for fraudulent financial reporting was not vested in one group. While the commission conceded that financial statements are the responsibility of a company's management, it issued a series of recommendations for the public company, the independent public accountant, the Securities and Exchange Commission (SEC), and the educational community.

The report identified a number of factors that might contribute to fraudulent financial reporting, including a number of environmental, institutional, and individual personal incentives to engage in fraudulent financial reporting. Institutional incentives include falsely improving financial appearances in financial statements for the purpose of maintaining market stock prices or to meet investor expectations as well as delaying the reporting of financial difficulties in order to avoid failure to comply with covenants in debt agreements. Individual incentives include falsely reporting results in order to achieve targeted results for bonus or incentive compensation purposes, as well as to avoid penalties for poor performance in achieving targeted profit objectives.

The commission indicated that the oversight bodies that establish auditing standards and those that monitor compliance have a continuing responsibility to uphold the integrity of the public disclosure and reporting system. The Commission also concluded that many of the Securities and Exchange Commission's fraudulent financial reporting cases against auditors' alleged failure to conduct the audits in accordance with generally accepted auditing standards.

RECOMMENDATIONS FOR THE PUBLIC COMPANY

The commission made a number of recommendations affecting public companies. These included proposals that companies develop and vigilantly enforce written codes of corporate conduct because such codes foster a positive ethical climate and discourage incidences of fraudulent financial reporting by positively affecting behavior throughout the public company.

The commission noted that company audit committees (those members of a company's board of directors who have responsibility for oversight of the financial reporting process) have historically been generally successful in exercising their oversight responsibility regarding financial reporting. However, it offered a number of recommendations that would improve this system. The commission proposed that boards of directors of all public companies be required by SEC rule to be composed of independent (outside, nonemployee) directors. Other specific recommendations included proposals to expand the authority of the audit committee and to enhance communications with the company's internal auditors and independent public accountants.

RECOMMENDATIONS FOR THE INDEPENDENT PUBLIC ACCOUNTANT

The commission issued a number of specific recommendations designed to improve the auditor's ability to detect fraudulent financial reporting. One significant proposal was a recommendation that the Auditing Standards Board (ASB) of the AICPA revise standards to restate the independent public accountant's responsibility for the detection of fraudulent financial reporting. The commission recommended that the independent public accountant be required to take proactive steps to assess the potential for fraudulent financial reporting and design audit tests to provide reasonable assurance of detection. Other recommendations included suggestions for improved detection capabilities through required analytical review procedures in all audit engagements and improvements to peer review processes and other intra-accounting firm review procedures. The commission also suggested that the SEC strengthen the civil and criminal sanctions affecting registrants and the independent public accountant.

RECOMMENDATIONS FOR THE SECURITIES AND EXCHANGE COMMISSION

The commission acknowledged that strong and effective deterrence is essential in reducing the incidence of fraudulent financial reporting. The commission's recommendations to the SEC included increasing deterrence by issuance of new SEC sanctions, greater criminal prosecution, improved regulation of the public accounting profession, adequate SEC resources, improved federal regulation of financial institutions, and improved oversight by the state boards of accountancy.

RECOMMENDATIONS FOR EDUCATION

The commission concluded that education could influence present and future participants in the financial reporting system. Therefore, recommendations were made related to curricula, professional certification examinations, and continuing professional education.

The commission recommended that the business and accounting curricula should convey a deeper understanding of internal controls and the overall control environment within which financial reporting takes place. Students need to be taught the complex regulatory and law enforcement framework that government and private-sector bodies have developed to provide safeguards to protect the public interest. Students also need to develop skills that will help prevent, detect, and deter fraud in financial reporting. The ethical dimension of financial reporting should be given more emphasis in college and university programs.

The commission recommended that certification examinations and continuing education programs give greater attention to the knowledge, skills, and ethical values that would produce a better understanding of fraudulent financial reporting and possibly promote a reduction in the incidence of such fraud.

RESPONSE OF THE AUDITING STANDARDS BOARD

In response to the Treadway Commission report and to other influences, the Auditing Standards Board issued ten new auditing standards in April 1988. These Statements on Auditing Standards (SASs) include requirements affecting the auditor's responsibility to detect and report errors and irregularities, consideration of internal control structure in a financial statement audit, and communication with a company's audit committee.

SAS No. 53, "The Auditor's Responsibility to Detect and Report Errors and Irregularities," stated auditor responsibility more clearly than had the earlier statement with the same title. SAS No. 53, however, was superseded in 1997 with a new SAS, No. 82, "Consideration of Fraud in a Financial Statement Audit." This revised Statement clearly identified the responsibility of the auditor to provide reasonable assurance that the two types of misstatements are detected: those arising from fraudulent financial reporting and those arising from misappropriation of assets.

Another SAS, No. 61, "Communication with Audit Committees," was issued to enhance the role of the audit committee of the board of directors in understanding the scope and results of the audit so that the committee members would be more effective in overseeing the financial reporting and disclosure process for which the company's management is responsible. In complying with this Statement, the auditor is required to communicate to the audit committee such matters as the company's management's significant accounting policies, judgments, and accounting estimates, and disagreements with the auditors. The audit committee is to be informed of any consultation that management had with other accountants and of difficulties the auditors encountered while performing the audit.

SAS No. 55, "Consideration of Internal Control in a Financial Statement Audit," changed the responsibility of the auditor for internal control. The new Statement required the auditor to develop an understanding of internal control sufficient to plan the audit and to document the understanding. Prior to the issuance of the new Statement, the auditor was not required to develop such an understanding. SAS No. 55 was amended with the issuance of SAS No. 78 in 1997, which redefined internal control. Control environment and risk assessment, among the concerns of the Treadway Commission, were more clearly described in SAS No. 78 and the auditor's responsibility for both factors clearly specified.

CONTINUING ATTENTION TO THE PROBLEMS OF FRAUDULENT FINANCIAL REPORTING

Attempts have continued to enhance understanding of fraudulent financial reporting in the United States. In early 1999, for example, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) issued the results of a study of Accounting and Auditing Enforcement Releases issued by the SEC between 1987 and 1997. This study attempted to improve ways of determining who participated in a fraud as well as the size and duration of the fraudulent behavior.

The Blue Ribbon Committee, formed at the request of the SEC chairman, the New York Stock Exchange, and the National Association of Securities Dealers, was charged with recommending ways to enhance the effectiveness of audit committees. The committee reported its recommendations in early 1999. The focus of the recommendations was related to audit committee oversight responsibilities relating to financial reporting.

The SEC, with its oversight responsibility for financial reporting, continues to provide leadership in cooperation with other groups for the reduction of fraudulent financial reporting.

(SEE ALSO: *Audit Committees*; *Auditing*)

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GERARD A. LANGE

FREE ENTERPRISE

(SEE: *Economic Systems*)

FUND ACCOUNTING

(SEE: *Government Accounting*; *Not-For-Profit Accounting*)

FUTURE BUSINESS LEADERS OF AMERICA

Future Business Leaders of American (FBLA) is one of ten nationally recognized vocational student organizations in the United States (Gordon, 1999). The organization is a nonprofit educational association for students who are preparing for careers in business and business-related fields. The organization is composed of four divisions:

- FBLA for middle school students
- FBLA for high school students
- Phi Beta Lambda (PBL) for post-secondary students
- A professional division composed of businesspeople, educators, and other individuals who uphold the goals of the organization ("Frequently Asked Questions," 1999).

FBLA has been in existence since 1937. Dr. Hamden I. Forkner of Teachers College of Columbia University developed the first chapter in New York City (Vaughn et al., 1990). In 1940 the National Council for Business Education recognized and sponsored FBLA. The first high school chapter was chartered in Johnson City, Tennessee, on February 3, 1942. Currently, more than 25,000 active members participate in the organization.

Students participating in FBLA have the opportunity to develop leadership skills; enter a variety of competitions at local, state, and national levels; establish occupational goals; and learn from business and professional individuals in their communities. The goals of FBLA (and PBL) are the following:

- To promote competent, aggressive business leadership
- To understand American business enterprise
- To establish career goals
- To encourage scholarship
- To promote sound financial management
- To develop character and self-confidence
- To facilitate transition from school to work ("Frequently Asked Questions," 1999)

Conferences, seminars, awards, publications, and scholarships are services provided for members of the organization. By providing practical hands-on activities for students in the business arena, FBLA continues to prepare young men and women to become successful leaders in our ever-changing society. More information is available from FBLA or PBL at FBLA/PBL Inc., 1912 Association Drive, Reston, Virginia 22091; (800)FBLA-WIN; or http://www.fbla-pbl.org/.

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JILL T. WHITE

G

GENERAL ACCOUNTING OFFICE

(SEE: *U.S. Government Accounting Office*)

GENERALLY ACCEPTED ACCOUNTING PRINCIPLES

Most individuals who understand the basics of financial reporting are familiar with the phrase *generally accepted accounting principles* (GAAP) and will readily identify the Financial Accounting Standards Board (FASB) as the standard-setting body in the United States currently responsible for establishing accounting principles for non-governmental entities. However, some may not be aware that there is no single reference source for GAAP because these principles are derived from a variety of sources. For example, although the FASB is responsible for issuing FASB Statements of Financial Accounting Standards, Interpretations, and Technical Bulletins, the American Institute of Certified Public Accountants (AICPA) issues Statements of Position, Audit and Accounting Guides, and Practice Bulletins, and the FASB Emerging Issues Task Force (EITF) issues EITF Abstracts.

It may seem that accounting principles could be generally accepted because of popular vote or consensus of opinion. However, *generally accepted accounting principles* is a technical accounting phrase defined in Accounting Principles Board (APB) Statement No. 4, *Basic Concepts and Accounting Principles Underlying Financial Statement of Business Enterprises*, as "the conventions, rules, and procedures that define accepted accounting practice at a particular time." GAAP includes not only broad guidelines of general application but also detailed practices and procedures that provide a standard by which to measure financial presentations. For the most part, in financial reporting, "generally accepted" implies "substantial authoritative support."

THE GAAP HIERARCHY

Although there is no single reference source for GAAP, there is a hierarchy established by the AICPA in Statement on Auditing Standards No. 69, *The Meaning of "Present Fairly in Conformity With Generally Accepted Accounting Principles" in the Independent Auditor's Report* (SAS 69). At the foundation of that hierarchy are the principles established by the FASB and its predecessors, the APB and the AICPA Committee on Accounting Procedure. From that foundation, the hierarchy formulates a "pecking order" for all the rules and procedures that are incorporated in the preparation of financial statements and that have come to be known as GAAP.

The GAAP hierarchy includes four successive categories (A-D), each of which establishes a different level of authority. Generally speaking, if there is a conflict between accounting principles relevant to the circumstances from one or more sources in Categories A, B, C, or D, the treatment specified by the source in the higher category is then followed. In other words, Categories A through D of the hierarchy descend in authority. Therefore, Category A takes precedence over all others, Category B takes precedence over Categories C and D, and Category C takes precedence over Category D. If a situation is not covered by guidelines in Categories A through D, other accounting literature should be considered. However, that literature should be consulted only when guidelines in higher categories are not applicable.

Category A Category A consists of the following officially established accounting principles: (1) FASB Statements of Financial Accounting Standards, (2) FASB Interpretations, (3) APB Opinions, and (4) AICPA Accounting Research Bulletins. All of those accounting principles are included in Volumes I and II of *Original Pronouncements*, which is updated annually and published by the FASB. In addition, FASB Statements and Interpretations are available individually from the FASB as published.

The accounting principles included in Category A are often referred to as “Rule 203 pronouncements” because the bodies responsible for establishing those principles have been so designated by the AICPA Council, pursuant to Rule 203 of the AICPA Code of Professional Conduct. Specifically, from September 1939 to August 1959 the AICPA committees on terminology and on accounting procedure were responsible for issuing fifty-one Accounting Research Bulletins (ARBs). In 1953, the first forty-two of those were revised, restated, or withdrawn and now appear as ARB No. 43, *Restatement and Revision of Accounting Research Bulletins*. On September 1, 1959, the AICPA committees were superseded by the APB, which issued thirty-one Opinions until it ceased operations in June 1973. At that time, the FASB took over the responsibilities of standard setting from the APB and as of March 31, 2000, had issued 137 Statements of Financial Accounting Standards and 44 Interpretations.

Category B Category B consists of (1) FASB Technical Bulletins and, if cleared by the FASB, (2) AICPA Statements of Position and (3) AICPA Industry Audit and Accounting Guides. Technical Bulletins are available individually from the FASB as published and are also included collectively in Volume II of *Original Pronouncements*. Statements of Position and Audit and Accounting Guides are available individually from the AICPA as published. In addition, Statements of Position are included collectively in *AICPA Technical Practice Aids*.

FASB Technical Bulletins provide timely guidance for applying Category A accounting principles and resolving accounting issues not directly addressed in those principles. The following kinds of guidance may be provided in a Technical Bulletin:5

- Guidance that clarifies, explains, or elaborates on an underlying standard.
- Guidance for a particular situation (usually a specific industry) that differs from the general application required by the standard in an ARB, APB Opinion, or FASB Statement or Interpretation. For example, the guidance in a Bulletin may specify that the standard does not apply to enterprises in a particular industry or may provide for deferral of the effective date of a standard for that industry.
- Guidance that addresses areas not directly covered by existing standards.

The AICPA’s Accounting Standards Executive Committee (AcSEC), which works closely with the FASB and its staff, is the senior technical committee of the AICPA authorized to set accounting standards and to speak for the AICPA on accounting matters. AcSEC’s standard-setting activities are often industry-specific or narrow in scope, whereas the FASB’s activities result in standards that are more general and broader in scope. AcSEC issues AICPA Statements of Position, which present conclusions with respect to an emerging problem or diversity in practice. In addition, AcSEC issues AICPA Audit and Accounting Guides, which either interpret GAAP as applicable to a specific industry or, in some cases, establish industry-specific GAAP. For example, Guides have been published for agricultural producers and cooperatives, airlines, casinos, construction contractors, and health care organizations.

Category C Category C consists of (1) AcSEC Practice Bulletins that have been cleared by the FASB and (2) consensus positions of the FASB Emerging Issues Task Force (EITF). AcSEC Practice Bulletins are available individually from the AICPA as published and are also included collectively in *AICPA Technical Practice Aids*. Consensus positions of the EITF are available individually from the FASB as published and are included collectively in *EITF Abstracts*, which is published by the FASB.

The EITF was established by the FASB in 1984 to assist in the early identification of emerging issues affecting financial reporting and of problems in implementing authoritative pronouncements. Each EITF Abstract summarizes the accounting issue involved and the results of the EITF discussion, including any consensus reached on the issue. Each Abstract also reports, in its "status" section, subsequent developments on that issue, such as issuance of a relevant Securities and Exchange Commission Staff Accounting Bulletin or an FASB Technical Bulletin. If the EITF can reach consensus on an issue, usually that is taken as an indication that no action is needed by the FASB or AcSEC. Alternatively, if no consensus is possible, it may be an indication that action by one of those bodies is necessary.

AcSEC Practice Bulletins are used to disseminate AcSEC's views for the purpose of providing practitioners and preparers with guidance on narrow financial accounting and reporting issues.6 The issues covered by Practice Bulletins are limited to those that have not been and are not being considered by the FASB. Therefore, AcSEC Practice Bulletins, which are reviewed by the FASB, are only issued after the FASB has informed AcSEC that it has no current plans to consider the issue.

Category D Category D includes (1) AICPA Accounting Interpretations, (2) FASB staff implementation guides, and (3) practices that are widely recognized and prevalent either generally or in an industry.

AICPA Accounting Interpretations (not to be confused with FASB Interpretations, which are included in Category A) were issued from March 1971 through November 1973. The purpose of the interpretations was to provide timely guidance for applying APB Opinions without the formal procedures required for an APB Opinion. In addition, they were used to clarify points on which past practice may have varied and been considered generally accepted. The interpretations, prepared by AICPA staff and reviewed by members of the accounting profession, are not considered to be official pronouncements of the APB. Although most of the interpretations have been superseded by other accounting standards, Volume II of *Original Pronouncements* includes those that continue in effect as well as reference pages for those that have been superseded.

Implementation guides, which appear in a question-and-answer format, are issued as aids to understanding and implementing various FASB Statements. Typically, those guides are issued when an unusually high number of inquiries are received and the accounting required by a given FASB Statement is particularly complex. The positions and opinions expressed in those guides are those of the FASB staff and do not represent official positions of the FASB. Staff implementation guides are available individually from the FASB as published and also are included collectively in *FASB Staff Implementation Guides*.

OTHER ACCOUNTING LITERATURE

Occasionally new transactions or events for which there are no established accounting principles must be reported. In those instances, it is sometimes possible to identify an analogous transaction or event for which there is an established principle and report the new transaction or event similarly. In the absence of a pronouncement in one of the four categories above or an analogous transaction or event, other accounting literature should be considered. Examples of other literature include: FASB Concepts Statements; APB Statements; AICPA (AcSEC) Issues

Papers; pronouncements of other accounting standard-setting bodies, professional associations, or regulatory agencies; technical information service inquiries; and accounting textbooks, handbooks, and articles.

SUMMARY

Generally accepted accounting principles are not a set of specific circumscribed standards that can be easily found in one convenient set of rules. Rather, they are an amalgam arising from various sources and with an established hierarchy. Generally accepted accounting principles range from official standards established by the FASB, through literature from the AICPA, to, in some situations, articles. Yet the system seems to work reasonably well. Financial statements prepared pursuant to GAAP are highly regarded in the United States for the quality and comparability of the information they provide. Thus, investors and other users have been well served by our system of financial reporting, which results in the fair presentation of financial information prepared in conformity with generally accepted accounting principles.

(SEE ALSO: *Accounting*; *Financial Accounting Standards Board*; *Government Financial Reporting*)

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EDMUND L. JENKINS
CHERI REITHER

GENERIC PRODUCTS

(SEE: *Product Labeling*)

GLOBAL ECONOMY

The global economy refers to the increasing integration of fragmented national markets for goods and services into a single global market. In such a market, companies may source from one country, conduct research and development (R&D) in another country, take orders in a third country, and sell wherever there exists demand regardless of the customer's nationality. Kenichi Ohmae (1989), a Japanese consultant, calls this the *borderless world*. While nobody would argue that national borders are completely irrelevant, certain influences have caused the globe to become smaller and smaller. These include technological advances in global communication and transportation, the dilution of culture, a decrease in tariff and nontariff barriers, and a self-feeding change in the degree of global competition.

INTERNATIONAL TRADE

To comprehend the recent increase in global markets, it is important to have some understanding of the historical development of international trade. While some form of international trade existed prior to the colonial expansion of Europe in the fifteenth and sixteenth centuries, *mercantilism*, or the trading of gold and silver for goods, served as the precursor for the large flows of goods, services, and information that currently exists. This philosophy of national power postulated that those countries with large amounts of *specie* could maintain the types of armies necessary to conquer other nations. The conquered nations then provided additional sources of revenues either through goods, slave labor, or gold and silver that could be used to support additional armies, thereby creating a "virtuous" cycle.

From the demands of war, trade theory has moved through a number of stages. Adam Smith, the Scottish economist and philosopher, stated that countries traded because they had an *absolute advantage*. One nation's workers could produce a given product more efficiently than workers in other countries. Rather than produce those products that it could produce but poorly, a country could specialize and exchange those products it produced efficiently for those produced efficiently by another country and, therefore, increase its overall wealth.

David Ricardo altered this theory to suggest that a country need only have a *comparative ad-*

vantage in order to specialize and trade to increase wealth. A country having an absolute advantage in two goods might find that it would still rather specialize in that good for which it had relatively greater production expertise. It could then trade its excess for a greater quantity of the second good than it could have obtained had it split its production between the two goods.

These theories of trade were followed by Hecksher and Ohlin's *theory of factor proportions* (1933), which suggested that countries will specialize in the production and trade of either capital-intensive products or labor-intensive products, depending on whether their comparative advantage lies in capital or labor. Other theories of trade include Vernon's *product cycle theory*, which suggests that a country's comparative advantage in products changes over time as the technology to produce that product changes, and Porter's writings on the competitive advantage of nations, according to which a nation's competitive industries depend on domestic rivalry, demand conditions, factor conditions, and the strength of related and supporting industries.

CAUSES OF INCREASING GLOBALIZATION

During the time that different trade theories have risen and fallen, the world has become a smaller place. One of the primary facilitators of the global marketplace is the technological advance of the telecommunications industry.

In the days of Adam Smith, if a merchant wanted to trade a lot of wool for a case of port wine, the communication of that intent would require weeks. Sending a message to a subordinate in India took months. Such circumstances lent themselves to fragmented individualized markets with subsidiaries run by family members or close friends. These in-country managers were trusted to make decisions in the best interest of the company because no rapid means of communicating new opportunities and information existed. The opportunity to closely coordinate the activities of several foreign operations simply did not exist.

Today, communication between most parts of the world is instantaneous. A manager in Bonn can telephone a manager in Rio de Janeiro to discuss the latest news regarding the orange crop. If the Brazilian manager wants to send some contracts to the German manager, it can be done by fax; if the data demands are larger, the information can be transferred via the Internet. Should the Brazilian manager then need to travel to the middle of the Amazon rainforest to check up on the supply of a certain healing plant, that information can also be passed on to Germany through a sophisticated cellular phone.

These new capabilities allow vast amounts of business data to be transferred almost instantaneously all over the world and at ever-decreasing costs. The cost of a three-minute phone call between London and New York fell from $13.73 in 1973 to $1.78 in 1993.

These gains in communication technology closely parallel those in the transportation industry. P. Dicken (1992) indicates that between 1500 and 1840 the best average speed of horse-drawn coaches and sailing ships was about ten miles per hour. Between 1850 and 1930, steam became a dominant technology, with trains averaging sixty-five miles per hour and ships increasing their speed to thirty-six miles per hour. In the 1950s, propeller aircraft achieved speeds of three hundred to four hundred miles per hour. These speeds later increased to over six hundred miles per hour with the advent of the jet-engine technology. Again, what this means is that an executive who used to spend several weeks traveling from Lisbon to Rio de Janeiro to visit a factory could visit factories all over the world in that same amount of time.

These advances have greatly increased the potential for flows of goods and individuals across national borders. Further advances include such things as standardized shipping containers, which can be easily transferred from sea carriers to land carriers and can be packed with greater efficiency. In addition, the vast size of modern supertankers has greatly increased the amount of goods that can be shipped at one time.

In addition to advances in transportation and communication, some scholars, such as Theodore Levitt (1983), have argued that the world has become a smaller place in terms of tastes and preferences. The tastes of teenagers around the world may be as much informed by Hollywood movies and MTV as they are by cultural heritage. Levitt argues that such convergence of preferences is not limited to any one age group, since adults worldwide enjoy Chinese food, country music, pizza, and pita bread. While some convergence has certainly taken place, scholars such as Susan P. Douglas and Yoram Wind (1987) argue that this cross-border similarity of tastes and preferences is limited to certain countries and product lines.

While the extent of convergence is certainly arguable, it is clear that at least in some countries and with some product lines, the tastes and preferences of consumers seem quite similar. This reality encourages a global-market approach to business as companies attempt to reach the largest number of consumers at the lowest price possible.

Another factor leading to a more globalized marketplace is the historical decrease in tariff and nontariff barriers. In 1930 the United States raised tariffs under the Smoot-Hawley Tariff Act to an average of 53 percent. Other countries followed suit, and international trade slowed significantly. In 1947 several leading trading nations created the *General Agreement on Tariffs and Trade* (GATT) to serve as a forum for bringing down trade barriers. Between 1947 and 1994, trading countries around the world have participated in eight rounds of negotiating in an effort to reduce tariffs. The latest round, entitled the Uruguay round, boasted 117 participants and resulted in an average tariff reduction of 35 percent. As tariff barriers fell, the inducement to trade was increased as foreign-produced goods became more and more competitive with domestic goods.

In addition to the GATT agreements, several countries have participated in regional agreements encouraging even lower tariff rates among participants. An example of such an agreement is the North American Free Trade Agreement (NAFTA) implemented by Canada, Mexico, and the United States in 1994. This agreement reduced tariffs over a fifteen-year period, lifted many investment restrictions, allowed for easier movement of white-collar workers, opened up government procurement over a ten-year period, and created a mechanism for dispute resolution. As a result, retailers such as Wal-Mart and 7-Eleven have expanded operations into Mexico, and many Mexican and Canadian firms have been enjoying the benefits of participating in the world's largest consumer market, the United States. In the first two years of NAFTA's implementation, trade among Canada, the United States, and Mexico increased by 43 percent.

In addition to NAFTA, numerous other such agreements exist, including the European Union, the Carribean Community and Common Market (CARICOM), the Economic Community of West African States (ECOWAS), the Association of Southeast Asian Nations (ASEAN), and the Andean Common Market (ANCOM). Each of these agreements seeks to promote trade through minimizing the barriers to trade that exist in the region.

Closely related to the liberalization of trade, technological advantages, and the convergence of consumer preferences are a set of competitive factors centered around the ideas of economies of scale (larger production volumes generating lower per-unit production costs) and locational advantages. Marquise R. Cvar (1986) cites the example of Becton Dickinson, which in the 1980s was faced with new technologies in disposable syringe production that could dramatically decrease the cost of these medical devices. Unfortunately, the investment needed in technology was so high that, to be efficient, the company would have to capture 60 percent of the U.S. and Japanese markets. Further, it was believed that by doubling volume, cost would decrease by 20 percent. Becton Dickinson responded by creating standardized syringes for markets in the United States, Europe, Mexico, Brazil, Australia, the Philippines, Singapore, and Hong Kong. In so doing, they were able to reduce the cost of their product to 5 to 10 percent below those of local competitors while simultaneously providing generally higher quality. These savings led to an average market share of 45 percent in those countries.

Further, this standardization approach also allowed Becton Dickinson to shift production among various plants located in the United States, Ireland, Spain, Mexico, and Brazil. As exchanges rates fluctuated, the company was able to increase production at more cost-effective plants while decreasing it elsewhere, resulting in even greater savings. Further, companies in such situations may use profits in one country to subsidize their competitive activities in another. While anti-dumping laws prohibit selling exported goods at a price below their cost of production or at a price lower than the price in the home market, companies will sometimes seek to attack a competitor in a foreign market by engaging in dumping-like pricing in an attempt to wrest market share. If the firm under attack has operations in the foreign firm's home market, it can respond in kind. A purely domestic firm does not have such options.

In response to the competitive advantage enjoyed by global companies such as Becton Dickinson, local firms often respond by becoming more global themselves. This cycle has created a more worldwide competitive market for a large number of products and services.

CONCLUSION

Changes in communications and transportation technology, convergence of consumer tastes and preferences, trade liberalization, and the emergence of global competitors have all combined to create a much more integrated world economy. Companies like Becton Dickinson, Unilever, and Samsung profit from larger numbers of consumers and cheaper factors of production, while consumers may experience lower prices and higher quality. Of course, some might argue that the benefits of the global marketplace come at a price. Membership in trade organizations such as the World Trade Organization (WTO) may limit a country's ability to create laws regarding the conduct of business within its borders since each law must pass the scrutiny of the WTO. In addition, the interrelatedness of markets may cause a negative domino effect within a region, as happened with the Asian crisis of the 1990s. Despite these and other concerns, however, the global marketplace seems likely to continue its expansion as new technological advances continue to shrink the importance of geographic distance.

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NORMAN S. WRIGHT

GROSS NATIONAL PRODUCT (GNP)

(SEE: *Gross Domestic Product*)

GOALS AND OBJECTIVES

(SEE: *Strategic Management*)

GOODS AND SERVICES

Goods and services are the outputs offered by businesses to satisfy the demands of consumer and industrial markets. They are differentiated on the basis of four characteristics:

1. *Tangibility:* Goods are tangible products such as cars, clothing, and machinery. They have shape and can be seen and touched. Services are intangible. Hair styling, pest control, and equipment repair, for example, do not have a physical presence.
2. *Perishability:* All goods have some degree of durability beyond the time of purchase. Services do not; they perish as they are delivered.
3. *Separability:* Goods can be stored for later use. Thus, production and consumption are typically separate. Because the production and consumption of services are simultaneous, services and the service provider cannot be separated.
4. *Standardization:* The quality of goods can be controlled through standardization and grading in the production process. The quality of services, however, is different each time they are delivered.

For the purpose of developing marketing strategies, particularly product planning and promotion, goods and services are categorized in two ways. One is to designate their position on a goods and services continuum. The second is to place them into a classification system.

The goods and services continuum enables marketers to see the relative goods/services composition of total products. A product's position on the continuum, in turn, enables marketers to spot opportunities. At the pure goods end of the continuum, goods that have no related services are positioned. At the pure services end are services that are not associated with physical products. Products that are a combination of goods and services fall between the two ends. For example, goods such as furnaces, which require accompanying services such as delivery and installation, are situated toward the pure goods end. Products that involve the sale of both goods and services, such as auto repair, are near the center. And products that are primarily services but rely on physical equipment, such as taxis, are located toward the pure services end.

The second approach to categorizing products is to classify them on the basis of their uses. This organization facilitates the identification of prospective users and the design of strategies to reach them. The major distinction in this system is between consumer and industrial products. Consumer goods and services are those that are purchased for personal, family, or household use. Industrial goods and services are products that companies buy to make the products they sell.

Two major changes have affected the marketing and production of goods and services since about 1950. The first was a shift in marketing philosophy from the belief that consumers could be convinced to buy whatever was produced to the marketing concept, in which consumer expectations became the driving force in determining what was to be produced and marketed. This change in orientation has resulted in increases in both lines of products and choices within the lines.

The second change was an increased demand for services. The growth in demand for services—and resulting production—continues to increase at a faster rate than the demand for manufactured goods.

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Earl C. Meyer
Matthew F. Hazzard

GOVERNMENT ACCOUNTING

Government accounting has been viewed historically as a key element in the movement from *absolute power*, (i.e., the government or a king or emperor) to *relative power* (i.e., a shared model of government). Under the shared model of government, government accounting was used by a parliament to limit the king's power to (1) spend public money, (2) raise taxes to cover the expenditures, and (3) determine the purpose of the expenditure. The use of governmental accounting remained unchanged during the evolution into modern democratic systems.

Thus government accounting requires the executive to (1) state the amount, nature, and purpose of the planned expenditure and the taxes needed to fund it, (2) ask for and obtain approval from the legislature, and (3) comply with the expenditure authority—that is, appropriation—granted by the legislature and demonstrate such compliance. Under government accounting, the legislature is allowed to steer and control the behavior of the government.

The basic foundation of governmental financial accounting and reporting in the United States was established by the Governmental Accounting Standards Boards (GASB) in its "Objectives of Financial Reporting," which stated that the purpose of financial reporting is to provide information to facilitate decision making by various groups (GASB, 1987). The groups were defined as (1) citizens of the governmental entity, (2) direct representatives of the citizens, such as legislatures and oversight bodies, and (3) investors, creditors, and others who are involved in the lending process. Although not specifically identified, intergovernmental agencies and other users have informational needs similar to the three primary user groups. While the three user groups have overlapping membership with corporate financial information users, citizens and legislative users are unique to governments. The use of governmental accounting information centers on political, social, and economic decisions in addition to determining the government's accountability.

Accountability (GASB, 1987, 56-58) was identified as the paramount objective of governmental financial reporting because it is based on the transfer of responsibility for resources or actions from the citizens to some other party, such as the management of the governmental entity. The assessment of accountability is fulfilled when financial reporting enables financial data users to determine to what extent current-period costs are financed by current-period revenues. Two basic types of budgets are used by governments and are the same as those used by corporate entities—an annual operating budget and a capital budget. Governmental annual operating budgets include estimated revenues and appropriations for expenditure for a specific fiscal year. Capital budgets control the expenditures for construction projects and fixed asset acquisitions. Operating or capital budgets are recorded in the accounting system as a means of control or compliance.

Many governmental entities are required by law to maintain a balanced budget in that revenues must equal or exceed appropriations; the latter situation results in a budgetary surplus. If a budgetary deficit occurs in a governmental entity with a balanced-budget requirement, additional appropriations must be enacted by the legislative process.

Governmental accounting uses a fund accounting structure as a means of controlling resources. That is, each type of financial activity is segregated into a separate set of self-balancing asset, liability, and net asset accounts. GASB codification identifies three fund groups—governmental, proprietary, and fiduciary (GASB, 1997, Sections 1100.103 and 1100.105). Governmental funds are used to account for financial resources used in the day-to-day operations of the government. Proprietary funds are those used to account for the government's business-type activities where fees are charged for the services rendered, for example, utility services. Fiduciary funds are those used to account for funds held by the government in trust for others that cannot be used to support the government's programs, for example, an employee pension fund.

State and local governments report dual-perspective financial information with both full accrual information and fund-based modified accrual information in accordance with GASB Standard No. 34, *Basic Financial Statements—and Management Discussion and Analysis—for Statement and Local Governments* (GASB, 1999).

The management's discussion and analysis (MD&A) is required supplementary information presented before the financial statements that is subjected to limited auditor review and presents an overview of the government's financial activities for the part year. This narrative description of the financial performance is much like the management discussion required of corporations by the Securities and Exchange Commission (SEC). The MD&A provides an objective and easily readable analysis of the government's financial activities based on currently known facts, decisions, or conditions. The discussion compares the government's current-year results with the previous year and may include charts, graphs, or tables to illustrate the discussion. The discussion is general rather than specific so that the most relevant information is provided. At a minimum, fourteen prescribed elements are a part of the MD&A discussion; these elements explain the relationship among the financial statements and any significant differences in the information provided in the financial statement.

The full accrual information reports the full cost of providing government services, with details on how much of the cost is borne by taxpayers and by specific users of the government's service. The full accrual reports are similar to those of profit-seeking corporations. The government's equity is displayed as net assets rather than stockholders' equity. The full accrual results of the government's financial activity are displayed in two government-wide reports—(1) the statement of net assets and (2) the statement of activities.

The statement of net assets displays information about the government as a whole, reports all financial and capital resources, and assists the financial statement user in assessing the medium- and long-term operational accountability of the government. Separate columns are used to distinguish between the financial data for the governmental activities and the business-type activities that comprise the total primary government. As the term *statement of net assets* implies, the statement format presents the assets minus liabilities that equal the total net assets, that is, equity. Assets and liabilities are presented in their order of liquidity. That is, assets are presented in the order to their nearness to producing cash, and liabilities are presented in the order to their nearness to consuming cash. Assets and liabilities may be displayed in a classified, current, and noncurrent format if desired. The government's net assets are presented in three components: (1) capital assets net of related accumulated depreciation and debt, (2) restricted net assets with constraints imposed on their use by parties outside the government, and (3) unrestricted net assets.

The statement of activities reports the net expense over revenue of each individual function or program operated by the government. The net expense over revenue format reports the relative financial burden of each of the programs on the government's resource provides—taxpayers. The format highlights the extent to which each program directly consumes the government's revenues or is financed by fees, contributions, or other revenues.

In addition to the governmentwide full accrual information, state and local governments present financial statements on the fund-based modified accrual basis. In the modified accrual basis of accounting, revenues are recognized only when they become both measurable and available to finance expenditures for the fiscal period. Expenditures are recognized when the related liabilities are incurred, if measurable, except for unmatured interest on long-term debt, which is recognized when legally due.

Fund-based financial statements assist in assessing the government's short-term fiscal accountability. Most funds are established by governments to show restrictions on the planned use of resources or to measure, in the short-term, the revenues and expenditures of a particular activity. Fund activity displayed in the fund-based financial statements is grouped by governmental, proprietary, and fiduciary categories as identified by the GASB codification. The equity component of modified accrual fund-based financial statements is reported as fund balance rather than net assets, which is used in the full accrual statement.

A balance sheet and a statement of revenues, expenditures, and change in fund balance are required for each of the three fund groups. Because the fund financial statements are prepared using the modified accrual basis, a required reconciliation is prepared that explains the differences between the net change in fund balances and the change in net assets in the governmentwide statement of activities. The proprietary funds also present a statement of cash flows. Unlike corporate cash flow statements, the governmental cash flow statement is prepared using the direct method and has four categories—operating, noncapital financing, capital financing, and investing activities.

Although some similarities exist between accounting for state and local governments and accounting for the federal government, there are selected areas specific to each. For example, federal agencies account for quarterly apportionments to procure goods and services, a process that is generally ignored by state and local governments. The head of each agency in the executive branch of the federal government has the responsibility for establishing and maintaining accounting and control systems in conformity with principles, standards, and requirements established by the Federal Accounting Standards Advisory Board and the Federal Financial Management Improvement Act of 1996.

Federal accounting provides the information needed for financial management as well as the information needed to demonstrate compliance with budgetary and other legal requirements. Thus, federal accounting is based on a two-track system. One track is a self-balancing set of proprietary accounts intended to provide information for management. The other track is a set of self-balancing budgetary accounts that assure that available budgetary resources and authorities are not overexpended or overobligated and assist in budgetary reporting requirements.

Like its state and local government counterpart, the federal financial statements include an MD&A that provides a clear and concise description of the reporting entity and its mission, activities, program and financial results, and financial condition (OMB, 1996). Federal financial statements are less prescriptive than state and local financial statements because federal agencies are permitted significant latitude on the level of aggregation presented. The six statements in the federal financial report include a (1) balance sheet, (2) statement of net cost, (3) statement of changes in net position, (4) statement of budgetary resources, (5) statement of financing, and (6) statement of custodial activity.

(SEE ALSO: *Government Accounting Standards Board*; *Government Financial Reporting*)

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MARY L. FISCHER

GOVERNMENTAL ACCOUNTING STANDARDS BOARD

The Governmental Accounting Standards Board (GASB) was organized in 1984 under the auspices of the Financial Accounting Foundation to establish financial accounting and reporting standards for state and local government entities. These standards are important because external financial reporting can demonstrate financial accountability to the public. They are the basis for many legislative and regulatory decisions, as well as investment and credit policies. The foundation is responsible for selecting the seven members of GASB and its Advisory Council, funding their activities, and exercising general oversight. Except for the chairman of GASB, all members are part time.

GASB's mission is to establish and improve standards of state and local governmental accounting and financial reporting that will (1) result in useful information for users of financial reports and (2) guide and educate the public, including issuers, auditors, and users of those financial reports. To accomplish its mission, GASB acts to:

1. Issue standards that improve the usefulness of financial reports based on (a) the needs of financial report users, (b) the primary characteristics of understandability, relevance, and reliability, and (c) the qualities of comparability and consistency.
2. Keep standards current to reflect changes in the governmental environment.
3. Provide guidance on implementation of standards.
4. Consider significant areas of accounting and financial reporting that can be improved through the standard-setting process.
5. Improve the common understanding of the nature and purposes of information contained in financial reports.

GASB formulates and uses concepts to guide them in the development of their standards. These concepts provide a frame of reference for resolving accounting and financial reporting issues. This framework helps to establish reasonable bounds for judgment in preparing and using financial reports; it also helps the public understand the nature and limitations of financial reporting. GASB actively solicits and considers the views of its various constituencies on all accounting and financial reporting issues. GASB's activities are open to public participation and observation under "due process" procedures. These procedures are designed to permit timely, thorough, and open study of accounting and financial reporting issues. Consequently, broad public participation is encouraged in the accounting standard-setting process, which permits communication of all points of view and expressions of opinion at all stages of the process. Use of these procedures recognizes that general acceptance of the GASB conclusions is enhanced by demonstrating that the comments received during due process are considered carefully.

GUIDING PRINCIPLES

In establishing concepts and standards, the GASB exercises its judgment after research, due process, and careful deliberation. Some of the principles used by GASB are as follows:

1. One of GASB's overriding principles is that it *be objective and neutral in its decision making*. This principle ensures, as much as possible, that the information resulting from its standards is a faithful representation of the effects of state and local government activities. Objective and neutral means freedom from bias, precluding GASB from placing any particular interest above the interests of the many who rely on the information contained in financial reports.
2. Another primary principle is to *weigh carefully the views of its constituents in developing concepts and standards*. This permits GASB to (a) meet the accountability and decision-making needs of the users of government financial reports and (b) gain general acceptance among state and local government preparers and auditors of financial reports.
3. A third principle is to *establish standards only when the expected benefits exceed the*

perceived costs. GASB strives to determine that proposed standards (including disclosure requirements) fill a significant need and that the costs they impose, compared with possible alternatives, are justified when compared to the overall public benefit.

4. A fourth principle is to *consider the applicability of its standards* to the separately issued general-purpose financial statements of governmentally owned special entities. GASB specifically evaluates similarities of special entities and of their activities and transactions in both the public and private sectors, and the need, in certain instances, for comparability with the private sector.
5. A fifth principle is to *bring about needed changes in ways that minimize disruption of the accounting and financial reporting processes*. Reasonable effective dates and transition provisions are established when new standards are introduced. GASB considers it desirable that change should be evolutionary to the extent that can be accommodated by the need for understandability, relevance, reliability, comparability, and consistency.
6. A final principle is to *review the effects of past decisions for appropriateness*. This permits continual interpretation, amendment, or replacement of standards, when deemed necessary.

PUBLICATIONS

As of December 31, 1998, more than thirty financial accounting and reporting standards had been issued since GASB's inception. A standard pertaining to a new financial reporting model for state and local governments has been exposed and is expected to be issued in 1999 with an effective date in 2001. Copies of these standards, along with other GASB publications, can be obtained from the GASB offices at 401 Merritt 7, P.O. Box 5116, Norwalk, Connecticut 06856-5116. Their phone number is (203) 847-0700 and their Web site is http://www.asb.org. GASB's Web site is a subpart of the FASB (Financial Accounting Standards Board) Web site.

OTHER FINANCIAL ACCOUNTING AND REPORTING STANDARD-SETTING BODIES

Additional standard-setting bodies for the public sector are as follows:

1. The *Federal Accounting Standards Advisory Board (FASAB)* was established in 1990 by the following three U.S. government principals: the Comptroller General, the Director of the Office of Management and Budget, and the Treasurer. FASAB's primary function is to make recommendations to the principals for financial accounting and reporting standards to be adopted for the U.S. federal government. More information is available from FASAB at 441 G Street NW, Suite 3B18, Washington, D.C. 20548; (202) 512-7350; or http://www.financenet.gov/fasab.htm.
2. The Public Sector Committee of the International Federation of Accountants (IFAC-PSC) assumed responsibility in 1998 for developing a set of financial reporting standards to be adopted worldwide by public sector entities. More information is available from IFAC-PSC at 535 Fifth Ave., 26th floor, New York, NY; (212) 286-9344; or http://www.ifac.org/Committees/PublicSector/index.html.

Standard-setting bodies for the private sector are as follows:

1. The *Financial Accounting Standards Board (FASB)* also falls under the auspices of the Financial Accounting Foundation. Its responsibilities are to set the financial accounting and reporting standards to be applied by U.S. businesses. FASB is co-located with GASB in Connecticut and their Website is http://www.fasb.org.
2. Financial accounting and reporting standards recommended for use by businesses throughout the world are established by

the *International Accounting Standards Committee (IASC)*. More information is available from IASC at 166 Fleet St., London EC4A 2DY, United Kingdom; +44 (171) 353-0565; or http://www.iasc.org.uk.

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JESSE W. HUGHES

GOVERNMENT AUDITING STANDARDS

Generally accepted government auditing standards (GAGAS)—informally known as the Yellow Book—are promulgated under the leadership of the comptroller general of the United States, who heads the U.S. General Accounting Office. The responsibility includes both establishing and revising these standards. The staff of the comptroller general's office is aided by the Advisory Council on Government Auditing Standards, whose members come from units of the federal and state governments, representatives of public accounting firms, and professors of accounting.

The first set of standards was issued in 1972; the second in 1988; the third in 1994. As of mid-2000, a review of the 1994 edition continues. The guidance in the 1994 edition continues to be in effect, except for changes contained in amendments. Two amendments have been issued as of early 2000. The amendments become effective once they are completed. All changes to the Yellow Book are initially presented in exposure draft so that interested parties can comment; these comments are considered in determining the adequacy of any change being proposed.

THE AUTHORITY OF GOVERNMENT AUDITING STANDARDS

The Yellow Book includes standards to guide all audits of governmental units, irrespective of the level of the unit. The standards are considered broad statements of auditors' responsibilities. The Introduction to the Yellow Book states its purpose as providing "standards for audits of government organizations, programs, activities, and functions, and of government assistance received by contractors, nonprofit organizations, and other nongovernment organizations" (Comptroller General of the United States, 1994).

Federal legislation established the requirement that all inspectors general comply with the GAGAS. Furthermore, inspectors general are responsible for assuring that nonfederal auditors also comply with these standards when they audit federal organizations, programs, activities, and functions. The Office of Management and Budget as well as the requirements of the Chief Financial Officers Act of 1990, the Single Audit Act of 1984, and other federal policies and regulations require the use of these standards in audits where federal funds are involved. The standards are recommended for use by state and local government auditors and public accountants in audits of state and local government organizations, programs, activities, and functions even though federal funds are not involved in some instances. A number of states and local audit organizations have officially adopted these standards.

THE NATURE OF AUDITS PERFORMED

GAGAS are provided for both financial and performance audits. The comprehensive guidance applies to the following:

- *Financial statement audits.* The statements included are the statement of financial position, results of operations, and cash flows, all of which are in conformity with generally accepted accounting principles. Financial statements audits also include audits of financial statements prepared in conformity with several other bases of accounting as established by auditing standards and related statements issued by the Auditing Standards Board of the American Institute of Certified Public Accountants.

- *Financial related audits.* Among such audits are those (1) involving financial information presented in accordance with established or stated criteria, (2) related to specific financial compliance requirements, (3) related to an entity's internal control over financial reporting and/or safeguarding of assets, and (4) involving compliance with laws and regulations and allegations of fraud. Also included are segments of financial statements, statement of revenue and expenses, statement of fixed assets, budget requests, and variances between estimated and actual financial performance.
- *Performance audits.* Such audits include systematic examination of relevant evidence to provide an independent assessment of the performance of a government organization, program, activity, or function. Also, economy and efficiency and program audits are included among performance audits. Such economy and efficiency audits may, for example, determine whether the entity is following sound procurement practices; is acquiring appropriate types of resources; is properly protecting and maintaining resources; is avoiding duplication of effort by employees; is avoiding idleness and overstaffing; is using efficient operating procedures; is using optimum amounts of resources; is complying with requirements of laws and regulations that could effect acquisition, protection, and use of resources; has an adequate management control system; and has reported measures of economy and efficiency that are reliable and valid. Program audits, for example, may assess whether the objectives of a program are proper, suitable, or relevant; and determine the extent to which a program is achieving its goals; identify factors inhibiting satisfactory performance; identify ways of making programs work better; and determine whether management has reported measures of program effectiveness that are valid and reliable.

Government audits may be a combination of financial and performance audit, as, for example, when auditors conduct audits of government contracts and grants with private-sector organizations as well as government and not-for-profit organizations where both financial and performance objectives must be audited.

GOVERNMENT AUDITING STANDARDS FOR FINANCIAL AUDITS

Standards are classified as general, field, and reporting. The GAGAS incorporate the generally accepted auditing standards as promulgated by the Auditing Standards Board of the American Institute of Certified Public Accountants. However, there are some additional standards that relate to the accountability of government units for compliance with laws and regulations. There are also more extensive reporting requirements related to such accountability.

General standards relate to qualifications of staff assigned to conduct an audit, to the need for the audit entity to be organizationally independent and the individual auditors to maintain independent in attitude and in appearance and to exercise due professional care in the work related to an audit, and to the need for the audit organization to have an appropriate internal quality control system that is externally reviewed at least every three years.

Field standards incorporate the three field standards as established by the Auditing Standards Board, which relate to planning, understanding internal control, and obtaining sufficient evidential matter. Additional standards relate to following up on known material findings and recommendations from previous audits; to designing the audit to provide reasonable assurance of detecting material misstatements related to irregularities and/or direct and material illegal acts; and to detecting noncompliance with provisions of contracts or grant agreements that have a direct and material effect on the financial statements. There is also a field standard related to the need to prepare adequate working papers.

Reporting standards incorporate the four reporting statements of the Auditing Standards Board. Additionally, there are standards that deal with communication with audit committee; disclosure of the fact that the audit was performed in accordance with generally accepted government auditing standards; and disclosures related to compliance with laws and regulations regarding on internal control, privileged and confidential information, and report distribution.

GOVERNMENT AUDITING STANDARDS FOR PERFORMANCE AUDITS

The general standards are the same for financial and performance audits as discussed earlier. Field and reporting standards for performance audits overlap to some extent with those for financial audits.

Field standards are related to (1) planning; (2) supervision; (3) design of the audit when laws, regulations, and other compliance requirements are significant to the audit objective; (4) understanding of management controls when relevant to the audit; and (5) sufficient, competent, relevant evidence.

Reporting standards are related to (1) preparation of written reports that communicate results; (2) appropriate issuance; (3) reporting audit objectives as well as scope and methodology; (4) the need for a complete, accurate, objective, convincing, and clear and concise report; and (5) report distribution.

AMENDMENTS TO GOVERNMENT AUDITING STANDARDS

As of mid-2000 there were two amendments to the Yellow Book. Amendment No. 1, "Documentation Requirements When Assessing Control Risk at Maximum for Controls Significantly Dependent upon Computerized Information Systems," and Amendment No. 2, "Auditor Communications."

Amendment No. 1 relates to an additional fieldwork standard requiring documentation in the planning of financial statements of the basis for assessing control risk at the maximum level for assertions related to material account balances, transaction classes, and disclosure components of financial statements when such assertions are significantly dependent on computerized information systems. The Advisory Council on Government Auditing Standards recommended this new standard as a way of tightening the rigor applied to an audit of the financial statements when computerized information systems are used for significant accounting applications. Prior to the implementation of this standard, auditors were not required to document their assessment of control risk at maximum; only if the assessment was below maximum was support to be included in the working papers. This new standard, Amendment No. 1, became effective for financial statement audits of periods ending on or after September 30, 1999.

Amendment No. 2 adds a fieldwork standard and amends a report standard for financial statement audits. The purpose is the improvement of auditor communication concerning the auditor's work on compliance with laws and regulations and internal control over financial reporting. In the report, the auditor is to emphasize the importance of the reports on compliance with laws and regulations and internal control over financial reporting when these reports are issued separately from the report on financial statements. This amendment is effective for financial statements audits of periods ending on or after January 1, 2000.

The review of government auditing standards continued in progress as of mid-2000. The General Accounting Office staff monitors the effectiveness of the guidance provided to auditors. Review of audits that are alleged to be defective in some respects leads to an assessment of the adequacy of guidance. Furthermore, changes in standards and statements issued by the Auditing Standards Board, changes in the structure of organizations, and the need to more sharply focus auditor responsibility lead to reconsideration of audit guidance.

Audits of financial status and of programs provided by various government agencies are critical to assuring accountability and adequate management. Those audits are reported publicly. The quality of the audits as well as of the reporting is related to the adequacy of the generally accepted government auditing standards.

(SEE ALSO: *Auditing*; *United States General Accounting Office*)

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BERNARD H. NEWMAN
MARY ELLEN OLIVERIO

GOVERNMENT FINANCIAL REPORTING

Government financial reporting is the process whereby governments report their financial position and activities to the public at large. These reports are the standard that citizens, oversight bodies, and other stakeholders use to judge their government's efficiency, effectiveness, and overall financial condition. This article examines government financial reporting from a historical perspective, and today; it also looks at contemporary issues and possible future trends.

HISTORY

Government financial reporting evolved through the twentieth century. The National Committee on Municipal Accounting (NCMA) was established in 1934 by the Government Finance Officers Association (GFOA) and began to promulgate formal standards. It issued the first "blue book" in 1936, Bulletin No. Six, *Municipal Accounting Statements* (GFOA, 1988). From that point, government financial reporting, along with government accounting and auditing, began to develop into what it is today.

The National Council on Governmental Accounting (NCGA), which succeeded the NCMA, initiated the basic format of the current blue book, which was later officially titled *Governmental Accounting, Auditing and Financial Reporting* (GAAFR). In 1968, generally accepted accounting principles (GAAP) for government were established in GAAFR (GFOA, 1988). Government accountants and financial managers use the blue book to this day as a reference for current standards and practices in government financial reporting.

In the past, some confusion existed concerning who set the standards that constituted GAAP for governments. This issue became prominent when the American Institute of Certified Public Accountants (AICPA) issued an industry audit guide in 1974 that, while endorsing most, modified some principles set forth by the NCGA (GFOA, 1988). The AICPA later recognized NCGA Statement No. One, *Governmental Accounting and Financial Reporting Principles.* Even after this statement was recognized, questions still arose. Conflicts with the standards set by the NCGA generally were associated with pronouncements issued by the Financial Accounting Standards Board (FASB). These conflicts were not resolved until the Government Accounting Standards Board (GASB) was established in 1984 (GFOA, 1988). From then on, the GASB was clearly established as the primary authority for setting government standards.

The GASB was created as a five-member board under the Financial Accounting Foundation (FAF). In addition to the GASB, the FAF also established the Governmental Accounting Standards Advisory Council (GASAC) to advise the GASB of its members' views and those of the organizations they represent. The GASAC assists the FAF in approving appointments of GASB members.

FINANCIAL REPORTING TODAY

Generally, government financial reporting is the process of communicating information concerning a government's financial position and activities. Financial information is often dispersed through financial reports. Government financial

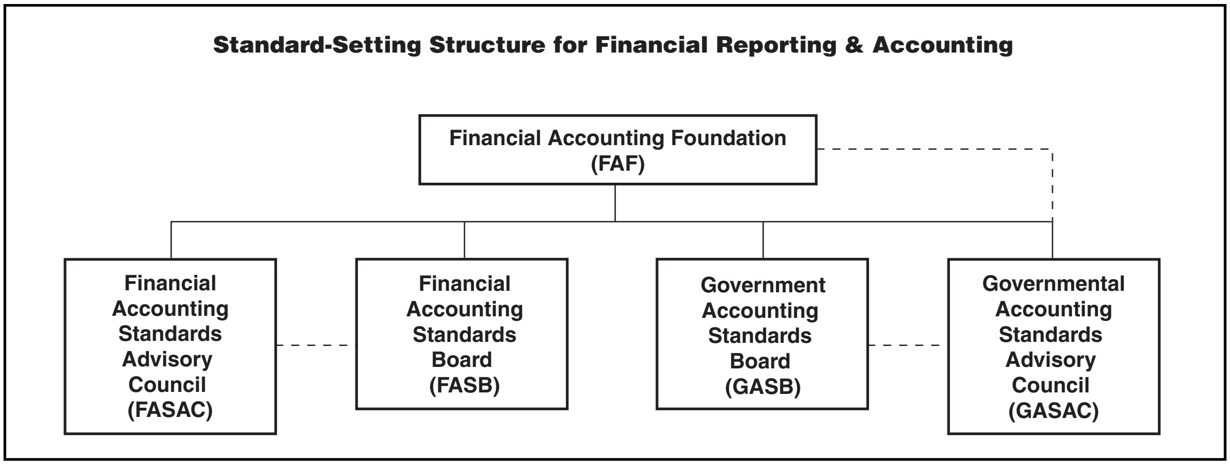
Standard-Setting Structure for Financial Reporting & Accounting
Financial Accounting Foundation (FAF)
Financial Accounting Standards Advisory Council (FASAC)
Financial Accounting Standards Board (FASB)
Government Accounting Standards Board (GASB)
Governmental Accounting Standards Advisory Council (GASAC)

Table 1

reports have several uses: They can be used to compare actual financial results against the legally adopted budget; assess financial condition and results of operations; assist in determining compliance with finance-related laws, rules, and regulations; and assist in evaluating efficiency and effectiveness (GFOA, 1988). Although government financial reports cannot meet the needs of every user, they can be used in a myriad of ways to assess accountability and make effective decisions.

The GASB has the responsibility of establishing and improving financial reporting standards at the state and local government levels. Three primary user categories of government financial reports exist: citizens, legislative and oversight bodies, and investors and creditors (GFOA, 1988). The executive branch and subordinate bureaus/agencies are not identified as primary users because they have the ability to obtain this information from other sources (GFOA, 1988).

At the federal level, financial reporting wasn't required until 1996. The Chief Financial Officers (CFO) Act of 1990 was the initial legislative element requiring the federal government to provide reliable, audited financial information to taxpayers, elected officials, appointed officials, and other stakeholders. Consequently, the Federal Accounting Standards Advisory Board (FASAB) was established in October of 1990 to consider and recommend accounting principles for the federal government. The CFP Act of 1990 was expanded in 1994 and required the federal government's twenty-four major agencies to provide annual financial statements beginning with those for fiscal year 1996.

Although various internal and supplemental financial reports exist, the most common is the comprehensive annual financial report (CAFR). The GASB's 1987 *Codification of Governmental Accounting and Financial Reporting Standards* states that "every government should prepare and publish as a matter of public record, a comprehensive annual financial report" (section 2200.101) The CAFR normally contains three distinct sections: introductory, financial, and statistical. These sections can be supplemented with other specialized sections as necessary.

Government financial reporting should assist in fulfilling government's duty to be publicly accountable by providing users of these reports with the means to evaluate the operating results of a government and assess the level of service(s) it provides. It is imperative that these reports be reliable, understandable, relevant, and timely in order to enable informed citizens, legislators, and other stakeholders to hold government fiscally accountable.

CONTEMPORARY ISSUES/THE FUTURE

There seems to be a current trend toward fiscal discipline in government that has generated a demand for better information on which to base decisions. Consequently, state and local governments must change their financial reporting from basic stewardship reports on the various government funds to a more corporate-style report that offers analysis of the long-term impact of financial management decisions (Klasney and Williams, 2000). Currently, from annual financial reports, state and local governments focus on the individual "funds" of government. These reports can be difficult for readers of financial statements to understand because the number of funds can run into the dozens or hundreds. As a result of GASB Statement No. Thirty-Four, financial reports must begin to include comprehensive information about the cost of providing government services and show all of a government's liabilities and assets, including infrastructure (Allen, 1999). This new approach calls for governmentwide reporting, enhanced fund reporting, and management's discussion and analysis (MD&A).

The concept of governmentwide reporting is the most dramatic change in the new approach. This is a significant move because, until now, government followed only the modified-accrual basis of accounting. The change is important to potential lenders and taxpayers because of the need to capitalize and depreciate general capital assets or infrastructure (Klasney and Williams, 2000). Information concerning infrastructure will include the cost and anticipated life of roads, bridges, sewer and water systems and other capital assets. Since state and local governments invest $1 out of every $10 dollars ($140 billion to $150 billion annually) in the construction, improvement, and rehabilitation of capital assets, that information should be very interesting to local taxpayers (Allen, 1999).

The elements of fund reporting have not changed much. Fund categories will continue to apply their current measurement focus and basis of accounting; however, reporting fund types (such as special revenue and capital projects) is no longer required for governmental funds in the basic financial statements. The new approach will also establish two new fund types—permanent funds (governmental) and private-purpose trust funds (fiduciary). Governments must provide a summary reconciliation to the governmentwide financial statements at the bottom of fund financial statements or in a separate schedule. This will be an extensive undertaking for government funds because of the difference in the measurement focus and basis of accounting (Klasney and Williams, 2000). In addition to governmentwide reporting and enhanced fund reporting, each government entity's financial management will now present an MD&A as required supplementary information before the basic financial statements. In response to users' demand for a summary of a government's operations and financial situation, the GASB expanded the number of issues that the MD&A must address. They include the following:

- An objective discussion of the basic financial statements and condensed financial information comparing current and prior years
- An analysis of the overall financial position and results of operations
- An analysis of balances and transactions of individual funds
- An analysis of significant variations between the original and final budget and the final budget and actual results for the general fund
- A description of significant capital asset and long-term debt activity during the year
- Known facts, decisions or conditions expected to have a significant impact on financial position or results of operations (Klasney and Williams, 2000).

The implementation of this new approach to government financial reporting will be challenging at best. Some governments will find themselves gathering information they haven't tracked before and, in some cases, reconstructing information as far back as twenty-five years (GASB, 1999). This is precisely why the GASB established a phased implementation plan based on each government's total revenues (Klasney & Williams, 2000). Implementation will begin on June 30, 2002, for the largest governments (at least $100 million in revenues), with one additional year for medium-sized governments ($10 million to $100 million), and two additional years for smaller governments (less than $10 million) (Allen, 1999; GASB, 1999). Although implementation may be rigorous, this new method is essential for enabling decisionmakers to overcome the challenges of a new, global society.

SUMMARY

The process of government financial reporting evolved during the twentieth century. The blue book, or GAAFR, was established and continues as the primary reference for government financial reporting standards at the state and local levels. The Government Accounting Standards Board (GASB) was established in 1984 and is the authority for setting those standards. The Federal Accounting Standards Advisory Board (FASAB) was established in 1990 and prescribes financial reporting standards at the federal level. Citizens and other stakeholders use government financial reports to assess a government's performance and overall financial position in order to hold that government accountable for its actions. The most common type of government financial report is the comprehensive annual financial report (CAFR). A current trend toward fiscal discipline is the driving force behind many contemporary issues. Chief among these issues is the GASB requirement that all state and local government financial reports begin to include information concerning capital assets and debts. This changes the essence of government financial reports from basic fund stewardship to comprehensive, corporate-style reporting.

(SEE ALSO: *Government Accounting*; *Government Accounting Standards Board*; *Government Auditing Standards*)

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ROBERT J. MURETTA, JR.

GOVERNMENT ROLE IN BUSINESS

Government regulation at the federal and state levels has a major impact on how businesses operate in the United States. In order to manage business activities in a complex society and to help respond to changing societal needs, governments at all levels have created numerous regulatory agencies. Although the duties and functions of each agency vary, all influence the day-to-day business activities that take place within the United States. Businesses that take a proactive stance toward understanding and complying with federal regulatory agencies will minimize their chance of fines, prosecution, or other regulatory action. Therefore, it is in the best interest of businesses to maintain healthy relationships with regulatory agencies at all levels of government. Among the business activities regulated by government are competitive practices, industry-specific activities, general issues of concern, and monetary regulations.

COMPETITIVE PRACTICES

A number of laws have been passed to protect competitive practices. Among these laws are the Sherman Antitrust Act of 1890, the Federal Trade Commission Act of 1914, and the Wheeler-Lea Act of 1938.

Sherman Antitrust Act of 1890. One of the earliest pieces of legislation that had a critical effect on the business sector was the Sherman Antitrust Act of 1890, passed by Congress in response to public outrage over a few large companies that were forcing their smaller competitors out of business and becoming monopolies. Since there was no competition, consumers were left with higher prices and usually a lower-quality product. The act had two main sections attempting to prevent the formation of monopolies. Specifically, section one maintained that forming a trust or a conspiracy resulting in the restraint of trade was illegal. Section two provided that persons monopolizing or attempting to monopolize trade were guilty of a misdemeanor. Basically, the federal government was (and is) looking for companies engaging in price fixing, in dividing up the market share among different companies to control the market, or in other business practices that may create a monopoly.

The Justice Department is the federal agency responsible for enforcing the act. By prosecuting individuals and companies violating provisions of the law, imposing fines and jail time, or calling for injunctions, the Justice Department prevents monopolies from forming. The act also allows injured parties, usually other businesses, to file suit and get relief from the federal courts for infractions of the law. The Justice Department also reviews almost every large merger or acquisition that affects the U.S. marketplace. If the Justice Department opposes a proposed merger, companies involved in the transaction can try to work out an agreement to allay the government's concerns or oppose the Justice Department in federal court, asking a judge to rule on the merits of the case. Most companies planning a merger or takeover normally have their legal departments conduct exhaustive research in order to answer potential questions from the Justice Department. The primary reason for this research is to avoid a long legal fight with the government that is expensive and can cause significant delays in the proposed merger or takeover.

Federal Trade Commission Act of 1914. The Federal Trade Commission Act of 1914 created the Federal Trade Commission (FTC), which consists of five members with staggered terms of seven years each. Board members are nominated by the president and confirmed or rejected by the Senate. One person serves as the chairperson of the commission and guides the agency's daily operations. The FTC was originally created to enforce the provisions of the Sherman Antitrust and Clayton Acts. The FTC has the power to investigate unfair competitive practices on its own. Firms may also petition the FTC to investigate alleged unfair competitive practices of which it might otherwise be unaware. The agency can hold public hearings to investigate the alleged infractions, and it may also issue cease-and-desist orders when it believes unfair competitive business practices are being used. Since the enforcement powers of the FTC and Justice Department overlap, the two agencies often work together to solve problems.

Wheeler-Lea Act of 1938. Congress responded to public complaints about improper and deceptive advertising by passing the Wheeler-Lea Act of 1938, which empowered the FTC to investigate businesses that engage in deceptive business activities or companies that use misleading or less than truthful advertising to entice consumers into their stores. A common deceptive practice that some companies have used in the past is called "bait and switch." This practice refers to advertising a product at an extremely low price to draw customers into a store but in reality having very little or none of the product available. Store employees then attempt to sell customers a more expensive product. This is but one example of what the FTC may investigate.

INDUSTRY-SPECIFIC FEDERAL AGENCIES

Federal legislation has created agencies to monitor and regulate particular industries because of concern over industry-specific practices, among them the Interstate Commerce Commission, the Federal Communications Commission, and the Food and Drug Administration.

Interstate Commerce Commission (ICC). In 1887, Congress passed legislation creating the Interstate Commerce Commission. Originally, only railroads were regulated, but as modern transportation methods developed, other transportation modes were added to its list of responsibilities. The primary purpose of the ICC was to monitor railroad companies (prices charged) that may have had a monopoly in some parts of the country. The commission could take corrective action, such as price modification, if it found that a railroad or other interstate business was engaging in monopolistic business activities and charging high prices for its services. Since this act applied to a limited number of industries, Congress later passed the Sherman Antitrust Act of 1890 (discussed earlier) to provide a much broader coverage of monopolies regardless of industry.

Federal Communications Commission (FCC). The FCC monitors and regulates CB radio, radio, telegraph, telephone, and television operations. It has broad powers to set acceptable standards for television regarding language, nudity, violence, or other material that may be perceived as inappropriate by the general public. For example, television shows that are adult-oriented or contain violence are typically on late in the evening so that children are less likely to see them. In addition, television shows often warn viewers about their content through a rating system; since the rating is displayed on the screen, viewers can make an informed decision before watching a particular program.

The FCC also has the power to fine broadcast companies that use inappropriate language in their programming. Since most television and radio stations know what are considered acceptable standards, fines are rarely issued. When fines are issued, however, a television or radio station may take the FTC to federal court to appeal the decision. Broadcast companies that fight the FCC over a show's content normally argue that the First Amendment gives them the right to broadcast the contested material.

Food and Drug Administration (FDA). The FDA is responsible for ensuring the safety of cosmetics, drugs, and food. One of the most important functions of the agency is new drug approval. The FDA requires pharmaceutical companies to provide detailed scientific data regarding new drugs prior to approval. Specifically, the FDA will review the potential benefits and negative side effects of all proposed drugs. The agency reviews the information submitted by the pharmaceutical company and may also conduct its own tests if additional study is deemed needed. The FDA is extremely important to the business community because if it rejects a new drug, the pharmaceutical company developing it cannot sell it. FDA regulators must balance the interests of the general public with those of the pharmaceutical company. The FDA does not endorse new drugs; rather, it approves them, stating that they are thought to be safe.

GENERAL FEDERAL REGULATORY AGENCIES

Federal legislation has also created agencies addressing a broad range of issues, including the Equal Employment Opportunity Commission, the Occupational Safety and Health Administration, the Environmental Protection Agency, and the Consumer Product Safety Commission.

Equal Employment Opportunity Commission (EEOC). The Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, creed, sex, or national origin. This law applies to almost every private company, nonprofit organization, and government employer, although some exceptions were granted to religious corporations, Indian tribes, and private-membership clubs. The Civil Rights Act also created the Equal Employment Opportunity Commission.

The original purpose of the EEOC was to monitor and enforce the provisions of the Civil Rights Act. Its powers were enhanced in 1972 with passage of the Equal Employment Act, which gave the EEOC the power to file civil lawsuits in federal court and to represent a person filing a grievance. Prior to filing the suit in federal court, the EEOC must first try to settle the case out of court with the alleged offending company—an attempt to promote a more conciliatory approach to solving discrimination problems and to reduce the number of court cases. The company could agree, for example, to settle the complaint by paying a fine, ordering remedial steps to prevent further discrimination, and/or working out the problem for the original complainant. In large cases, the EEOC may work with the Civil Rights Division of the Justice Department in order to settle the problem.

Occupational Safety and Health Administration (OSHA). Enacted in 1970, the Occupational Safety and Health Administration, was designed to ensure safe and healthy working conditions in nearly every environment. OSHA's basic premise is that employers must provide a work environment that is safe and free from hazards that may cause harm or death to their employees. In addition, employers are obligated to follow occupational safety and health standards that are ordered by the secretary of labor (OSHA falls under this department). Employers are given written guidelines so they know specific OSHA rules and regulations.

In order to verify that organizations are complying with these regulations, OSHA can conduct surprise inspections. Technically, employers can ask OSHA to show a search warrant before the search is executed, but this is not normally done because OSHA can get a warrant relatively quickly. OSHA investigators may inspect the building, but an employer has the right to have a representative accompany the regulators during the tour. The investigators review accident records and other documents to verify that compliance has been maintained. OSHA investigators also observe employees to verify that guidelines set by the agency are followed (e.g., wearing eye protection). If OSHA investigators believe that violations have occurred, they can issue citations against the employer. If the employer agrees to pay a fine, OSHA will normally inspect the building at a later date to ensure compliance. If an employer believes that the fine or other sanction is inappropriate, a court order can be sought seeking relief from the fine or sanction. In rare instances, the secretary of labor may ask for an injunction against an employer. Injunctions are only sought in the most serious cases, such as those in which there is imminent danger to employees.

Environmental Protection Agency (EPA). One of the most pressing issues in the United States is protecting the environment. A combination of pressure from consumer groups, news media, and voters encouraged Congress to pass legislation creating the Environmental Protection Agency in 1972. Prior to the creation of the EPA, no single federal agency had control over environmental issues, resulting in fragmented enforcement and confusing or conflicting codes. The EPA was created to act as the focal point regarding all pollution issues (air, noise, water, etc.).

In recent years, Congress has passed several laws addressing a host of environmental issues (e.g., noise, pesticide, radiation, and water pollution). When Congress passes a new law regarding the environment, it is the EPA's job to enforce its provisions with the powers contained in the legislation. One example of the EPA's power is that it can set acceptable air-quality standards for a state. If air-quality standards are not met within a specified frame of time, fines or other punitive measures may be imposed on the offending state.

Consumer Product Safety Commission (CPSC). Another powerful federal agency was created in 1972 under the Consumer Product Safety Act. The law created the Consumer Product Safety Commission, which was intended to protect consumers from defective and dangerous products. In addition, Congress also wanted to unify the majority of laws regarding product safety (except food, automobiles, and other products already regulated by federal agencies) so that they would be effective and clear. The CPSC is very powerful; it can ban products without a court hearing if they are deemed dangerous and can order recalls, product redesigns, and the inspection of production plants. In more severe cases, the CPSC may also charge officers, managers, and/or supervisors with criminal offenses.

FEDERAL MONETARY REGULATORY AGENCIES

Several federal agencies have been established to monitor monetary practices in the United States, including the Securities and Exchange Commission, the Federal Reserve Board, and the Federal Deposit Insurance Corporation.

Securities and Exchange Commission (SEC). The SEC was established to regulate the securities industries in the United States. A quasi-regulatory and judicial agency, the SEC regulates publicly traded stock-offering companies by requiring them to issue annual and other financial reports. In addition, the SEC regulates the stock market, brokers who sell securities, and large investment firms. The SEC also looks for insider trading, such as trading on secret knowledge about a company, other white-collar crime that may affect a company's stock price, and securities fraud by stockbrokers. The agency can initiate civil or criminal action against the individual or firms charged with securities violations. Depending on the circumstances, the penalties levied by the SEC can be severe, with large fines and long jail terms being the norm. The SEC normally works closely with the Justice Department when criminal prosecution is involved. As always, the SEC's actions can be appealed to the federal courts if the individual or firm believes the charges are inaccurate or unjust.

Federal Reserve Board As the United States grew, the nation's banking system became more complex and subject to greater fluctuations without government regulation. The United States experienced an acute money panic in 1907 that put a severe strain on the banking system. As a result of the financial panic, a National Monetary Commission was established by Congress to study how the United States could protect the banking system and, in turn, the money supply. National Monetary Commission recommendations were implemented by Congress in 1913 when the Federal Reserve Act was passed and the Federal Reserve Board was established. The primary purpose of the Federal Reserve Board is to function as a semi-independent board designed to protect the banking system in the United States.

Federal Reserve Board activities are guided by a board of governors. The board has seven members, all of whom are nominated by the president and confirmed or rejected by the Senate. Each member is appointed to a fourteen-year term, with vacancies occurring about every two years. To be nominated to the Federal Reserve Board, an individual must possess excellent academic credentials, be an established leader in the financial world, and have achieved an impeccable business reputation. In order to separate the Board from political influences and to ensure that all decisions are based on economic rather than political issues, Board members are appointed and will likely serve through several presidential administrations. The Board is headed by the chairperson, who is considered to be the most powerful banker in the world. As such, the chairperson directs the overall mission of the Board and consults regularly with the president, secretary of the treasury, banking executives, stock market representatives, and top banking regulators from other countries to coordinate financial policy.

Federal Deposit Insurance Corporation (FDIC). Created after the Great Depression of the 1930s, the FDIC insures each account up to $100,000 in the event of a bank failure. In return for this protection, participating banks, credit unions, and other financial institutions must pay premiums, which the FDIC uses to build up funds for any future bailouts.

SUMMARY

Government regulations and agencies at all levels of government have had a major impact on how businesses operate. In order to manage business activities in a complex, ever-changing society, governments at all levels have created numerous regulatory agencies through the legislative process. Although the duties and function of agencies vary, all influence day-to-day business practices. Frequently regulated business activities include competitive practices, industry specific activities, general issues of concern, and monetary regulations.

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ALLEN D. TRUELL
MICHAEL MILBIER

GROSS DOMESTIC PRODUCT (GDP)

Led by the auto industry, the United States economy grew rapidly in the 1920s, generating more jobs, more income, and more free time that the American consumer had in order to spend. As long as people were employed, paying for goods and services, there was really no need to measure how the economy was doing. However, in the 1930s, the American economy went bust and a frustrated Congress asked if there was any way to measure the depth of the Great Depression.

On January 4, 1934, economist Simon Kuznets, professor at the University of Pennsylvania, sent to the Senate a report entitled "National Income: 1929-1932," the first accounting of U.S. productivity, essentially the gross national product (GNP). More than 4500 copies of this report were sold in just eight months. The basic concept that Kuznet had was to limit this accounting measurement to the marketplace, and thus to the amount that consumers paid for goods and services. Until 1992, the term *GNP* was used to refer to the total dollar value of all finished goods and services produced for consumption in society during a particular period of time (usually one year). In 1992 the Commerce Department began to compute gross domestic product (GDP) instead of GNP. The differences between the two are slight and involve how to count earning of assets owned by foreigners. GNP counts the earnings in the homeland of the owner of the asset, while GDP counts the earnings of a manufacturer in the country in which the assets exists. For the United States, there is virtually no difference between the two measures.

There are three basic components that determine the U.S. GDP:

1. Consumption, the amount that consumers pay for goods (durable and nondurable).
2. Investment, the amount of money spent on new production facilities, that is, plants and facilities.
3. Services, the amount that consumers pay for the services they use.

Several things were not included in GNP and subsequently in GDP:

- Work that is provided in an economy by nonmarket transactions such as homemakers and military personnel. These factors were too difficult for Kuznets and his team to measure.
- Illegal activities such as gambling and drug trafficing. These factors are also difficult to estimate; in addition Kuznets excluded them from GNP because he deemed them a "disservice" to the economy.
- Goods and services that are bartered. These were excluded because they cannot be measured.
- Sale of intermediate goods (raw materials).
- Sale of used goods (used cars, furniture, etc.).
- Purely financial transactions such as sale of stocks and bonds.
- Imports (goods made outside the United States).

The GDP is the ultimate benchmark that measures the expansion and contraction of the U.S. multitrillion dollar national economy. It covers everything that is produced and sold in the marketplace. Bankers, investment brokers, and government officials use the GDP to determine such things as interest rates, investment opportunities, and tax rates. The GDP is not the only measure of output, however; economists use GDP because it is the most comprehensive of

Product and Prices

	Year 1		Year 2	
Goods	**Output**	**Prices**	**Output**	**Prices**
Balls	10 balls	$50 per ball	10 balls	$55 per ball
Bats	10 bats	$25 per bat	12 bats	$25 per bat
Gloves	10 gloves	$25 per glove	9 gloves	$30 per glove

Table 1

output measures. This measure is important because it helps societies understand both inflation and employment.

In the flow of payments in the economy, *where* does one measure? Consider, for example, an automobile. The mining operator receives an income from the sale of iron ore, the mill owner receives income from the sale of finished steel, and the automobile manufacturer receives income from the sale of the finished car. In order to avoid the inaccuracy of counting the same money three times, Kuznets decided to use only final sales; thus the amount paid to the dealer for the car is the only amount used in calculating GDP. The labor cost of the workers at all three locations is added to GDP. In essence, the price of the automobile includes the cost of the materials purchased from suppliers. The value added to manufacture the automobile can be found by deducting the cost of one product from the total cost of the automobile.

The more goods and services a country produces, the healthier that country's economy becomes. There is a major flaw in measuring economic success, however, in that when GDP (production) increases, negative externalities (air and water pollution) also increase. The environment becomes degraded and negatively affects the quality of life. GDP measures goods and services traded, but the negative externalities are not included in this counting; however, these negative externalities increase GDP. For example, when the automobile industry wants to produce more cars, the smoke that is emitted from the smokestacks includes carcinogens that may make people in the area sick. A person who gets sick from the emitted smoke may go to the doctor. The doctor may prescribe medication. The cost of the visit to the doctor and the cost of the medication are added to the total value of GDP.

Table 1 contains output and price statistics for a simple economy that produces only three goods. In the first year, the value of output, or GDP, is $1000; in the second year, the GDP is $1120. These numbers are obtained by multiplying quantities by prices and then summing the resulting values. They give us current dollar or nominal GDP, that is, the value of output measured in prices that existed when the output was produced.

GDP has risen by 12 percent from the first year to the second, but this increase is only partially due to additional output ($1120 − $1000 = $120). Part of the increase is due to changes in prices. To get a measure that contains only the increase in output, we can multiply the outputs of the second year by the prices of the first year. When we add up these values, they total $1025. This number implies that if only the quantities of output had changed and not the prices, GDP would have increased only from $1000 to $1025, a rise of only 2.5 percent. This $1025 is real GDP.

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GREGORY P. VALENTINE

H

HARDWARE

The concept of inventing hardware to assist in commercial productivity is not new. For example, thousands of years ago the Chinese sought greater efficiency in calculating numbers, leading to the invention of the abacus, a hand-held mechanical device. Another hardware milestone was reached when Charles Babbage, in 1822, proposed a machine that would calculate mathematical tables; much of his design was used in later computers (Long and Long, 1999). Herman Hollerith designed a method to store numbers onto punched cards in order to calculate the 1890 census, and the company he founded eventually became IBM Corporation (Long and Long, 1999).

THE COMPUTER ERA BEGINS

The first electronic computer, the ENIAC, was developed at the University of Pennsylvania in 1946. It used vacuum tubes and weighed thirty tons. Remington Rand Corporation produced the first commercial computer, the Univac, in 1951, which also used transistors (Long and Long, 1999). Transistors replaced vacuum tubes, were far smaller, and used less power than tubes. Transistors were shortly thereafter replaced by integrated circuits, which further minimized size and lessened power requirements. The availability of integrated circuits made the first personal computer possible in 1977 when Stephen Jobs and Steve Wozniak introduced the "Apple II" (Long and Long, 1999). IBM offered their first microcomputer in 1981, and Apple's Macintosh was introduced in 1984. The Macintosh was the first popular computer with a graphical user interface (GUI), and it also had a laser printer that could combine text and pictures (Long and Long, 1999). A GUI operating system receives input from both the keyboard and a pointing device (mouse). This type of system was a boon to computer users who were not proficient or comfortable with keyboarding, and today most personal computers require the use of a mouse.

CLASSIFICATIONS AND DEFINITIONS OF COMPUTERS

There are three main classifications of computers: mainframe, minicomputer, and microcomputer. The major categories can only be used as general guidelines because of the huge variety in product lines. Computer "servers" have also been included in this discussion because of their important role in networking and Internet applications.

A mainframe computer is any large computer system, such as that used by the Internal Revenue Service. Another typical use of a mainframe computer would be for an airline ticketing system, which can have thousands of users connected to one computer. The next smaller-sized computer is termed a minicomputer. It is of medium scale and can serve up to several hundred users. The microcomputer is the smallest in size

Steve Jobs (left) and Steve Wozniak (right).

and power, and the term is "generally synonymous with personal computer, such as a Windows PC or Macintosh, but it can refer to any kind of small computer" (CMP Net Online Encylopedia). Microcomputers can also be portable, and some have Pentium processors, fourteen-inch color screens, and multi-gigabyte hard drives. Very small computers include hand-held units and pen computers that store information the user enters with a stylus rather than a keyboard (Hutchinson and Sawyer, 1998).

A "server" computer is one that is used to connect a cluster of personal computers through using a local area network (LAN). World Wide Web pages are also stored on a "Webserver," which is typically a dedicated personal computer.

COMPUTER COMPONENTS

Central Processing Unit (CPU) The CPU is at the heart of all computers. All data passes through it. According to the *CMP Net Online Encyclopedia:*

> *[The CPU is] the computing part of the computer. Also called the processor, it is made up of the control unit and ALU. Today, the CPUs of almost all computers are contained on a single chip. The CPU, clock and main memory make up a computer. A complete computer system requires the addition of control units, input, output and storage devices and an operating system.*

Micro, or personal, computers use microprocessors that run at approximately 500 megahertz per second. Mainframe computers measure their speed in millions of instructions per second.

Random Access Memory Random access memory (RAM) consists of microchips that allow for the temporary storage of data. RAM functions as the workspace for the CPU. The "workspace" temporarily holds the program and the active calculation before deriving an outcome. One example would be using a word processor's spelling check tool on a document. The words being checked and the program would be temporarily stored in RAM.

Input Devices Computers receive information from a variety of sources. The most common input device is a keyboard, but the pointing device (mouse or trackball) is equally important with today's GUI interface. Other input devices include video cameras, scanners, microphones, digital cameras, CD-ROMs, and voice commands that operate the computer.

Output Devices The computer monitor is an output device that is changing rapidly. For several decades computer screens only displayed letters or numbers onto a green or amber screen. As computers began using GUIs, the display device took on greater significance. The success of Apple's Macintosh computer with the graphical user interface caused Microsoft to come out with their GUI, called the Windows Operating System. Thus, all current operating systems use GUI and color for both print and images.

The standard monitor for many years has been a cathode-ray tube (CRT). CRT monitors are still very common, and they are capable of high-quality pictures. However, they are inherently bulky and relatively heavy. Portable computers became possible only when smaller and lighter-weight and display units became available. Current portable or laptop computers use LCD (liquid crystal display) panels, which are flat. LCD panels are now also being used for desktop monitors. LCD units cost about three times what comparable CRT units do, but they occupy far less space and have a very bright picture.

Computer projectors are commonly used to display data or information onto a large screen. This setup can be used to demonstrate programs, provide visuals for training, or show Web sites to large groups of people. Many businesspeople travel with both a portable computer and a computer projector to visually display information for training or to aid in sales.

The GUI and the general popularity of computers have caused significant changes in the hardware available for printing. The earliest printers were essentially automatic typewriters and had little flexibility. Today, there are a wide variety of printers currently available that are capable of nearly professional-quality output.

Laser printers, which first became available in the early 1980s, had an inherent advantage over earlier computer printers; that is, the laser beam could place tiny ink dots anywhere on the page. In practice, this means that laser printers can print fonts of any size or typeface. Further, they can print text in any direction and also print pictures. Current laser printers print at a very crisp 1200 dots per square inch and are considered to be very reliable. Color laser printers are also available, though they are much slower and also more expensive than black-and-white printers.

Ink-jet printers essentially spray ink onto the paper. They are normally very quiet, are relatively inexpensive, and have high-quality output. Further, all the newest ink-jet printers offer reasonably high-quality color printing. Both the increased use of the Internet to download color pictures and the prevalence of digital cameras have significantly increased the popularity of color ink-jet printers.

Connection Devices Partially because of the popularity of the Internet, more and more computers of all kinds have some means of connecting to other computers. For desktop computers in schools and businesses, a network interface card (NIC) is frequently used. Portable computers and home desktop units typically use a modem as a connection device. Modems connect a personal or portable computer to dial-up networks through a regular telephone line. This connectivity has served as a boon to telecommuting and changed the way work is performed in organizations. Modems and NICs can serve as both input and output devices, depending on whether the computer is receiving or sending information.

Sound Cards and Speakers Today, any multimedia computer contains a device to reproduce sound. Typically this means that computers have a sound card that contains a mini-amplifier and connects to speakers. Sounds can also come from programs, from the Internet, and from participants in desktop teleconferences. A sound card can also function as an input device when it utilizes a microphone.

Storage Devices The number and size of storage devices are increasing. Floppy disks are portable, but they can store only a relatively small amount of information compared to the newest storage units, Zip® disks, which are also portable and small. A Zip® disk has about a hundred times the storage capacity of a floppy disk. Hard drives are internal storage devices that hold the computer's operating system, the application software, and other files.

A LOOK TO THE FUTURE

Computers have become a critical component of the workplace, home, and school. As we look toward the future, some trends are emerging based on the past few decades of hardware development. It is highly probable that computer hardware will become even smaller, lighter in weight, more portable, and less expensive. Keyboards may even become obsolete as voice-activation equipment becomes more sophisticated. It is also likely that there will be a greater degree of connectivity within and between systems on a global basis, as well as between home to work.

There is an increasing emphasis in elementary and secondary schools on the use of technology to access information and change the way students learn. We will see new generations of students entering the work force with surprisingly sophisticated computer skills and, perhaps, less fear of new hardware and change in general. The foreseeable future holds the promise of more and more integration of work and home by means of computers.

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ARMAND SEGUIN
CYNTHIA SHELTON SEGUIN

HAWTHORNE STUDIES

(SEE: *Motivation*)

HEALTH ISSUES IN BUSINESS

Health issues in business are as critical today as they were in the mid-twentieth century. Many of the injuries and illnesses have changed but their impact is no less dramatic. The increased use of computers and job specialization have contributed to a new generation of occupational hazards, especially repetitive motion injuries, also known as cumulative trauma disorders. These are injuries caused by repetitive hand, arm, or finger motions that cause tendons to swell and become progressively more painful. In advanced cases, workers lose the strength in their thumb and fingers and eventually become unable to complete simple tasks, such as lifting a baby or tying their shoes. Cumulative trauma disorders were the most common type of illness reported in 1997, accounting for 64 percent of the 430,000 cases of illness reported (Herington and Morse, 1995).

Every five seconds a worker is injured on the job, and every ten seconds a worker is temporarily or permanently disabled. The estimated cost for injuries alone is $121 billion annually (Herington and Morse, 1995). This cost includes lost productivity and wages, administrative expenses, and health care. In reality, these costs may be much higher. It is virtually impossible to pinpoint exact costs due to the lack of accurate statistics on workplace injury and illness. There is no comprehensive, integrated national system for collecting data on occupational injury, illness, and fatalities. Another factor contributing to inconsistent data is the reluctance of many companies to report incidents for fear of being targeted by the Occupational Safety and Health Administration for on-site inspections.

FEDERAL AGENCIES

There are two federal agencies designed to operate in the occupational health and safety arena: the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH). Both were created by the same act in Congress in 1970; however, each has a very distinct purpose. OSHA, which is part of the Department of Labor, is responsible for developing and enforcing rules and regulations in regards to workplace health and safety. NIOSH, which is part of the Department of Health and Human Services, is a research agency, identifying the causes of work-related disability and injury as well as potential hazards of new technology and practices.

During the 1990s, OSHA was criticized for being an agency of red tape that had lost sight of its original mission "to assure as far as possible every working man and woman in the nation safe and healthful working conditions." Historically, OSHA agents have been compensated for the number of violations they have found at job sites.

This has created an environment in which citations are given for all violations regardless of how small, causing employers to fear OSHA rather than seek its help with health and safety issues. Until recently, OSHA has not promoted partnerships with companies to solve health- and safety-related issues in the workplace. This did begin to change under the Clinton administration. OSHA now offers companies a choice between a partnership or a traditional enforcement relationship. The companies who choose to go into partnership with OSHA work with the agency to develop health and safety programs. OSHA recognizes the companies that truly commit to the new partnership by reducing or eliminating workplace hazards through a more lenient inspection policy, priority assistance, and reductions in penalties up to 100 percent. By involving both the companies and the workers, a more collaborative relationship has developed that has initiated better workplace practices and solutions to health and safety issues. OSHA has also committed to focus on the greatest hazards and most dangerous workplaces and to update confusing rules and regulations.

The National Institute of Occupational Health and Safety, whose primary role is research, has developed the National Occupational Research Agenda (NORA), which identifies the top twenty-one health and safety research areas on which to focus its work through 2009 (see Table 1). The agenda was developed in collaboration with numerous stakeholders, including employers, employees, and labor organizations. Research areas were chosen based on the greatest needs and the areas most likely to produce the greatest overall gains to workers and industry as a whole. NIOSH is not able to tackle all of these alone. It must be a collaborative effort with the entire health and safety community.

LEGISLATION

Two acts passed in recent years have had a significant impact on people who have experienced an occupational illness or sickness. The first is the Americans with Disability Act, passed in July 1990. This act, which applies to employers with more than fifteen employees, prohibits discrimination against people with disabilities. Under this act, an employee is entitled to certain rights regarding employment upon returning from disability leave and proving the ability to perform the essential functions of the job. The employer is required to provide "reasonable accommodation" when necessary, that is, to change work schedules, adjust equipment, or modify tasks to enable the employee to continue to perform the job held prior to taking the disability leave. Reasonable accommodation is required except when the employer can prove that it would cause undue hardship on its part. Another option is to transfer the worker to another position within the company.

The second act is the Family Medical Leave Act (FMLA), which was enacted in August 1993 and applies to employers with fifty or more employees. Employees who have worked for employers in this category longer than one year are entitled to take up to twelve weeks of unpaid leave annually for certain medical or family situations, including suffering from a serious health condition themselves. The FMLA requires employers to guarantee employees who take a leave the right to return to an equivalent job, that is, the pay, benefits, and other terms and conditions of employment must be equivalent. This provides employees who are temporarily disabled with job security.

THE ROLE OF WORKERS' COMPENSATION LAWS

The original purpose of workers' compensation laws was to protect employers as well as employees in cases of occupational injury or illness. Employers were protected from lawsuits initiated by employees seeking restitution for workplace illness or injury, and employees were compensated for the cost of medical care in addition to lost wages. Today, most private employers are required to have workers' compensation insurance, with the exception of employers in New Jersey, South Carolina, and Texas.

Workers' compensation insurance is no-fault. In other words, regardless of who is at fault (the

The National Occupational Research Agenda

Category	Priority Research Areas
Disease and Injury	Allergic and Irritant Dermatitis Asthma and Chronic Obstructive Pulmonary Disease Fertility and Pregnancy Abnormalities Hearing Loss Infectious Diseases Low Back Disorders Musculoskeletal disorders of the Upper Extremities Traumatic Injuries
Work Environment and Workforce	Emerging Technologies Indoor Environment Mixed Exposures Organization of Work Special Populations at Risk
Research Tools and Approaches	Cancer Research Methods Control Technology and Personal Protective Equipment Exposure Assessment Methods Health Services Research Intervention Effectiveness Research Risk Assessment Methods Social and Economic Consequences of Workplace Illness and Injury Surveillance Research Methods

Table 1

worker, employer, or neither), the employer is responsible for compensating the worker for health care and lost wages. The employee's responsibility is to notify the employer as soon as an injury or illness occurs. Today, workers' compensation issues have become extremely complex because what is considered a compensable illness or injury (warranting restitution by the employer) varies considerably from state to state. The most liberal state is California, where any disease alleged to be aggravated by work-related stress could be compensable. This liberal approach can distort statistical data and also discourage employers from reducing workplace hazards. It also makes it extremely difficult to control the costs of workers' compensation insurance.

PREVENTION

Employers play a vital role in the prevention of workplace injuries and illnesses. They are responsible for evaluating workplace injuries to discover possible causes and for developing prevention strategies for those injuries. Other employer responsibilities include safety and hazard training, drug testing, workstation evaluations, and enforcement of the use of protective equipment. Employers have an array of resources from which to draw when analyzing workplace hazards and developing health and safety programs. These include industrial hygienists, certified safety professionals, federal and state OSHA programs, and NIOSH.

Ergonomics also plays a significant role in the prevention of workplace injuries and illness. Ergonomics is the science of designing and arranging tools and equipment to fit workers. The overall goal is to prevent workplace illness and injuries that result from poor workstation design or improperly designed equipment. Workstation evaluations are an example of an ergonomic program that many large companies employ. During this evaluation, a health and safety professional evaluates a worker performing daily tasks at his or her workstation. The health and safety professional observes the worker in order to evaluate the "fit" of the workspace, furniture, and equipment to the worker. In the case of a worker who spends the majority of the day at a computer, the professional would look at several factors to determine the degree to which the workstation fits. These factors include the height and position of the computer screen and keyboard in reference to the worker's body posture, the height and position of the worker's chair, and the types of movements the worker makes while performing tasks. From this evaluation, changes may be made to alleviate discomfort and prevent harmful injuries. Early intervention is the key to preventing potentially disabling injuries. In addition to the evaluation, the health and safety professional gives the worker advice on how to sit, how to position hands on the keyboard, and how often to take breaks.

There are no comprehensive ergonomic standards in force in the United States today. In February 1999, OSHA proposed its first draft of ergonomics standards. Proponents believe it will help control the large numbers of musculoskeletal disorders (disorders involving both muscle and skeleton, such as back pain and neck strain). These disorders account for 34 percent of all lost workday injuries and illnesses and cost $15 billion to $20 billion dollars annually in workers' compensation costs, according to the Bureau of Labor Statistics. Business groups object to the federally imposed standards, saying that the standards will be a "blank check" for OSHA inspectors and will require all American businesses to become full-time experts in ergonomics. In addition, the U.S. Chamber of Commerce points out that there are presently (1) no scientifically established standards for what is "overuse" and (2) no existing studies that demonstrate the connection between ergonomic adjustments and injury prevention. While the connection does seem to make sense, it must be admitted that more studies need to be done before meaningful standards can be established.

A final critical element in the prevention of workplace injuries and illnesses is the development of health and safety programs designed to train and educate workers on workplace hazards. OSHA recommends the following elements for a comprehensive health and safety program:

- Management leadership and commitment
- Meaningful employee participation
- Systematic hazard identification and control
- Employee and supervisor training
- Medical management and program evaluation

In conclusion, the prevention of occupational injuries and illnesses is a collaborative effort involving employers, employees, federal and state agencies and health and safety professionals. The field of occupational safety and health is extremely broad and complex.

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Brenda J. Reinsborough

HUMAN RELATIONS

Owners and managers of profit and nonprofit organizations define human relations as fitting people into work situations so as to motivate them to work together harmoniously. The process of fitting together should achieve higher levels of productivity for the organization, while also bringing employees economic, psychological, and social satisfaction. Human relations covers all types of interactions among people—their conflicts, cooperative efforts, and group relationships. It is the study of why our beliefs, attitudes and behaviors sometimes cause interpersonal conflict in our personal lives and in work-related situations.

One of the most significant developments in recent years has been the increased importance of interpersonal skills in almost every type of work setting. For many employers, interpersonal skills represent an important category of transferable skills a worker is expected to bring to the job. Technical ability only is usually not enough to achieve career success. Studies indicate that many people who have difficulty in obtaining or holding a job possess the needed technical competence but lack interpersonal competence.

HUMAN RELATIONS MOVEMENT

Problems in human relations are not new—cooperative efforts carry the potential for conflicts among people. It is only within the past few decades that management has recognized that human relations can have considerable impact on organizational productivity. During this period, the human relations movement has matured into a distinct and important field of study.

Although it is difficult to pinpoint exactly when the human relations movement began, most researchers agree that the earliest developments emerged in the mid-1800s. In the beginning, the focus was mainly on improving efficiency, motivation, and productivity. But over time, this research became more involved with redefining the nature of work and perceiving workers as complex human beings.

Prior to the Industrial Revolution, most work was performed by individual craftworkers. Generally, each worker saw a project through from start to finish. Skills such as tailoring, carpentry, or shoemaking took a long time to perfect and were often a source of pride to an individual. Under this system, however, output was limited.

The Industrial Revolution had a profound impact on the nature of work and the role of the worker. Previously, an individual tailor could make only a few items of clothing in a certain time period; factories could make hundreds. Employers began to think of labor as another item in the manufacturing equation, along with raw materials and capital.

Employers at that time did not realize how workers' needs affected productivity. As a result, few owners or managers gave much thought to working conditions, safety precautions, or worker motivation. Hours were long and pay was low.

Around the turn of the century, Frederick Taylor and other researchers interested in industrial problems introduced the concept of scientific management. They believed that productivity could be improved by breaking down a job into isolated, specialized tasks and assigning each of those tasks to specific workers. The development of scientific management coincided with the revolutionary concept of mass production. Eventually it paved the way for the assembly line.

Taylor's work was sharply criticized by those who believed it exploited workers. Employees were treated as a commodity, as interchangeable as the parts they produced. Taylor thought that by increasing production, the company would end up with a larger financial pie for everyone to share. Management would earn higher bonuses; workers would take home more pay. He did not foresee that his theories would be applied in ways that dehumanized the workplace.

In the late 1920s, Elton Mayo and other researchers from Harvard University initiated what have become known as the Hawthorne Studies at the Hawthorne plant of Western Electric Company near Chicago. The purpose of the investigation was to explore the relationship between changes in physical working conditions and employee productivity. Specifically, Mayo was interested in the effect of different intensities of light on employee output. In one experiment, ample light was provided to a group of six female workers. Later, the amount of light was significantly reduced; but instead of productivity decreasing, as was expected, it actually increased.

The researchers attributed the phenomenon to what has since become known as the Hawthorne effect—employees who participate in scientific studies may become more productive because of the attention they receive from the researchers. This discovery became important in the human relations movement because it has been interpreted to mean that when employees feel important and recognized, they exhibit greater motivation to excel in their work activities.

HUMAN RELATIONS AS A FIELD OF STUDY

Human relations is an interdisciplinary field because the study of human behavior in organizational settings draws on the fields of communications, management, psychology, and sociology. It is an important field of study because all workers engage in human relations activities. Several trends have given new importance to human relations due to the changing workplace.

The labor market has become a place of constant change due to the heavy volume of mergers, buyouts, a labor shortage, closings, and changing markets. These changes have been accompanied by layoffs and the elimination of product lines. Even those industries noted for job security have recently engaged in layoffs. As the United States attempts to cope with rapid technological change and new competition from international companies, there is every reason to believe that we will see more volatility in the labor force. Interpersonal skills will be even more critical in the future.

Organizations are developing an increasing orientation toward service to clients. Relationships are becoming more important than physical products. Restaurants, hospitals, banks, public utilities, colleges, airlines, and retail stores all must now gain and retain patronage. In any service firm, there are thousands of critical incidents in which customers come into contact with the organization and form their impressions of its quality and service. Employees must not only be able to get along with customers; they must also project a favorable image of the organization they represent.

Most organizations recognize improved quality is the key to survival. The notion of quality as a competitive tool has been around for many years, but today it is receiving much more attention. In a period of fierce competition, a consumer may not tolerate poor quality. Human beings are at the heart of the quality movement because workers are given the power and responsibility to improve quality.

Companies are organizing their workers into teams in which each employee plays an important role. If team members cannot work together, the goals of the organization will suffer. In some cases, workers are cross-trained so they can do the work of others, if necessary.

The demographics of the workplace are also changing. Diversity is more and more typical. In the years ahead, a large majority of those entering the work force will be women and minorities. Passage of the American with Disabilities Act in 1990 opened the employment door to more people with physical or mental impairments. And in the future, we will see increased employment of the population over age sixty-five. Within this heterogeneous work force, we will find a variety of values and work habits. Supervisors will need to become skilled at managing diversity.

The leaders in today's work force need different skills to be successful. The current generation of workers is better educated and better informed, and it also has higher expectations. They seek jobs that give not only a sense of accomplishment but also a sense of purpose. They want jobs that provide meaningful work. Today's managers must therefore shift from manager as order-giver to manager as facilitator. They must also learn how to assume the roles of teacher, mentor, and resource person.

Few lines of work will be immune from these trends. Today's employee must be flexible and adaptable in order to achieve success within a climate of change. It is important for everyone to develop those interpersonal skills that are valued by all employers.

UNDERSTANDING HUMAN BEHAVIOR

Mental perceptions are influenced by everything that has passed through an individual's mind. That includes all of a person's experiences, knowledge, biases, emotions, values, and attitudes. No two people have identical perceptions because no two people have precisely the same experiences.

Mental perceptions may sometimes lead to conflict. Each person has formed mental perceptions relating to a number of controversial issues. For example, most workers have an opinion on abortion and capital punishment, among other issues. When proponents and opponents clash in voicing mental perceptions of controversial issues, conflict occurs. If the issue is one pertinent to the workplace, such as affirmative action, human values have the potential to lead to problems.

Ethics also play a role in interpersonal conflict. Ethics refer to moral rules or values governing the conduct of a person or group. Perhaps more than anything else, an individual's adherence to values related to what is morally right determines the respect that others hold for that person. Lack of respect for one individual by another is likely to lead to poor human relations between the two.

The social dimension of behavior is determined by a person's personality, attitudes, needs, and wants. An individual's personality is the totality of complex characteristics, including behavior and emotional tendencies, personal and social traits, self-concept, and social skills. The objective of many training sessions for employees and supervisors is to improve a person's ability to get along with others. A person's personality has a major impact on human relations skills.

People reveal their attitudes through their personality. An attitude is a mental position one possesses with regard to a fact, issue, or belief. Attitudes that often present problems in the workplace are those that concern biased and prejudiced viewpoints. Generally, employees who possess positive attitudes and who are open-minded are judged to have more desirable personalities than those with negative attitudes who hold biased viewpoints.

COMMUNICATION

Perhaps the single most important aspect of designing any work environment is the plan that links all workers and supervisors with multiple channels of communication. Good communication may be cited as the most important component of sound human relations. Despite the recognition of the importance of communication, it presents one of the most difficult and perplexing problems faced in modern organizations.

Even in small organizations, where only a few people are involved, sound communication is difficult to establish. When an organization expands in numbers, as well as in diversity among its members, the establishment of communication channels becomes even more difficult. Good communication is essential for the smooth functioning of any organization. Managers need clear lines of communication to transmit orders and policies, build cooperation, and unify groups. Employees must be able to convey their concerns or suggestions and feel that management has heard them. Clear communication among coworkers is vital to good teamwork, problem solving, and conflict management. In short, effective human relations is founded on good communication.

When people in organizations want to send messages, conduct meetings, or communicate person to person, they have many options. With increased use of voice mail, e-mail, fax machines, and videoconferencing, it is a wonder people have time to read all the incoming information, let alone interpret and respond to it.

Costly communication breakdowns are a prime factor in organizational problems ranging from high employee turnover to low productivity. Poor communication also takes a toll in employee injuries and deaths, particularly in industries where workers operate heavy equipment or handle hazardous materials.

Although some communication breakdowns are inevitable, many can be avoided. Employees who are treated with respect, are empowered to think for themselves, and feel a sense of loyalty are more apt to communicate openly with other workers and leaders throughout the organization.

TYPES OF RELATIONSHIPS

Human relations occurs on several levels. Individuals interact in a variety of settings—as peers, subordinates, and supervisors. No matter what the setting, relationships are built. All types of groups exist in an organization. Formal groups are officially designated, while informal groups are formed unofficially by the members themselves. Some would argue the informal groups have more power. In either situation, important human relationships are taking place.

Employees relate to their work group, other formal groups, and informal groups. The norms set by a group can greatly influence a person's behavior. Dress and language are two examples. Considering the number of groups in today's complex organizations, the influence is unlimited.

The organization provides an opportunity for individual satisfaction. To achieve such satisfaction, and to continue as a successful member in the organization, the individual must comply with organizational policies, procedures, and rules. The organization requires certain behaviors from its employees. The rewards for such behaviors are demonstrated in the form of raises, promotions, and continued employment. When the organization promotes an employee, it is relating to the individual.

Today's complex organizations depend on dividing the work among many formalized groups. Informal groups will also emerge, either positively or negatively affecting organizational outcomes. The relationship between organizations and groups must also be considered when quotas or standards are established. The acceptance or rejection of such standards illustrates the interaction between the organization and the group.

One also has a relationship to one's self. Are you happy with yourself? Are you happy with your relationships with others? With the organization? With your future? If not, perhaps you should analyze your relationship with yourself.

Managers and supervisors achieve results through people. Therefore, today's complex organizations require managers and supervisors to display a concern for people. The successful leader creates an effective balance between people and productivity, and recognizes human relations as the key ingredient transforming organizational plans into organizational results. Although it is often misunderstood, effective human relations will lead to success.

Human relations is not limited to supervisors—it applies to every employee in an organization. Statistics indicate that successful people competently practice interpersonal skills, while the incompetent are left behind. Fortunately, these skills can be developed.

Good relationships must be built among individuals and within groups of an organization. Although this is not an easy task, success without good human relations in not possible. Every individual must be prepared to meet the challenge.

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PATRICK J. HIGHLAND

HUMAN RESOURCE MANAGEMENT

Humans are an organization's greatest assets; without them, everyday business functions such as managing cash flow, making business transactions, communicating through all forms of media, and dealing with customers could not be completed. Humans and the potential they possess drive an organization. Today's organizations are continuously changing. Organizational change impacts not only the business but also its employees. In order to maximize organizational effectiveness, human potential—individuals' capabilities, time, and talents—must be managed. Human resource management works to ensure that employees are able to meet the organization's goals.

"Human resource management is responsible for how people are treated in organizations. It is responsible for bringing people into the organization, helping them perform their work, compensating them for their labors, and solving problems that arise" (Cherrington, 1995, p. 5). There are seven management functions of a human resources (HR) department that will be specifically addressed: staffing, performance appraisals, compensation and benefits, training and development, employee and labor relations, safety and health, and human resource research.

Generally, in small organizations—those with fewer than a hundred employees—there may not be an HR department, and so a line manager will be responsible for the functions of HRM. In large organizations—those with a hundred employees or more—a human resource manager will coordinate the HRM duties and report directly to the chief executive officer (CEO). HRM staff in larger organizations may include *human resource generalists* and *human resource specialists.* As the name implies, an HR generalist is routinely involved with all seven HRM functions, while the HR specialist focuses attention on only one of the seven responsibilities.

Prior to discussing the seven functions, it is necessary to understand the job analysis. An essential component of any HR unit, no matter the size, is the *job analysis*, which is completed to determine activities, skills, and knowledge required of an employee for a specific job. Job analyses are "performed on three occasions: (1) when the organization is first started, (2) when a new job is created, and (3) when a job is changed as a result of new methods, new procedures, or new technology" (Cherrington, 1995).

Jobs can be analyzed through the use of questionnaires, observations, interviews, employee recordings, or a combination of any of these methods. Two important tools used in defining the job are (1) a *job description*, which identifies the job, provides a listing of responsibilities and duties unique to the job, gives performance standards, and specifies necessary machines and equipment; and (2) the *job specification*, which states the minimum amount of education and experience needed for performing the job (Mondy and Noe, 1996).

STAFFING

Both the job description and the job specification are useful tools for the staffing process, the first of the seven HR functions to be discussed. Someone (e.g., a department manager) or some event (e.g., an employee's leaving) within the organization usually determines a need to hire a new employee. In large organizations, an *employee requisition* must be submitted to the HR department that specifies the job title, the department, and the date the employee is needed. From there, the job description can be referenced for specific job-related qualifications to provide more detail when advertising the position—either internally, externally, or both (Mondy and Noe, 1996).

Not only must the HR department attract qualified applicants through job postings or other forms of advertising, but it also assists in screening candidates' resumes and bringing those with the proper qualifications in for an interview. The final say in selecting the candidate will probably be the line manager's, assuming all Equal Employment Opportunity Commission (EEOC) requirements are met. Other ongoing staffing responsibilities involve planning for new or changing positions and reviewing current job analyses and job descriptions to make sure they accurately reflect the current position.

PERFORMANCE APPRAISALS

Once a talented individual is brought into an organization, another function of HRM comes into play—creating an environment that will motivate and reward exemplary performance. One way to assess performance is through a formal review on a periodic basis, generally annually, known as a *performance appraisal* or *performance evaluation.* Because line managers are in daily contact with the employees and can best measure performance, they are usually the ones who conduct the appraisals. Other evaluators of the employee's performance can include subordinates, peers, group, and self, or a combination of one or more (Mondy and Noe, 1996).

Just as there can be different performance evaluators, depending on the job, several appraisal systems can be used. Some of the popular appraisal methods include (1) ranking of all employees in a group; (2) using rating scales to define above-average, average, and below-average performance; (3) recording favorable and unfavorable performance, known as critical incidents; and (4) managing by objectives, or MBO (Mondy and Noe, 1996).

Cherrington (1995) illustrates how performance appraisals serve several purposes, including: (1) guiding human resource actions such as hiring, firing, and promoting; (2) rewarding employees through bonuses, promotions, and so on; (3) providing feedback and noting areas of improvement; (4) identifying training and development needs in order to improve the individual's performance on the job; and (5) providing job-related data useful in human resource planning.

COMPENSATION AND BENEFITS

Compensation (payment in the form of hourly wages or annual salaries) and *benefits* (insurance, pensions, vacation, modified workweek, sick days, stock options, etc.) can be a catch-22 because an employee's performance can be influenced by compensation and benefits, and vice versa. In the ideal situation, employees feel they are paid what they are worth, are rewarded with sufficient benefits, and receive some intrinsic satisfaction (good work environment, interesting work, etc.). Compensation should be legal and ethical, adequate, motivating, fair and equitable, cost-effective, and able to provide employment security (Cherrington, 1995).

TRAINING AND DEVELOPMENT

Performance appraisals not only assist in determining compensation and benefits, but they are also instrumental in identifying ways to help individuals improve their current positions and prepare for future opportunities. As the structure of organizations continues to change—through downsizing or expansion—the need for training and development programs continues to grow. Improving or obtaining new skills is part of another area of HRM, known as training and development.

"*Training* focuses on learning the skills, knowledge, and attitudes required to initially perform a job or task or to improve upon the performance of a current job or task, while *development* activities are not job related, but concentrate on broadening the employee's horizons" (Nadler and Wiggs, 1986, p. 5). *Education*, which focuses on learning new skills, knowledge, and attitudes to be used in future work, also deserves mention (Nadler and Wiggs, 1986).

Because the focus is on the current job, only training and development will be discussed. Training can be used in a variety of ways, including (1) orienting and informing employees, (2) developing desired skills, (3) preventing accidents through safety training, (4) supplying professional and technical education, and (5) providing supervisory training and executive education (Cherrington, 1995).

Each of the training methods mentioned has benefits to the individual as well as to the organization. Some of the benefits are reducing the learning time for new hires, teaching employees how to use new or updated technology, decreasing the number and cost of accidents because employees know how to operate a machine properly, providing better customer service, improving quality and quantity of productivity, and obtaining management involvement in the training process (Cherrington, 1995). When managers go through the training, they are showing others that they are taking the goals of training seriously and are committed to the importance of human resource development.

The type of training depends on the material to be learned, the length of time learners have, and the financial resources available. One type is instructor-led training, which generally allows participants to see a demonstration and to work with the product first-hand. On-the-job training and apprenticeships let participants acquire new skills as they continue to perform various aspects of the job. Computer-based training (CBT) provides learners at various geographic locations access to material to be learned at convenient times and locations. Simulation exercises give participants a chance to learn outcomes of choices in a nonthreatening environment before applying the concept to real situations.

Training focuses on the current job, while development concentrates on providing activities to help employees expand their current knowledge and to allow for growth. Types of development opportunities include mentoring, career counseling, management and supervisory development, and job training (Cherrington, 1995).

EMPLOYEE AND LABOR RELATIONS

Just as human resource developers make sure employees have proper training, there are groups of employees organized as unions to address and resolve employment-related issues. Unions have been around since the time of the American Revolution (Mondy and Noe, 1996). Those who join unions usually do so for one or both of two reasons— to increase wages and/or to eliminate unfair conditions. Some of the outcomes of union involvement include better medical plans, extended vacation time, and increased wages (Cherrington, 1995).

Today, unions remain a controversial topic. Under the provisions of the Taft-Hartley Act, the *closed-shop arrangement* states employees (outside the construction industry) are not required to join a union when they are hired. *Union-shop* arrangements permit employers to hire nonunion workers contingent upon their joining the union once they are hired. The Taft-Hartley Act gives employers the right to file unfair labor practice complaints against the union and to express their views concerning unions (Cherrington, 1995).

Not only do HR managers deal with union organizations, but they are also responsible for resolving collective bargaining issues—namely, the contract. The contract defines employment-related issues such as compensation and benefits, working conditions, job security, discipline procedures, individuals' rights, management's rights, and contract length. Collective bargaining involves management and the union trying to resolve any issues peacefully—before the union finds it necessary to strike or picket and/or management decides to institute a lockout (Cherrington, 1995).

SAFETY AND HEALTH

Not only must an organization see to it that employees' rights are not violated, but it must also provide a safe and healthy working environment. Mondy and Noe (1996) define *safety* as "protecting employees from injuries caused by work-related accidents" and *health* as keeping "employees free from physical or emotional illness" (p. 432). In order to prevent injury or illness, the Occupational Safety and Health Administration (OSHA) was created in 1970. Through workplace inspections, citations and penalties, and on-site consultations, OSHA seeks to enhance safety and health and to decrease accidents, which lead to decreased productivity and increased operating costs (Cherrington, 1995).

Health problems recognized in the workplace can include the effects of smoking, alcohol and drug/substance abuse, AIDS, stress, and burnout. Through employee assistance programs (EAPs), employees with emotional difficulties are given "the same consideration and assistance" as those employees with physical illnesses (Mondy and Noe, 1996, p. 455).

HUMAN RESOURCE RESEARCH

In addition to recognizing workplace hazards, organizations are responsible for tracking safety- and health-related issues and reporting those statistics to the appropriate sources. The human resources department seems to be the storehouse for maintaining the history of the organization—everything from studying a department's high turnover or knowing the number of people presently employed, to generating statistics on the percentages of women, minorities, and other demographic characteristics. Data for the research can be gathered from a number of sources, including surveys/questionnaires, observations, interviews, and case studies (Cherrington, 1995). This research better enables organizations to predict cyclical trends and to properly recruit and select employees.

CONCLUSION

Research is part of all the other six functions of human resource management. With the number of organizations participating in some form of international business, the need for HRM research will only continue to grow. Therefore, it is important for human resource professionals to be up to date on the latest trends in staffing, performance appraisals, compensation and benefits, training and development, employee and labor relations, and safety and health issues—both in the United States and in the global market.

One professional organization that provides statistics to human resource managers is the Society for Human Resource Management (SHRM), the largest professional organization for human resource management professionals. Much of the research conducted within organizations is sent to SHRM to be used for compiling international statistics.

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CHRISTINE JAHN

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VOLUME 2

BURTON S. KALISKI,
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I

IDEA SELLING

(SEE: *Advertising*)

IMPORTS

(SEE: *International Trade*)

IMPULSE ITEMS

(SEE: *Shopping*)

INCOME

By working and being productive, households earn an income and businesses make a profit. The total amount that households and businesses receive *before* taxes and other expenses are deducted is called aggregate income. The amount of money that is left *after* taxes and other expenses have been deducted from one's pay is called disposable income. Discretionary income is what consumers (households) have to pay for the goods and services they desire. We shall focus only on households and how they consume their income. Households spend most of their discretionary income on consumption. Some consumers spend even more than their current discretionary income on consumption by borrowing. Consumption consists of almost everything that consumers purchase, from durable to nondurable goods as well as all types of services. The only exception to this rule is the purchase of a new home: It is counted as an investment because homes tend to appreciate in value.

Households (individuals) cannot spend all their earnings on consumer goods and services. Part of the income each household receives must be used to pay different kinds of taxes, such as income taxes to federal, state, and local governments. Most state and local governments also impose sales taxes. In addition to paying income and sales taxes, households may also have to pay property taxes to local governments. After paying taxes and spending income on consumables, some households put aside money as savings to be used for consumption at a later time.

Earnings differ among individuals and households because of several factors: (1) inborn differences, (2) human-capital differences, (3) work and job performance, (4) discrimination, (5) age, (6) labor mobility, (7) government programs and policies, and (8) luck.

> *Inborn differences* are those characteristics that one is blessed with, such as strength, energy, stamina, mental capacity, natural ability, and motivation.
>
> *Human-capital differences* reflect how people invest various amounts of both their physical and mental capacities toward the achievement of specific goals.

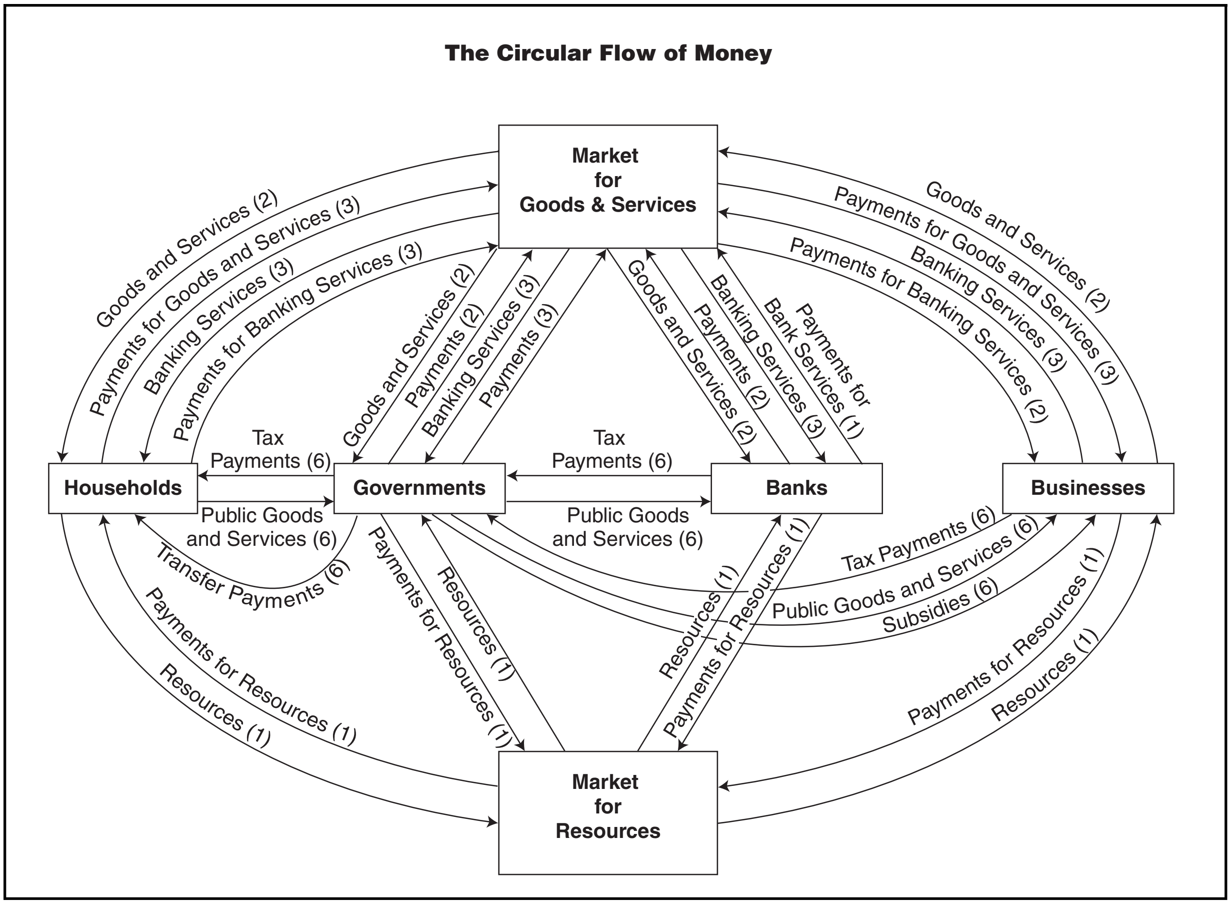
The Circular Flow of Money
Market for Goods & Services
Households
Governments
Banks
Businesses
Market for Resources
Goods and Services (2)
Payments for Goods and Services (3)
Banking Services (3)
Payments for Banking Services (3)
Goods and Services (2)
Payments (2)
Banking Services (3)
Payments (3)
Goods and Services (2)
Payments (2)
Banking Services (3)
Payments for Bank Services (1)
Goods and Services (2)
Payments for Goods and Services (3)
Banking Services (3)
Payments for Banking Services (2)
Tax Payments (6)
Public Goods and Services (6)
Tax Payments (6)
Public Goods and Services (6)
Transfer Payments (6)
Tax Payments (6)
Public Goods and Services (6)
Subsidies (6)
Payments for Resources (1)
Resources (1)
Payments for Resources (1)
Resources (1)
Resources (1)
Payments for Resources (1)
Payments for Resources (1)
Resources (1)

Figure 1

SOURCE: Federal Reserve Bank of St. Louis, Missouri, Council on Economic Education. *The Money Tree.* University of Missouri-St. Louis: June 1989.

Work and job performance indicates how individuals differ in their preferences regarding the trade-off between work and leisure. Those who wish to work more usually receive a higher income; others prefer more leisure at the cost of earning a lower income. People also prefer different types of jobs. These specific job choices will affect the distribution of income.

Discrimination is treating people differently solely on the basis of factors unrelated to productivity.

Age affects earnings significantly. Most individuals earn little before the age of eighteen. Earnings tend to increase as workers gain experience and their productivity increases.

Labor mobility—the willingness to go where the jobs are or to move wherever the company has a need—enhances an individual's income potential. Immobility limits workers' response to changes in wage rates and can contribute to an unequal distribution of income.

Government policies and programs, such as benefit programs and the progressive income tax, reduce income inequality. The minimum wage may also increase income inequality.

Luck plays a role in determining the distribution of income, but choices are perhaps the most important factor.

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GREGORY P. VALENTINE

INCOME TAX, HISTORY OF

A tax consists of a rate and a base. Because income is the base for the income tax, a central question is: What constitutes income? Different theoretical concepts of income exist in economics, accounting, and taxation. The base of income to which the federal income tax rate structure applies is taxable income as constitutionally and statutorily defined. Thus, the concept of taxable income is grounded in theory and modified by political dynamics and administrative concerns.

From its modern introduction in 1913, the rate structure for the individual income tax has been progressive, meaning that tax rates graduate upward as the base of taxable income increases. Different tax rates apply to ranges of income, called brackets. Over time, the number of brackets and tax rates that apply to them have varied greatly. The tax rate applied to the last dollar of taxable income earned by a taxpayer is called the marginal tax rate. Total income tax as a percentage of total taxable income is the average tax rate, whereas total income tax as a percentage of total economic income is the effective tax rate.

ADOPTION AND EARLY IMPLEMENTATION OF FEDERAL INCOME TAX

Until the Civil War, federal revenues came from relatively low tariff rates imposed on a broad base of imported goods and from excise taxes. However, tariffs and excise taxes could not support escalations in government spending caused by the Civil War. Drawing on the example of the British Parliament's adoption of an income tax in 1799 to help finance the Napoleonic Wars, the U.S. Congress adopted the first federal income tax in 1861 to partially finance the Civil War. Legislators regarded the war-motivated income tax as an indirect tax because neither real nor personal properties were taxed directly. The constitutionality of the tax was not challenged, and it expired in 1872.

A tax collector in his office.

During the post-Civil War years, high tariffs, often established to protect selected industries from foreign competition, and excise taxes were the major sources of revenues. By the early 1890s, tax structure was a political issue, with debate centering on the equity of the tax burden. In

1894, with strong Democratic support, a modest income tax was adopted. The first $4000 of income was exempt from taxation, and the initial tax rate was 2 percent. The prevailing view was that this tax would apply to high-income taxpayers and corporations without extending to the wages and salaries of working people.

In 1895, the U.S. Supreme Court declared the income tax unconstitutional in the case of *Pollock v. Farmers' Loan and Trust Co.* on the basis that it was a direct tax. Article I, Section 9 of the original U.S. Constitution provided that "No capitation, or other direct tax shall be laid, unless in proportion to the census." After the income tax was declared unconstitutional, Democrats began to introduce constitutional amendments to permit it. By the early 1900s, political support had broadened to include progressive Republicans. The Sixteenth Amendment, which legalized an income tax, was submitted to the states in 1909 and ratified in 1913. At this time, roughly 2 percent of American households paid the new tax.

MODIFICATIONS TO FEDERAL INCOME TAX OVER TIME

Various aspects of the federal income tax have changed since its inception.

World War I and Depression Years. During World War I, the Democrats altered the tax by adopting highly progressive rates and structuring the base to consist of the incomes of corporations and upper-income individuals. Additionally, an excess profits tax was imposed. This was a progressive tax on above-normal profits, and it generated most of the new tax revenue raised during World War I. Together the income tax and excess profits tax became an explicit means for the redistribution of income. To administer these taxes, the Bureau of Internal Revenue reorganized along functional lines, expanded in size, and employed such experts as accountants, lawyers, and economists. In 1916, "reporting at the source" was adopted, which required corporations to report salaries, dividends, and wages to the Treasury Department.

When the Republicans took control of the presidency and Congress in 1921, taxes on corporations and upper-income taxpayers were reduced, the excess profits tax was repealed, and the tax rate structure was adjusted to be less progressive. Many preferences were incorporated into tax law in the form of deductions, and the preferential taxation of capital gains was adopted. A capital gain is a gain that results from the sale of a capital asset, such as shares of stock in a corporation. In 1932 under President Hoover and in 1935 and 1937 under President Roosevelt, tax rates increased and the tax base expanded. However, the income tax was not a dominant policy focus during the 1930s, partially because the federal government relied heavily on excise taxes and debt to obtain funds to support government activities.

World War II. The most significant impact of World War II on the individual income tax was to transform it to a mass tax that was broadly based and progressive. In 1941, changes were made to both rates and base. Higher tax rates were adopted and lower exemptions were allowed, thus expanding the base. Higher tax rates were adopted again in 1942. With the inclusion of a surtax, tax rates ranged from 13 percent on the first $2000 of taxable income to 82 percent on taxable income in excess of $200,000. The number of taxpayers increased from 3.9 million in 1939 to 42.6 million in 1945. At the end of the war, 60 percent of households paid the income tax. The efficiency of collection was enhanced by the adoption of payroll withholding in 1943. By 1944, the individual income tax generated about 40 percent of federal revenues.

For corporations, progressive tax rates, also called graduated tax rates, were introduced in 1935, repealed in 1938, and remained flat during World War II. However, wartime corporations were subject to a graduated tax on excess profits, with the maximum rate of 50 percent after an allowance for a substantial credit.

During the World War II years, there was a major shift in the taxing power of the federal government relative to state and local governments. Federal revenues, as a percent of total taxes collected by all levels of government, increased from 16 percent in 1940 to 51 percent in 1950.

With some modifications, the basic structure of the income tax remained in place during the post-World War II years and continues to the present. Individual tax rates were reduced from wartime highs, and the tax base began to narrow with the adoption of exemptions, deductions, and credits. Inflation in the 1960s and 1970s created a condition called "bracket creep." Taxpayers whose monetary incomes were increasing because of inflation, but with no equivalent increase in purchasing power, were pushed into higher tax brackets and thus subject to higher marginal tax rates. Because the corporate rate structure was not progressive, bracket creep did not apply to corporations. Although the corporate and individual income taxes had generated roughly the same revenue in 1950, by 1980, partially as a result of bracket creep, the individual income tax generated four times the revenue of the corporate tax.

After World War II. During the post-World War II years, the tax system was used increasingly as a means of financing. A government may deliver services by direct payment or indirectly by subsidy through a reduction in tax. For example, the deduction for home mortgage interest provides a tax subsidy for investing in housing. The term *tax expenditure* is used to describe subsidies for various purposes achieved by use of exemptions, deductions, and credits. Exempt income is not subject to tax. A deduction reduces the amount of income that is subject to tax, and a credit represents a direct reduction in the amount of tax liability. From 1967 to 1982, tax expenditure increased from 38 percent to 73.5 percent of tax receipts. Tax expenditure provisions complicate the determination of taxable income, the base for the income tax.

The sophisticated study of tax policy, which continues to the present, began on a widespread basis during the post-World War II period. Central questions concerned the impact of tax policy on the amount of investment, the movement of capital, and labor-force participation.

From 1980 until 2000. The 1980s began with the adoption of the Economic Recovery Tax Act (ERTA) during President Reagan's term. A key provision of this act was the indexing of tax rates for inflation to eliminate bracket creep. ERTA provided for significant reductions in tax rates and began to reduce the role of the income tax in the nation's revenue system. During the 1980s, interest in tax reform grew, culminating in passage of the Tax Reform Act of 1986. The goal of this act was to be revenue-neutral, neither increasing nor decreasing revenues. It provided for a reduction in tax rates by expanding the tax base through the elimination of some tax expenditures.

After passage of the 1986 Tax Reform Act, attention shifted to the taxation of capital gains and replacement of the income tax. Beginning in 1987, capital gains and ordinary income were taxed in the same manner. Then preferential treatment was reintroduced for capital gains. Commonly proposed alternatives to the income tax include the value-added tax and national sales taxes, two taxes for which the tax base would be consumption rather than income. Another alternative is the flat tax on income. In theory, with one single tax rate—a flat tax—all taxpayers would pay the same proportion of taxable income in taxes. If the base of taxable income were defined as earned income, taxpayers receiving only interest and dividends would be excluded from the payment of taxes. Currently interest and dividends are subject to a double tax. Corporations pay income tax on the earnings from which dividends and interest are paid, and individuals pay income tax on dividend and interest income that they receive. Most flat tax proposals eliminate double taxation.

ADMINISTRATION OF FEDERAL INCOME TAX

The Internal Revenue Service (IRS), which administers the income tax, is part of the U.S. Department of Treasury. Adapting to changes in technology to achieve the most efficient processing of information is a major challenge for the IRS. For many years the IRS was organized on a geographical basis, but in 1998 it was reorganized into four functional divisions differentiated by type of taxpayer.

For corporate and individual taxpayers that report on a calendar-year basis, annual tax returns are due on or before March 15 and April 15, respectively, following the close of the calendar year. Providing that the tax due is paid, time extensions for filing returns may be obtained. Although the closing dates for the quarters differ, both individuals and corporations are subject to the payment of estimated tax in quarterly installments. Taxpayers who fail to file tax returns or fail to pay taxes are subject to monetary penalties, fines, and possibly prison sentences.

EXTENSION OF INCOME TAX TO THE STATE LEVEL

Wisconsin was the first state to adopt an income tax—in 1911. Massachusetts and New York soon followed by adopting income taxes when faced with problems related to World War I. Most other states adopted the income tax as a response to revenue crises created by the Great Depression. At the state level, definitions of taxable income differ from the federal definition and differ among states. Exemptions, deductions, and rates of taxation vary among states. As of January 2000, Nevada, South Dakota, Washington, and Wyoming did not impose individual or corporate income taxes; Alaska, Florida, New Hampshire, and Texas did not impose an individual income tax; and Michigan did not impose a corporate income tax. Formulas are used to allocate the income of multistate corporations among the states in which they operate.

(SEE ALSO: *Taxation*)

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JEAN E. HARRIS

INDEPENDENCE STANDARDS BOARD

The Independence Standards Board (ISB) was established in May 1997 as a result of discussions between the American Institute of Certified Public Accountants (AICPA) and the U.S. Securities and Exchange Commission (SEC). The various securities laws enacted by Congress and administered by the SEC recognize that the integrity and credibility of the financial reporting process for public companies depends, in large part, on auditors remaining independent from their audit clients. The operating policies of the ISB are designed to permit timely, thorough, and open study of issues involving auditor independence and to encourage broad public participation in the process of establishing and improving independence standards. The mission of the ISB is to establish independence standards applicable to audits of public entities in order to serve the public interest and to protect and promote investors' confidence in the securities markets.

ISB STRUCTURE

The ISB is a board of eight members, supported by an Independence Issues Committee, an executive director, and other support staff. The ISB operates as an independent body, funded by the AICPA SEC Practice Section of its Division of CPA Firms (SECPS). Accordingly, the ISB has authority to make public statements on matters relating to the subject of auditor independence in connection with audits of public entities without clearance from the SECPS or the AICPA board of directors. ISB board members serve on a part-time basis. Four are public members, three are senior partners of SECPS member firms, and one is the president of the AICPA or the president's designee. Public members are supposed to be prominent individuals of high integrity and reputation who understand the importance of investor protection, the U.S. capital markets, and the accounting profession. The appointment of the initial board was made by the SECPS Executive Committee after consultation with the SEC and the president of the AICPA. The terms of the board members are staggered and may be of varied lengths. Following the appointment of the initial board, successor public members will be nominated for three-year terms by the existing public members of the board. New members from SECPS member firms will be nominated for three-year terms by the SECPS Executive Committee subject to the approval of the AICPA's board of directors. The entire board will elect replacement members from those slates of nominees. The board selects its own chairperson from among the four public members.

ROLE OF CHAIR

The chair of the ISB serves a three-year term. The chair has powers and responsibilities relating to the appointment and supervision of personnel at the ISB, the distribution of work among such personnel, and the use and expenditure of funds by the ISB within the budget constraints approved by the ISB. The chair also has the authority to establish and appoint persons to task forces following approval by the ISB and after consultation with the executive director and others. The chair provides the leadership in identifying the pronouncements the ISB will issue, including, if necessary and appropriate, the authority, hierarchy, and exposure process for each pronouncement. All proposed standards will be exposed for public comment for a minimum of thirty days.

ISB STAFF

The ISB has a full-time executive director and, as necessary or appropriate, other full-time professional and administrative staff. The ISB staff fields telephone and other inquiries concerning independence issues in the manner that the board directs and pursuant to policies established by the board. In responding to inquiries, the ISB staff provides informal interpretations or guidance to the inquiring parties. As appropriate, the ISB staff informs the board regarding issues raised in such inquiries that might benefit from more comprehensive consideration by the board and, to the extent delegated or assigned by the board, the Independence Issues Committee (IIC). The ISB and its staff address independence inquiries that arise, and the ISB understands that the SEC will encourage registrants and auditors to look to the ISB and its staff to address such matters. Further, the ISB understands that the SEC staff expects to refer specific independence-related issues that may arise to the ISB. Absent express ratification by the board, ISB staff interpretations will be considered as applying only to the particular parties directly affected by the interpretation, who may rely on such interpretation. The executive director advises and consults with the AICPA, including its Professional Ethics Executive Committee, as appropriate, on independence issues of interest to the AICPA. A public file on all ISB meetings is kept for public reference and inspection for a reasonable period of time consistent with the public interest in the AICPA library.

THE INDEPENDENCE ISSUES COMMITTEE

The Independence Issues Committee (IIC) assists the ISB in establishing independence standards through the timely identification and discussion of emerging independence issues within the framework of existing authoritative literature. The IIC also addresses broader interpretative issues, including those that emerge from inquiries fielded by the ISB staff, and communicates its consensus on such issues to the board. The IIC makes publicly available its consensuses and the rationales or bases for such conclusions.

The IIC is comprised of nine certified public accountants (CPAs), drawn from SECPS member firms that audit SEC registrants, who are knowledgeable about the existing independence literature and are in positions to be aware of emerging practice issues as they develop. The SECPS Executive Committee nominates the nine members of the IIC, in consultation with and subject to the approval of the ISB. The ISB specifies the terms of the IIC members. The ISB names the chair from the nine members of the IIC.

The meetings of the IIC are usually open to the public, but sessions or portions of sessions may be closed to the public if they deal with (1) administrative matters, (2) matters that may cause substantial harm or injury (a rare occurrence), or (3) matters involving or relating to advice of counsel; all such closed sessions must be authorized by the chair or his or her designee, and in no instance can the SEC staff be excluded from these sessions. For the IIC to reach a consensus, at least six IIC members must approve the judgment or determination and no more than two IIC members may oppose it. On reaching a consensus, the IIC will promptly forward the matter to the ISB for ratification. If a majority of the ISB ratifies the consensus, the ISB understands that the SEC will consider such consensus as having substantial authoritative support.

PUBLIC HEARINGS

The ISB may seek information about independence matters by holding a public hearing. The basis for a public hearing generally will be an exposure draft, although the ISB may also determine to hold a public hearing for any other purpose. Each public hearing will be conducted by one or more members of the ISB or IIC, the executive director, or technical staff pursuant to procedures approved by the ISB for such hearing. The ISB will publicly announce its intent to hold a public hearing at least sixty days prior to the hearing, unless a shorter period (but in no event less than thirty days) is considered appropriate by the ISB, in any manner reasonably designed to inform the public.

Any individual or organization may request to be heard at a public hearing, and, to the extent practicable, the ISB will attempt to schedule all those making timely requests. Submission of written comments, a position paper, or an outline of a proposed oral presentation will generally be a condition of being heard. Materials submitted to the ISB in this connection will constitute a part of its public file.

More information is available from Independence Standards Board, 6th floor, 1211 Avenue of the Americas, New York, NY 10036-8775; (212)596-6133 (telephone); (212)596-6137 (fax); or http://www.cpaindependence.org.

(SEE ALSO: *American Institute of Certified Public Accountants*; *Auditing*; *Securities and Exchange Commission*)

C. RICHARD BAKER

INFLATION

(SEE: *Economic Cycles*)

INFLUENCE

(SEE: *Management: Authority and Responsibility*)

INFORMATION PROCESSING

Information processing may be defined as the manipulation of data to produce useful information. Over the past several years, the explosion of sophisticated computer software has dramatically changed the way computer users create documents. When word-processing, spreadsheet, and database software packages first became available to the public in the late 1970s and early 1980s, they were very different. The user interface, menus, and procedures were quite different depending on the program. As the years passed and computer software became more sophisticated, the software programs began to share many common features. Today, computer software not only shares common features, it is extremely compatible—that is, information created in one software package can be shared with that of another.

In today's modern office, computer documents often require that a combination of software packages be used together. For example, it might be necessary to place a spreadsheet in a word-processing document or a spreadsheet graph on one of the slides in a presentation file. This ability to integrate software applications is one of the most useful features of using Microsoft Windows and other software designed to be used in the Windows environment.

Integration simply means the sharing of information among applications. Windows allows the user to use different software packages as if they were parts of a single program. Shelley, Cashman, and Vermaat (2000) explain that integrating these software programs allows the user to move quickly among applications and transfer text and graphics easily. The Windows environment offers three ways that information can be integrated: (1) the clipboard, (2) linking objects, and (3) embedding objects.

THE CLIPBOARD—COPYING, CUTTING, AND PASTING

Software running in the Windows environment makes it very easy to copy and move text from one software application to another. The user can copy or move text, graphics, or other objects from one place to another using the clipboard application. For example, a chart created in Excel could be copied and pasted into a written report created in Word. To complete this procedure successfully, the user must first select the desired text or object. Then the user may choose to copy or cut (move) the selected text from the edit menu. Shortcuts usually exist for these two commands, such as clicking a button on the toolbar. If the user copies the selected text, an exact copy of the original text will be placed on the clipboard. If the user cuts the text, however, the original text will be moved to the clipboard. Text that is placed on the clipboard will stay there until it is pasted somewhere else. To paste the information, the user selects the paste option from the edit menu. It is important to remember that only one object can be stored on the clipboard at a time. When a new object is copied or cut to the clipboard, whatever information was previously there will be removed.

Because multiple software programs (applications) can run at the same time in Windows, the user can place information on the clipboard, open another program, and paste the information in the desired location in the new program. This method is the simplest and most frequently used for sharing information among software applications.

Copying/cutting and pasting among different applications has several advantages. This procedure saves time, eliminates keying errors, and allows the user to tie various applications together as if they were part of a single program.

LINKING INFORMATION BETWEEN PROGRAMS

Some limitations exist in using the clipboard to copy and move information between applications. Once the information has been pasted from the clipboard to the new location, all ties between the original source document and the pasted information cease to exist. The destination document, which contains the pasted information, will not be automatically updated if any changes are made to the original source document. This limitation creates a problem in many of today's fast-paced work environments. For example, many annual reports created in word-processing packages contain financial status information that is produced in a spreadsheet package. If the financial data are changed or updated in any way, the information that was previously pasted into the actual word-processing report would not show those changes.

To rectify many of these situations, Windows has developed Object Linking and Embedding (OLE). The first OLE method, linking, allows the user to share information among applications by creating a connection (or link) between the original source document and the destination document. If the source is altered after an OLE has been established, the destination document will automatically update and show all the changes that have been made. When data are linked between two documents in this way, the data are not actually stored in a destination file. The destination document stores only the information it needs to link back to the original source document. If changes need to be made to the linked information, the changes must be made and saved in the original source application.

Linking is very useful when there is a large group of users who need to view the source data. These users can access the source data and then view the updates if changes are made frequently. To link a selected object that has already been copied to the clipboard, the user must choose the

Paste special option on the edit menu. Within this menu, the user selects the Paste link option.

The user may find several advantages by deciding to link objects. Linking does not waste the computer's memory or storage space because it never duplicates information in two separate locations. Linking allows the user to place objects such as those created in other applications or sound and video clips into word-processing, spreadsheet, and presentation documents that have no other options for performing such procedures.

Linking can also be very beneficial when different users have to share computing tasks. For example, the accounting department might be responsible for the creation of all spreadsheets and graphs within a company. If the accounting department saves the files on the network drive, employees throughout the company can link these spreadsheet and graph files into their necessary applications. If changes need to be made to the original spreadsheet files, the accounting department would be responsible for making these updates. When other users throughout the company open their destination documents that contain the link, the changes can either be automatically updated (called an automatic link) or can be updated when the user requests it (called a manual link). Most Windows software has an Update Now feature that allows a user to decide when to update a link. A lock feature is also widely available in case the user does not want the link to be accidentally updated.

One important point to remember when linking information is that the destination document must always be able to locate the original source document. If a destination file was copied to a floppy disk and taken to another computer, all linked files must also be copied onto the floppy disk in order for the links to be able to find their connections.

EMBEDDING OBJECTS

The second type of OLE process, embedding, is another feature of Windows. When information from one application is embedded into another, the information becomes part of the destination file. Although this process requires the use of more memory, it allows the destination file to be self-supporting. When the embedded object needs to be edited or updated, the user must double-click on the object. This double-clicking opens the source application file inside an editing window. All the necessary menus and features will be available in this window for use in editing the source information. After making the appropriate changes to the embedded object, the user simply clicks outside of the editing window and returns to the destination document. Because the user does not have to keep opening and closing the source application file, a great deal of time is saved. Another advantage of this feature is that the user can make changes in the embedded object and the destination file without touching the original source document and vice versa. In keeping with linking objects, the user must be able to access all source applications in order to make changes in any embedded objects. The user does not, however, need to have access to the original source application in order to print or view the destination document. To embed an object, the user follows the same procedures as for linking an object except that in the Paste special menu the Paste option is selected instead of the Paste Link option.

O'Leary and O'Leary (1996) explain that embedding text or objects is often favored over linking objects in the following situations: (1) The size of the file is not important; (2) users have access to source applications, but not the original source file; and (3) the embedded data is changed only occasionally. For example, if the user intends to use the shared information at a location removed from the source file, it would be necessary to embed the object in order to edit the information. When linking, however, the user must always have access to the source file via a network or an accessible fixed drive.

Unfortunately, not every software program supports OLE features. If a software package supports OLE features, it is called OLE-aware. The first version of OLE was introduced with Windows 3.x; therefore, nearly all software created to run under the Windows environment is OLE-aware.

CONCLUSION

Information processing is a broad concept covering the many aspects of manipulating data to produce useful information. This article has addressed the specific skills of integrating information by using the clipboard, linked objects, and embedded objects. With the increased sophistication of software packages, the concepts and skills used in copying/cutting and pasting to the clipboard, linking objects, and embedding objects are no longer difficult to use. Software integration allows a number of software application packages to be used as if they were a single package, thereby increasing efficiency and productivity within the work environment. Various departments within an organization are able to access files from any desktop and link them to necessary applications. Users are able to save time and eliminate keying errors. As these activities become more commonplace, it may be necessary for computer users within organizations to update their skills in these areas.

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J. D. Thomerson
Donnie McGahee
Mary Alice Griffin

INFORMATION PROCESSING: AN HISTORICAL PERSPECTIVE

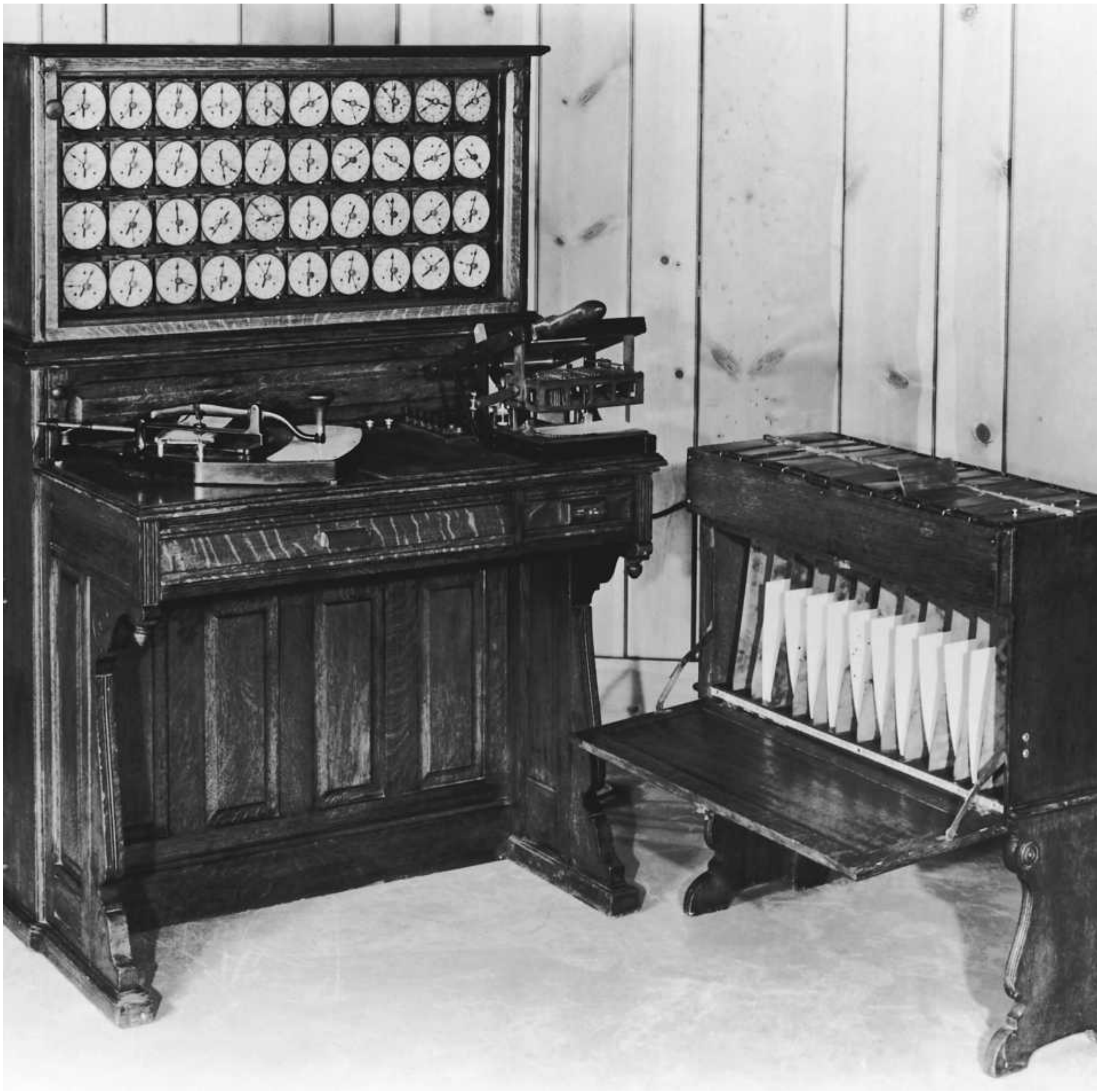
Throughout history humanity has tried to invent new ways to simplify the problem-solving process. With each generation, people have used various tools and methods to help them process information. Information is defined as letters, symbols, or numbers that are used to express an idea.

The history of information processing goes back five thousand years to the abacus, one of the earliest known counting devices. This first reported calculator or processor was developed in ancient Egypt and in the Far East during the thirteenth century. The abacus consisted of wires strung across a rectangular frame. The frame divides each wire into two sections: The one on the top contains two beads, and the one on the bottom contains five beads. Each top bead represents the quantity 5; each bottom bead represents the quantity 1. Each wire represents a place: units, tens, hundreds, and so on. Computations were done by moving the correct number of beads up to the top of the frame.

The invention of logarithms by John Napier was a landmark in the history of mathematics, enabling people to multiply or divide large numbers quickly and accurately. As a product of logarithms, Napier invented a tool, nicknamed "Napier's Bones," that was used to multiply, divide, and extract square and cube roots.

In 1642 a French philosopher and mathematician, Blaise Pascal, invented the first adding machine, called the Pascaline. It consisted of a series of ten-toothed wheels connected to numbers that could be added together by advancing the wheels by a correct number of teeth. The Pascaline was used until it was replaced by the electronic calculator in the 1960s.

In the 1820s, Sir Charles Babbage, an inventor and genius, developed a mechanical device that could be programmed to perform simple mathematical calculations. He called his invention the Difference Engine. In 1834, he designed the Analytical Engine, which could do more complicated calculations. It could multiply, divide, add, subtract, and even print out an answer. It included an input device, a storage facility to hold numbers for processing, a processor or number calculator, a control unit to direct tasks to be performed, and an output device. The concept used in the Analytical Engine is the concept used in today's general-purpose computer, which is why Babbage is considered to be the father of the modern computer and the field of study known today as operational research.



The Hollerith Tabulator was created at MIT in 1884.

In 1884, an American inventor at MIT, Herman Hollerith, filed his first patent for a system of encoding data on cards through a series of punched holes. His hand-fed press sensed the holes in punched cards as a wire passed through the holes into a cup of mercury beneath the card, closing the electrical circuit. This process triggered mechanical counters and sorter bins that tabulated the appropriate data. The U.S. government used Hollerith's machine to help with the 1890 census tabulation. His later machines mechanized the card-feeding process, added numbers, and sorted cards, in addition to merely counting data. In 1896, Hollerith started the Tabulating

Herman Hollerith.

Machine Company, which was the predecessor of the IBM (International Business Machines) Corporation.

Two major types of information-processing equipment were developed at the end of the nineteenth century. Christopher Sholes developed the first typewriter; it operated at a speed faster than a person could write, and its letters were always legible. Alexander Graham Bell, Charles Painter, and Chickester Bell invented the first telephone, which enhanced the processing of oral information.

Dr. John V. Atanasoff and Clifford Berry are believed to have invented the first electronic digital computer during the period 1937-1942. Their invention was called ABC, which stood for Atanasoff-Berry Computer.

In 1945, Howard Aiken, a mathematician, created the first digital computer, constructed from mechanical adding machine parts. An instruction sequence was fed into the machine on a roll of punched paper tape, rather than being stored in the computer, to solve a problem.

A research team at the University of Pennsylvania under the leadership of Dr. John W. Mauchly and J. Presper Eckert, Jr., was working with the U.S. Army in 1945 on the ENIAC (Electrical Numerical Integrator and Calculator) project. Their goal was to develop a calculating device with memory that could set firing tables for different weapons under varied conditions with target accuracy. They refined the ABC by developing five functional units—called central control, central arithmetic, input, output, and memory—to enhance these first electronic computers.

In 1946, John Presper Eckert and John Mauchly introduced the first "true computer" by unveiling the ENIAC I. It was an enormous machine covering 1800 square feet, weighing 60,000 pounds, and consuming 160 kilowatts of electrical power. This early machine had the calculating power of today's pocket calculator. With so many vacuum tubes, one of them would burn out every few minutes, which severely limited the running time of a program. They started the Eckert-Mauchly Computer Corporation, which was later bought out by Remington Rand Corporation, which changed the name to the UNIVAC division of Remington Rand.

The transistor, which was invented in the late 1940s, offered a huge advantage over vacuum tubes for building computers. Improvements in transistors led to the first integrated circuit, in which a number of transistors and other electronic devices, together with the wiring that connects them, are manufactured in one piece. Development of this technology changed the future of computers forever.

The next computer was UNIVAC I, built by Remington Rand. It introduced the use of magnetic tape as a means of input into a computer. The UNIVAC I was the first commercially available computer; the first one was installed at the Census Bureau in 1951 and the second one was installed at General Electric Appliance Park.

In the 1950s, when a computer was first used for business and engineering applications, the term *data processing* was first used, defined as the process of changing letters, numbers, and symbols into usable written information. The next attempt at data processing was the development of word-processing equipment to automate the production stage of typing documents. These machines produced high-quality documents efficiently but, unlike data-processing equipment, did not have calculating capabilities.

Until 1956, the only commercial computer was the UNIVAC I. IBM, recognizing the large potential for commercial applications, developed the IBM 650 computer system. Smaller than the UNIVAC I, it became the most successful computer system in use during the 1950s.

The 1960s saw the introduction of second-generation computers that used transistor technology. The transistor performed the same duties as the vacuum tube but was less expensive, required little power, and generated little heat. Computers became smaller in size, lower in cost, and quicker in operation when transistors replaced the vacuum tubes. Second-generation computers replaced machine language with assembly language, allowing abbreviated programming codes to replace long, difficult binary codes. Second-generation computers, however, had limited compatibility and used low-level programming languages. More than five thousand second-generation computers were installed in the United States, with the most successful machine being the IBM 1401.

Integrated circuits replaced transistors in third-generation computers. Integrated circuitry utilized extremely small chips of silicon mounted on a ceramic or glass substrate, segments of which had been metalized to form an electronic circuit similar to the transistor found on the printed circuit board. Third-generation computers had increased internal processing speed, disk-oriented systems, compatibility and multiprogramming capability, and data communications with on-line systems.

Fourth-generation computers are characterized by a microprocessor contained on a single silicon chip, called a semiconductor. These machines were smaller and more energy-efficient. IBM's System/360 computers gave customers a choice of processors, power, speed, and memory. Intel, the leading manufacturer of microprocessor chips, introduced the Pentium processor. The microcomputer moved the computer into small businesses and homes.

The history of information processing is vast and filled with inventions. We have gone from an abacus to a graphing calculator, from Babbage's Analytical Engine to powerful computers in the home. We now have cell phones, faxes, and answering machines.

IBM, which entered the computer field in 1951, created the personal computer for business and home use and rapidly advanced the field of data processing. Its relatively low-cost desktop microcomputer, with its enhanced graphics and communications capabilities, gave birth to the huge software industry that automated the processing of information.

By the 1980s, attention had focused on other stages of the document cycle in which manual tasks other than typing might be automated. The term *word/information processing* was introduced to describe automation as it is applied to all stages of the document cycle.

In today's fast-paced business world, information must be gathered, processed, and made available at an ever-increasing speed. The computer has proven to be a fast, reliable, and economical means of processing information critical to all organizations. Effectively managed information helps an organization serve its customers better and operate more efficiently. Information processing has given us the tools that can help us to become more creative and productive in our work while eliminating many of the boring, repetitive tasks of the workplace.

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JAMES E. MILES

INFORMATION SYSTEMS

The term *information system* refers to information technology that is used by people to accomplish a specified organizational or individual objective. The technology may be used in the gathering, processing, storing, and/or dissemination of information, and the users are trained in the use of that technology, as well as in the procedures to be followed in doing so. The specific technologies that collectively comprise information technology are *computer technology* and *data communications technology*. Computers provide most of the storage and processing capabilities, while data communications—specifically networks—provide the means for dissemination and remote access of information.

Advances in computer hardware, software, and networking technologies have spurred an evolution in the structure, design, and use of corporate information systems.

COMPUTER HARDWARE

When computers first began moving into the business world in the late 1950s and early 1960s, the computing environment was best described as *centralized, host-based computing*. In this environment, the typical organization had a large *mainframe computer* (the centralized host) connected to a number of "dumb" terminals scattered throughout the organization or at remote sites. These terminals were labeled "dumb" because they had no native "intelligence" (i.e., they had no built-in central processing units [CPUs] that were capable of processing data). The mainframe did all the data processing for all the user terminals connected to it.

In the mid-1960s, Digital Equipment Corporation (DEC) announced the development of the *minicomputer*. Smaller than the mainframe, the minicomputer ushered in the era of *distributed data processing* (DDP). In this new processing environment, an organization could connect one or more minicomputers to its mainframe. Typically, the minicomputers were located in an organization's regional offices, from which they were connected to the mainframe in corporate headquarters. Thus, the organization's data-processing function was no longer localized in a single, centralized computer (the mainframe) but, rather, *distributed* among all the computers.

The commercial introduction of the personal computer by IBM in the early 1980s revolutionized organizational data processing. The personal computer carried the distributed processing concept even further within organizations—it brought data processing to the desktop. Also, it eclipsed the dumb terminal as the terminal of choice by users. The commercial success of the IBM personal computer led other computer manufacturers to develop their own personal computers that were compatible with the IBM PC (these are usually described as *IBM clones* or *IBM-compatible computers*). One notable exception is Apple Computers, Inc., which developed its own line of non-IBM-compatible computers, namely the *Apple* and *Macintosh* line of computers. The all-inclusive term *microcomputer* is sometimes used to encompass all makes and models of desktop computers, including the IBM

IBM personal computer.

PC (and its clones) and the Apple/Macintosh computers.

It is important to note that, despite their proliferation and ubiquity, personal computers have *not* replaced minicomputers or mainframes. A large number of organizations still rely on these larger computers for significant aspects of their day-to-day operations.

COMPUTER SOFTWARE

Computer software is the set of programs and associated data that drive the computer hardware to do the things that it does, such as performing arithmetic calculations or generating and printing a report. Software typically comes in one of two forms: *custom-written application programs* or *off-the-shelf software packages.* Custom-written application programs are usually written by an organization's own programming team or by professional contract programmers to satisfy unique organizational requirements. Off-the-shelf software packages are produced by software development companies and made commercially available to the public. They usually fall in one of two main categories, namely *system software* or *application software.* The former includes such specialized programs as operating systems, compilers, utility programs, and device drivers. While these programs are important—and necessary—to the overall performance of an information system (especially from the "machine" perspective), they are not the primary focus of corporate information systems. Their basic functions are more machine-oriented than human-oriented.

Application software is designed to more directly help human users in the performance of their specific job responsibilities, such as business decision making, inventory tracking, and customer record keeping. From a software perspective, this is what corporate information systems are primarily concerned with.

One of the very important information systems functions is *systems analysis and design*, that is, analyzing a client's business situation (or problem), with respect to information processing, and designing and implementing an appropriate—usually computerized—solution to the problem. Information systems professionals who specialize in this area are known as *systems analysts.* The process begins with a detailed determination of the client's information requirements and business processes. The solution frequently involves some programming, as well as the use of an appropriate application software package(s), such as a database management system (DBMS) for designing and implementing a database for the client. It may also involve some networking considerations, depending on the user's requirements and goals. Some typical organizational information systems that can result from a systems analysis and design effort include the following.

Transaction processing systems: These record and track an organization's transactions, such as sales transactions or inventory items, from the moment each is first created until it leaves the system. This helps managers at the day-to-day operational level keep track of daily transactions as well as make decisions on when to place orders, make shipments, and so on.

Management information and reporting systems: These systems provide mid-level and senior managers with periodic, often summarized, reports that help them assess performance (e.g., a particular region's sales performance in a given time period) and make appropriate decisions based on that information.

Decision support systems: These systems are designed to help mid-level and senior managers make those difficult decisions about which not every relevant parameter is known. These decisions, referred to as *semistructured decisions*, are characteristic of the types of decisions made at the higher levels of management. A decision on whether or not to introduce a particular (brand-new) product into an organization's product line is an example of a semistructured decision. Another example is the decision on whether or not to open a branch in a foreign country. Some of the parameters that go into the making of these decisions are known. However, there are also many unknown factors—hence the "semistructuredness" of these decisions. The value of a decision support system (DSS) is in its ability to permit "what-if" analyses (e.g., What if interest rates rose by 2 percent? What if our main competitor lowered its price by 5 percent? What if import tariffs are imposed/increased in the foreign country in which we do, or plan to do, business?). That is, a DSS helps the user (decision maker) to model and analyze different scenarios in order to arrive at a final, reasonable decision, based on the analysis. There are decision support systems that help groups (as opposed to individuals) to make consensus-based decisions. These are known as group decision support systems (*GDSS*).

A type of decision support system that is geared primarily toward high-level senior managers is the *executive information system* (EIS) or *executive support system* (ESS). While this has the capability to do very detailed analyses, just like a regular DSS, it is designed primarily to help executives keep track of a few selected items that are critical to their day-to-day high-level decisions. Examples of such items include performance trends for selected product or customer groups, interest rate yields, and the market performance of major competitors.

Expert systems: An expert system is built by modeling into the computer the thought processes and decision-making heuristics of a recognized expert in a particular field. Thus, this type of information system is *theoretically* capable of making decisions for a user, based on input received from the user. However, due to the complex and uncertain nature of most business decision environments, expert system technology has traditionally been used in these environments primarily like decision support systems—that is, to help a human decision maker arrive at a reasonable decision, rather than to actually *make* the decision for the user.

COMPUTER NETWORKS

Together with computer technology, data communications technology has had a very significant impact on organizational information processing. There have been tremendous increases in the bandwidths (i.e., signal-carrying capacities) of all data communications media, including coaxial cables, fiber-optic cables, microwave transmission, and satellite transmission. Wide area networks (WANs) provide access to remote computers and databases, thus enabling organizations to gain access to global markets, as well as increase their information sources for decision making purposes. The Internet in particular—the worldwide network of computer networks—has greatly facilitated this globalization phenomenon by making it possible to connect any computer to virtually any other computer in any part of the world. Advances in networking technologies have also enabled organizations to connect their in-house personal computers to form local area networks (LANs). This greatly facilitates organizational communication and decision-making processes.

The combination of computer and networking technologies has also changed the way basic work is done in many organizations. For example, *telecommuting* and *virtual offices* are commonplace in several organizations. Telecommuting refers to the practice of doing office work from home (i.e., without physically being in the office). The term "virtual office" acknowledges the fact that a person's office does not necessarily have to be a physical location. A person can do productive "office work" (including the making of managerial decisions) on the go, for example, at the airport while waiting for a flight, on the airplane, or from a beach half-way around the world. These practices are made possible through modem-equipped computers that can access a remote computer (the office computer) via a data communications network.

An organization's overall performance can be greatly enhanced by strategically planning for, and implementing, information systems that optimize the inherent benefits of information technology to the benefit of the organization. This requires effective leadership and vision, as well as knowledge of both information technology and the organization's (business) environment.

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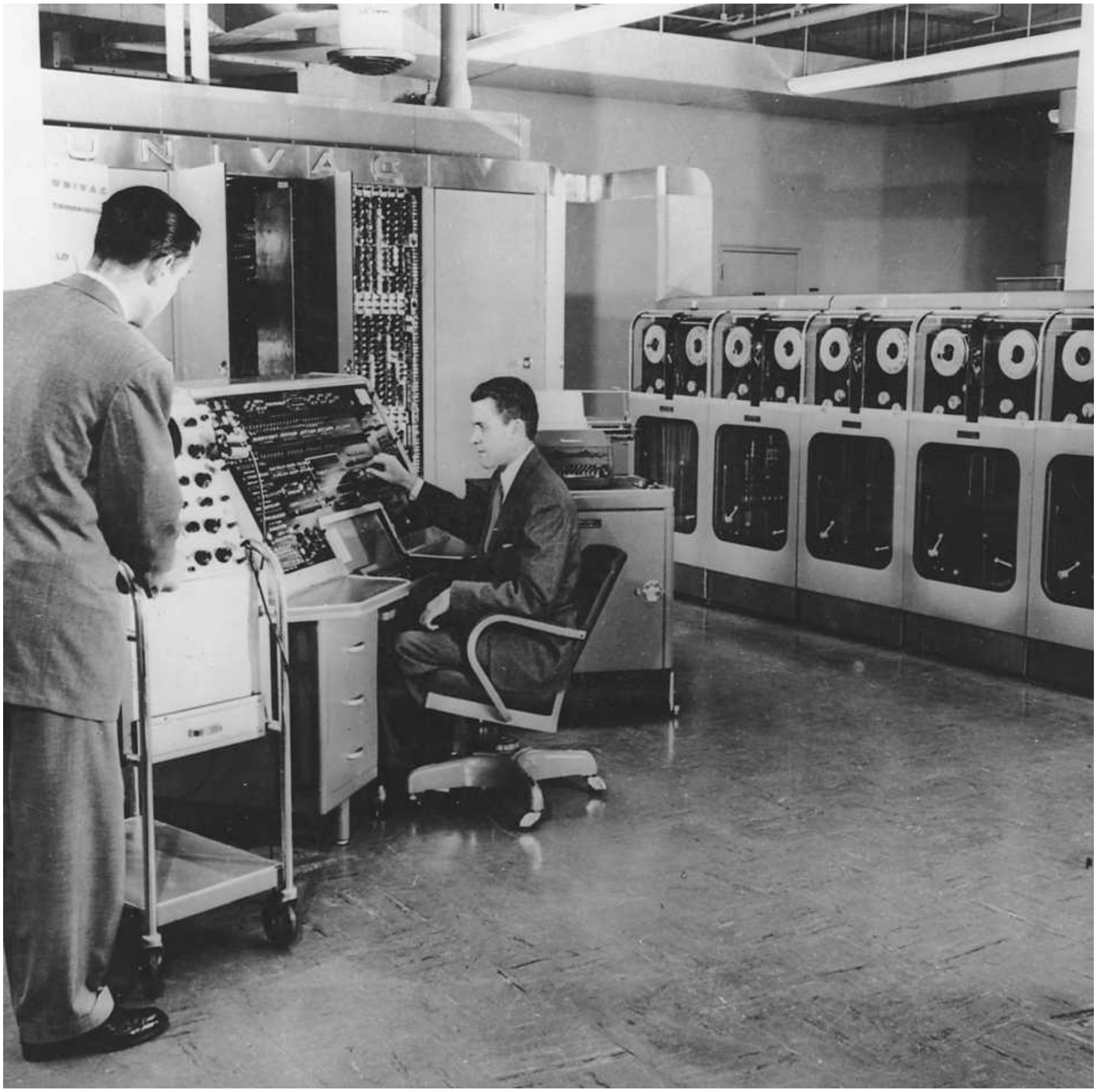
THEOPHILUS B. A. ADDO

INFORMATION TECHNOLOGY

Information technology, as defined by the Information Technology Association of America



The first commercial computer was the UNIVAC I.

(ITAA), is "the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware." Encompassing the computer and information systems industries, information technology is the capability to electronically input, process, store, output, transmit, and receive data and information, including text, graphics, sound, and video, as well as the ability to control machines of all kinds electronically.

Information technology is comprised of computers, networks, satellite communications, robotics, videotext, cable television, electronic mail ("e-mail"), electronic games, and automated office equipment. The information industry consists of all computer, communications, and electronics-related organizations, including hardware, software, and services. Completing tasks using information technology results in rapid processing and information mobility, as well as improved reliability and integrity of processed information.

HISTORY OF INFORMATION TECHNOLOGY

The term ‘‘information technology’’ evolved in the 1970s. Its basic concept, however, can be traced to the World War II alliance of the military and industry in the development of electronics, computers, and information theory. After the 1940s, the military remained the major source of research and development funding for the expansion of automation to replace manpower with machine power.

Since the 1950s, four generations of computers have evolved. Each generation reflected a change to hardware of decreased size but increased capabilities to control computer operations. The first generation used vacuum tubes, the second used transistors, the third used integrated circuits, and the fourth used integrated circuits on a single computer chip. Advances in artificial intelligence that will minimize the need for complex programming characterize the fifth generation of computers, still in the experimental stage.

The first commercial computer was the UNIVAC I, developed by John Eckert and John W. Mauchly in 1951. It was used by the Census Bureau to predict the outcome of the 1952 presidential election. For the next twenty-five years, mainframe computers were used in large corporations to do calculations and manipulate large amounts of information stored in databases. Supercomputers were used in science and engineering, for designing aircraft and nuclear reactors, and for predicting worldwide weather patterns. Minicomputers came on to the scene in the early 1980s in small businesses, manufacturing plants, and factories.

In 1975, the Massachusetts Institute of Technology developed microcomputers. In 1976, Tandy Corporation’s first Radio Shack microcomputer followed; the Apple microcomputer was introduced in 1977. The market for microcomputers increased dramatically when IBM introduced the first personal computer in the fall of 1981. Because of dramatic improvements in computer components and manufacturing, personal computers today do more than the largest computers of the mid-1960s at about a thousandth of the cost.

Computers today are divided into four categories by size, cost, and processing ability. They are supercomputer, mainframe, minicomputer, and microcomputer, more commonly known as a personal computer. Personal computer categories include desktop, network, laptop, and handheld.

INFORMATION TECHNOLOGY’S ROLE TODAY

Every day, people use computers in new ways. Computers are increasingly affordable; they continue to be more powerful as information-processing tools as well as easier to use.

Computers in Business One of the first and largest applications of computers is keeping and managing business and financial records. Most large companies keep the employment records of all their workers in large databases that are managed by computer programs. Similar programs and databases are used in such business functions as billing customers; tracking payments received and payments to be made; and tracking supplies needed and items produced, stored, shipped, and sold. In fact, practically all the information companies need to do business involves the use of computers and information technology.

On a smaller scale, many businesses have replaced cash registers with point-of-sale (POS) terminals. These POS terminals not only print a sales receipt for the customer but also send information to a computer database when each item is sold to maintain an inventory of items on hand and items to be ordered. Computers have also become very important in modern factories. Computer-controlled robots now do tasks that are hot, heavy, or hazardous. Robots are also used to do routine, repetitive tasks in which boredom or fatigue can lead to poor quality work.

Computers in Medicine Information technology plays an important role in medicine. For example, a scanner takes a series of pictures of the body by means of computerized axial tomography (CAT) or magnetic resonance imaging (MRI). A computer then combines the pictures to produce detailed three-dimensional images of the body's organs. In addition, the MRI produces images that show changes in body chemistry and blood flow.

Computers in Science and Engineering Using supercomputers, meteorologists predict future weather by using a combination of observations of weather conditions from many sources, a mathematical representation of the behavior of the atmosphere, and geographic data.

Computer-aided design and computer-aided manufacturing programs, often called CAD/CAM, have led to improved products in many fields, especially where designs tend to be very detailed. Computer programs make it possible for engineers to analyze designs of complex structures such as power plants and space stations.

Integrated Information Systems With today's sophisticated hardware, software, and communications technologies, it is often difficult to classify a system as belonging uniquely to one specific application program. Organizations increasingly are consolidating their information needs into a single, integrated information system. One example is SAP, a German software package that runs on mainframe computers and provides an enterprise-wide solution for information technologies. It is a powerful database that enables companies to organize all their data into a single database, then choose only the program modules or tables they want. The freestanding modules are customized to fit each customer's needs.

SOFTWARE

Computer software consists of the programs, or lists of instructions, that control the operation of a computer. Application software can be used for the following purposes:

- As a productivity/business tool
- To assist with graphics and multimedia projects
- To support household activities, for personal business, or for education
- To facilitate communications

Productivity Software Productivity software is designed to make people more effective and efficient when performing daily activities. It includes applications such as word processing, spreadsheets, databases, presentation graphics, personal information management, graphics and multimedia, communications, and other related types of software. *Word-processing* software is used to create documents such as letters, memos, reports, mailing labels, and newsletters. This software is used to create attractive and professional-looking documents that are stored electronically, allowing them to be retrieved and revised. The software provides tools to correct spelling and grammatical mistakes, permits copying and moving text without rekeying, and provides tools to enhance the format of documents. Electronic *spreadsheet* software is used in business environments to perform numeric calculations rapidly and accurately. Data are keyed into rows and columns on a worksheet, and formulas and functions are used to make fast and accurate calculations. Spreadsheets are used for ''what-if'' analyses and for creating charts based on information in a worksheet. A *database* is a collection of data organized in a manner that allows access, retrieval, and use of that data. A database management system (DBMS) is used to create a computerized database; add, change, and delete data; sort and retrieve data from the database; and create forms and reports using the data in the database. *Presentation graphics software* is used to create presentations, which can include clip-art images, pictures, video clips, and audio clips as well as text. A *personal information manager* is a software application that includes an appointment calendar, address book, and notepad to help organize personal information such as appointments and task lists. Engineers, architects, desktop publishers, and graphic artists often use *graphics and multimedia software* such as computer-aided design, desktop publishing, video and audio entertainment, and Web page authoring. Software for *communications* includes groupware, e-mail, and Web browsers.

HARDWARE

Information processing involves four phases: input, process, output, and storage. Each of these phases and the associated devices are discussed below.

Input devices: Input devices include the keyboard, pointing devices, scanners and reading devices, digital cameras, audio and video input devices, and input devices for physically challenged users. Input devices are used to capture data at the earliest possible point in the workflow, so that the data are accurate and readily available for processing.

Processing: After data are captured, they are processed. When data are processed, they are transformed from raw facts into meaningful information. A variety of processes may be performed on the data, such as adding, subtracting, dividing, multiplying, sorting, organizing, formatting, comparing, and graphing. After processing, information is output, as a printed report, for example, or stored as files.

Output devices: Four common types of output are text, graphics, audio, and video. Once information has been processed, it can be listened to through speakers or a headset, printed onto paper, or displayed on a monitor. An output device is any computer component capable of conveying information to a user. Commonly used output devices include display devices, printers, speakers, headsets, data projectors, fax machines, and multifunction devices. A multifunction device is a single piece of equipment that looks like a copy machine but provides the functionality of a printer, scanner, copy machine, and perhaps a fax machine.

Storage devices: Storage devices retain items such as data, instructions, and information for retrieval and future use. They include floppy disks or diskettes, hard disks, compact discs (both read-only and disc-recordable), tapes, PC cards, Smart Cards, microfilm, and microfiche.

INFORMATION AND DATA PROCESSING

Data processing is the input, verification, organization, storage, retrieval, transformation, and extraction of information from data. The term is usually associated with commercial applications such as inventory control or payroll. An information system refers to business applications of computers and consists of the databases, application programs, and manual and machine procedures and computer systems that process data. Databases store the master files of the business and its transaction files. Application programs provide the data entry, updating, and query and report processing. Manual procedures document the workflow, showing how the data are obtained for input and how the system's output is distributed. Machine procedures instruct the computers how to perform batch-processing activities, in which the output of one program is automatically fed into another program. Daily processing is the interactive, real-time processing of transactions. Batch-processing programs are run at the end of the day (or some other period) to update the master files that have not been updated since the last cycle. Reports are printed for the cycle's activities. Periodic processing of an information system involves updating of the master files—adding, deleting, and changing the information about customers, employees, vendors, and products.

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Linda J. Austin
Debbie Hughes

INPUT

(SEE: *Operations Management*)

INSTITUTE OF INTERNAL AUDITORS

The Institute of Internal Auditors was founded in 1941 by a small group of dedicated internal auditors who wanted an organization that would promote the role of the internal auditor and provide educational activities and standards for the professional practice of internal auditing. By 1999, the Institute had grown to include over 70,000 members representing more than one hundred countries around the world.

In 1944 the Institute began publishing its journal, *Internal Auditor*. This award-winning journal continues to present in-depth information on auditing practices and techniques and features articles written by experts from all over the world. In 1947 *the Statement of Responsibilities of Internal Auditing* was issued and became the foundation for development of internal auditing standards. The official motto ''Progress Through Sharing'' was adopted in 1955 and continues to guide the Institute's contributions to the profession. Institute members approved the *Code of Ethics* in 1968. Institute members, in 1972, adopted a *Common Body of Knowledge*, which identified the content for the examination offered for the first time in 1973. The examination is a requirement for attainment of the Certified Internal Auditor (CIA) designation. The IIA Research Foundation, founded in 1976, sponsors research on trends and issues in internal auditing. The *Standards for the Professional Practice of Internal Auditing* were approved in 1978. Awareness of the importance of university preparation for internal auditing motivated a pilot program in internal auditing at Louisiana State University. The success of this initial program effort led to establishment of similar programs in other colleges and universities. By 1999 more than 35 colleges and universities throughout the globe were participants in the *Endorsed Internal Audit Program.*

Noteworthy developments in the 1980s included the introduction of the Institute's first computer software product, audit Masterplan; establishment of the Quality Assurance Review Service; mandatory continuing professional development for CIAs; and the granting of consultative status to the Institute by the United Nations. The 1990s have seen professional certifications exceed 25,000; development of the Global Auditing Information Network that compiles and disseminates benchmarking information; and creation of two internet web sites—*www.theiia.org* and *www.itaudit.org*. The 1990s have also seen the introduction of specialty groups, services, and products to support unique membership needs. These include the Control Self Assessment Center, Certification in Control Self Assessment, Certified Governmental Auditor Program, Board of Environmental Auditors Certification, and the Chief Audit Executive Program.

In 1999 the Institute's Board of Directors approved a new *Professional Practices Framework* that will be the basis for development of comprehensive new standards for internal auditing. The board also approved a new definition that defines internal auditing as an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. The internal audit function helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

The Institute of Internal Auditors' mission is to be the primary international association, organized on a global basis, dedicated to the promotion and development of the practice of internal auditing. The Institute is organized as a nonprofit association governed by a volunteer board elected by the membership. National Institutes are located around the world and usually support individual chapters on a local basis. Volunteer committees at the international, regional, district, and local levels support the local chapters, national institutes, and the international board.

The Institute offers a variety of membership options and certification programs, establishes internal auditing standards and other guidance, provides training through conferences and seminars, produces educational products which include videos, study aids, textbooks, and software, generates research publications, and promotes academic relations. The Institute publishes several periodicals, offers an employment referral service, generates benchmarking information, provides quality assurance and consulting services, maintains an electronic information resource center, and maintains partnerships with other professional organizations to monitor and report on issues affecting the profession. More information about the Institute of Internal Auditors is available at *www.theiia.org*, or by writing to the Institute at 249 Maitland Avenue, Altamonte Springs, FL 32701.

(SEE ALSO: *Certified Internal Auditor*)

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STEVEN E. JAMESON

INSTITUTE OF MANAGEMENT ACCOUNTANTS

The Institute of Management Accountants (IMA) is the largest educational, nonprofit association in the world devoted exclusively to management accounting, finance, and information management. It was founded in 1919 in Buffalo, New York, as the National Association of Cost Accountants by a group of businesspeople to expand the knowledge and professionalism of people specifically interested in cost accounting.

Subsequently its name was changed to the National Association of Accountants and then in 1991 to the current name. These changes were made to reflect its broadened mission to disseminate the latest knowledge in accounting and finance to all those professionals employed in public and private companies as well as governmental and educational organizations. In its statement of mission, the IMA states that it will "provide to members personal and professional development opportunities through education, association with business professionals, and certification in management accounting and financial management skills and ensure that IMA is globally recognized by the financial community as a respected institution influencing the concepts and ethical practices of management accounting and financial management."

As an international educational organization, the IMA sponsors two certification programs: certified management accountant (CMA) and certified in financial management (CFM). [See certified management accountant (CMA)]. These certification programs are administered by an affiliate, the Institute of Certified Management Accountants, which was established in 1972.

The flagship publication of the Institute is a monthly magazine, *Strategic Finance*. The IMA also publishes *Management Accounting Quarterly* four times a year and a quarterly newsletter, *Focus*, which goes to all members. Through another affiliate, the IMA Foundation for Applied Research (FAR), it conducts research and publishes field-based research and analysis. It also publishes, in conjunction with other organizations, a series of guides called *Statements on Management Accounting*. As part of its professional responsibilities, the IMA contributes to and comments on the accounting rule-making process through a senior-level committee.

The IMA offers its 65,000 members an opportunity to join three member interest groups—the Controllers Council, Cost Management Group, and Small-Business Council. Each group publishes a newsletter ten times per year featuring information on industry trends and practices, emerging technologies, and financial and management reporting issues. Members' surveys are conducted to keep members apprised of how their colleagues in other industries and organizations are handling key issues. In addition, members can join Internet-based groups that enable them to network and exchange information on-line dealing with their particular industry or special interests.

The IMA requires certified members to obtain a certain number of Continuing Professional Education credits every year. It offers a number of methods to achieve this objective, including an annual conference, chapter/council education programs, Regional Education Assistance Programs, self-study courses (including on-line offerings), a monthly video-subscription program, and national seminars. It also offers in-house education programs for companies, focusing on current trends, industry-specific developments, and continuing skills enhancement.

The IMA is governed by a volunteer president, executive committee, and board of directors. A salaried, full-time executive director directs the day-to-day operations of the Institute based on policy guidelines promulgated by the executive committee and board of directors. Activities also are conducted by approximately three hundred local chapters and twenty-four regional councils, which hold regular technical meetings and other functions. The IMA's headquarters is located at 10 Paragon Drive, Montvale, New Jersey. Its Internet addresses are www.imanet.org and www.strategicfinancemag.com.

(SEE ALSO: *Certified Management Accountant*)

KATHY WILLIAMS
ROBERT F. RANDALL

INSURANCE

Insurance is vital to a free enterprise economy. It protects society from the consequences of financial loss from death, accidents, sicknesses, damage to property, and injury caused to others. The person seeking to transfer risk, the *insured* (*policyholder*), pays a relatively small amount, the *premium*, to an insurance company, the *insurer*, which issues an *insurance policy* in which the insurer agrees to reimburse the insured for any losses covered by the policy. Insurance is the process of *spreading the risk* of economic loss among as many as possible subject to the same kind of risk and is based on the laws of probability (chance of a given outcome happening) and large numbers (enables the laws of probability to work).There are many perils (causes of loss) that society faces, some natural (e.g., earthquakes, hurricanes, tornados, flood, drought), some human (e.g., arson, theft, fraud, vandalism, contamination, pollution, terrorism), and some economic (e.g., expropriation, inflation, obsolescence, depressions/recessions). Insurers are able to provide coverage for virtually any predictable loss.

EARLY HISTORY

Concepts of insurance evolved thousands of years ago. The Chinese, for example, divided their cargoes among many boats to reduce the severity of loss from the perils of the seas, while the biblical story of Joseph and the famine in Egypt illustrates the storing of grain during the seven good years to relieve shortages during the seven years of famine. Marine insurance emerged in London when ships sailed for the New World. Fire insurance arose from the great fire of London in 1666, in which 14,000 buildings were destroyed. In 1752 Benjamin Franklin founded the first mutual fire insurance company in the United States, the Philadelphia Contributorship for the Insurance of Houses from Loss by Fire. In 1759, he helped establish the first life insurance company, now known as the Presbyterian Ministers Fund. In 1887 the first auto-liability policy was written. Advancing technologies and a dynamic marketplace constantly change society's insurance needs. The insurance industry's goal is to respond to those needs with available and affordable insurance.

U.S. INSURANCE INDUSTRY

The U.S. insurance industry is comprised of approximately 1600 life (life/health) and 3000 nonlife (property/casualty) insurance and reinsurance companies; it is the world's largest insurance market, accounting for $736 billion or 34 percent of 1998's worldwide premiums of $2.2 trillion. Insurance is sold either directly by insurers (*direct insurers*) or through the *independent agency system*, *exclusive agencies*, and *brokers.*

Based on the 1997 U.S. Bureau of Labor Statistics, the life and health insurance industry employed 909,000 persons and the property/casualty insurance industry, 635,000; 706,000 persons were engaged in agency or brokerage activities and in insurance service organizations.

LIFE/HEALTH INSURANCE

Life/health insurance in the United States in 1998 represented 27.6 percent of the worldwide market, second to Japan's 28.6 percent and well ahead of the United Kingdom's 9.8 percent, which ranked third. A variety of life insurance (which provides income for a beneficiary at the insured's death), annuities (provides income for life for the annuitant), and health care products are offered. In 1997 Americans purchased $1.97 trillion of new life insurance; the average new policy totaled $97,358. Term policies and ordinary/whole life policies account for virtually all of the total life insurance in-force of $13.2 trillion. At the end of 1997, 373 million policies were inforce with an average size of $165,800 per insured household. Term policies provide "pure insurance" (no cash value) and maximally cost-effective protection to growing families.

Ordinary/whole life policies provide protection as well as building up cash values (investment component), which the policyholder can either borrow on or obtain by surrendering the policy. Life/health policies are sold on an individual or group basis—(the employer or association receives the master policy and the insured members receive certificates of insurance). Annuities-fixed (predetermined amount) and variable (varies with investment returns) can be purchased by making a single payment or a series of payments. The annuity income can start immediately or at some future date. Different types of annuity contracts meet different needs. Today there is a strong demand for individual annuity products, driven by the movement of the baby boomers through the preretirement phase, increased life expectancy and the fear of outliving savings, and concerns about the long-term viability of Social Security. Health (medical, disability, long-term care) insurance plans are offered by insurance companies, managed health care organizations, and medical prepayment organizations. Long term care products provide for reimbursement for covered nursing home and home health care expenses incurred due to physical or mental disability. The top ten U.S. life insurance companies are shown in Table 1.

PROPERTY/CASUALTY (P&C) INSURANCE

The United States dominates the world in P&C insurance (also known as general insurance). In 1998 the U.S. generated 43.4 percent of worldwide P&C premiums, Japan was next with 10.3 percent and Germany third with 8.8 percent. P&C insurance is broken down into personal lines (auto/private passenger and homeowners) and commercial lines (farm, commercial auto, aviation, marine/ocean/inland, crime, surety, boiler and machinery, glass, commercial credit, workers' compensation, public liability (including environmental pollution), professional liability (directors and officers, errors and omissions), product liability, commercial multiple-line, nuclear, title, and surplus and excess lines insurance). The top ten U.S. P&C insurers are shown in Table 2.

ORGANIZATION

Insurers primarily operate as stock (owned by stockholders) or mutual (owned by policyholders) companies. Today, many mutual companies are changing to stock companies (demutualizing) to facilitate the raising of capital. Other forms of structure are pools and associa-

Top Ten U.S. Life Insurers Ranked by Life Insurance In-Force 1998

(IN MILLIONS)

Metropolitan Life Insurance	$1,545,453
Prudential Insurance Company of America	1,013,109
Connecticut General Life Insurance	543,369
Northwestern Mutual Life Insurance	536,379
Transamerica Occidental Life	498,247
New York Life Insurance	440,527
Aetna Life Insurance	385,525
RGA Reinsurance	381,634
Lincoln National Life Insurance	367,155
State Farm Life Insurance	347,430

Table 1

SOURCE: A.M. Best Company. (1999). *Best's Insurance Reports-Life/Health-United States.* 1999 ed.

Top Ten U.S. Property/Casualty Insurers Ranked by Net Premiums Written (NPW) 1998

	NPW* (in millions)	Combined Ratio**
State Farm Group	$34,755.3	108.2
Allstate Insurance Group	19,072.1	95.5
American International Group	10,727.9	99.5
Farmers Insurance Group	10,316.4	101.7
CNA Insurance Group	10,044.0	115.2
Nationwide Group	8,494.9	108.9
Travelers Property Casualty Group	8,209.8	102.3
Berkshire Hathaway Insurance Group	7,731.8	95.7
Liberty Mutual Insurance Group	7,197.2	117.0
The Hartford Insurance Group	6,028.4	105.9

* Net premiums written includes only premiums written by domestic companies.
**A combined ratio of less than 100.0 indicates an underwriting profit.

Table 2

SOURCE: A.M. Best Company. *Best's Aggregate Averages-Property-Casualty-United States.* 1999 ed.

tions (groups of insurers), risk retention groups, purchasing groups, and fraternal organizations (primarily life and health insurance). An insurer within a given state is classified domestic, if formed under that state, foreign, if incorporated in another state, or alien, if incorporated in another country.

FUNCTIONS

The key functions of an insurer are marketing, underwriting, claims (investigation and payment of legitimate claims as well as defending against illegitimate claims), loss control, reinsurance, actuarial, collection of premiums, drafting of insurance contracts to conform with statutory law, and the investing of funds. Underwriters are expert in identifying, understanding, evaluating, and selecting risks. Actuaries play a unique and critical role in the insurance process; they price the product (the premium) and establish the reserves.

The primary goal of an insurer is to underwrite profitably. Disciplined underwriting combined with sound investing and asset/liability management enables an insurer to meet its obligations to both policyholders and stockholders. Underwriting combines many skills—investigative, accounting, financial, psychological. While some lines of business (e.g home-owners, auto) are underwritten manually or class rated, many large commercial property and casualty risks are judgment rated, relying on the underwriter's skill, experience and intuition.

PRODUCT AND RATINGS

The Insurance Policy varies among states and class of business; however, there are common features.

- *Declaration Page*: names the policyholder, describes the property or liability to be insured, type of coverage, and policy limits.
- *Insuring Agreement*: describes parties' responsibilities during the policy term.
- *Conditions of the Policy*: details coverage and requirements in event of a loss.
- *The Exclusions*: describes types of property and losses not covered. The states and insurers continually work together to make the policy more readable.

A. M. Best is the key rating organization of the industry. The Best's Ratings range from the excellent category (A+ + and A+) to the lowest categories—E (under regulatory supervision), F (in liquidation), and S (rating suspended). Other important rating organizations are *Moody's* and *Standard and Poor's.*

ROLE OF GOVERNMENT

Federal and state governments play important roles in managing large social insurance programs, such as social security, medicare, unemployment compensation, federal deposit insurance, and pension benefit guaranty. In these areas the government acts either as a partner or competitor to the insurance industry, or as an exclusive provider. Federal and state governments also manage property and casualty programs, such as "all-risk" crop, crime, flood, and workers' compensation.

REINSURANCE

Reinsurance is critical to the insurance process; it brings capacity, stability, and financial strength to insurers. The purpose of reinsurance is to spread large risks and catastrophes over as large a base as possible. It is the assumption by one insurance company (the reinsurer) of all or part of a risk undertaken by another insurance company (the cedent). It enables an insured with a sizable risk exposure to deal with and receive coverage from one insurer, rather than dealing with a number of insurers. The portion of the risk that exceeds the primary insurer's retention level is layed-off (ceded) to a reinsurer. The reinsurer can further reinsure a part of the risk assumed; this is called retroceding. If the reinsurer agrees to share losses arising from only one risk, the agreement is known as facultative reinsurance; if the reinsurer agrees to share losses arising from more than one risk, usually a whole line or book of business, the agreement is known as treaty reinsurance. Western Europe is the largest provider of worldwide reinsurance. The Caribbean, including Bermuda, is the largest foreign supplier of reinsurance to the United States. The financial strength of the reinsurer is most important, since the direct writer is always primarily responsible for payment of losses.

REGULATION

Under the McCarran-Ferguson Act of 1945, state insurance departments bear the primary responsibility to oversee insurance companies' operations to protect policyholders from insurer insolvency and unfair treatment. In doing so, they license insurers, agents, and brokers; enforce statutory accounting requirements; and conduct examinations of the financial position and market conduct of insurers. The examination is assisted by the Insurance Regulatory Information System (IRIS) Ratios, which test insurers' overall profitability, liquidity, and reserve strength. State insurance departments work with the National Association of Insurance Commissioners (NAIC) to develop and promote laws and regulations that serve as model laws, with the state legislatures, which pass the laws and set the budgets; with the courts, which interpret insurance regulations and policy wording; with Congress and the U.S. General Accounting Office, which periodically evaluate state insurance regulation; and with professional, trade, and consumer groups.

COMPETITION

Because the insurance market has many sellers and buyers, little product differentiation, and freedom of entry and exit, it is highly competitive. This is especially true in the P&C segment, where the leading company accounts for only 12 percent of the market and the top ten companies combined comprise only 44 percent. While demand for insurance grows steadily over time, with the increase in exposures and legal requirements, the supply of insurance, because it is financial and flexible, can be easily shifted in and out of the market. This attracts capital during periods of high interest and stock market strength because of high profit expectations from investing underwriting cash flows.

This excess capacity in the insurance industry has led to consolidation and convergence with capital markets and financial service institutions. Insurance companies seek to operate more efficiently and improve their communication and distribution systems. Combining insurance with other financial products and services is perceived to provide better sources for customers.

AN INDUSTRY IN TRANSFORMATION SECURITIZATION

With population growing in coastal, as well as hurricane, and earthquake-prone areas in the United States and scientists predicting a 100 percent chance of a major earthquake in the century before 2010, the insurance industry is faced with a potential megadisaster earthquake or hurricane that could produce insured losses in the $75,000,000,000 to $100,000,000,000 range. Losses of that magnitude would wreak havoc to the industry (see Table 3 for a list of the ten largest catastrophes as of 1999). In 1996, the industry started to securitize its catastrophe risk by packaging insurance risk as securities that could be traded in the capital markets, whose combined $26 trillion is 80 times greater than the capital of the insurance industry. To date, the industry has been successful in selling more than $4 billion worth of catastrophe-linked securities; it plans to build on these successes and continue to spread catastrophe risks to the capital markets through the issuance of catastrophe securities. As the insurance industry continues to converge with the capital markets and the financial services industry, other lines of business are likely to be securitized.

GLOBALIZATION

While reinsurers have always had an international presence and brokers have moved in that direction, primary insurers, with one notable exception, have been reluctant to expand internationally. The rapid growth of computer technology, however, has transformed the world into one global economy, in which U.S. and foreign insurers must, along with all other businesses, compete.

DISTRIBUTION CHANNELS

The insurance industry continues to explore new distribution systems, including the Internet and formation of alliances with banks and other financial services organizations in an effort to become more efficient and focused on the customer, who today places as much importance on service and convenience, as on price.

(SEE ALSO: *Personal Financial Planning*)

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EDWARD J. KELLER, JR.

INTEGRATED SOFTWARE

In today's fast-paced and volatile business world, it is hard to imagine any part that is not affected by information technology. We live in a world

Largest Ten Catastrophes in the United States (between 1957 and 1999 in 1999 dollars)

Year	Catastrophe	Location	Insured Losses (in billions)
1992	Hurricane Andrew	Gulf Coast U.S.	$19.1
1994	Northridge earthquake	California	14.1
1989	Hurricane Hugo	Puerto Rico/Southeast U.S.	5.7
1997	Hurricane Georges	Southeast U.S./Caribbean	3.6
1965	Hurricane Betsy	Southeast U.S.	2.5
1999	Hurricane Floyd	East Coast U.S./Bahamas	2.4
1995	Hurricane Opal	Guatemala/Gulf Coast U.S.	2.3
1993	Blizzard/tornados	East Coast/20 U.S. states	2.0
1992	Hurricane Iniki	Hawaii	1.9
1991	Fire	Oakland, California	1.8

Table 3

SOURCE: Swiss Re. Sigma No. 2/2000:33.

where worldwide markets change, technologies change, and economies and businesses need immediate access to accurate information. Integrated software has helped harness information and computing resources to maximize competitive advantage. This article focuses on the use of integrated software from an educator's point of view.

DEFINITION OF AND REASONS TO USE INTEGRATED SOFTWARE

Integrated software is a single program that contains "modules" or "tools" to complete many popular business applications. These applications include word processing, spreadsheets, database management, graphics, and communications.

These tools are sufficient for the typical tasks performed by a small business, a student, or a home user. The word processing module might be used to type a letter or report. The spreadsheet module might be used to do financial analysis or to record comparisons. The database module can be used in a variety of ways, such as to organize an inventory; to compile a list of customers' (or friends') names, street or e-mail addresses, and phone and fax numbers; and to maintain a household inventory for insurance purposes. A graphics module can give an individual or a business an edge by providing tools that will give a "professional look" to documents produced.

INTEGRATED SOFTWARE IN THE EDUCATION WORLD

One of the reasons integrated software is popular in the education world is that the user can easily switch from one type of application to another without exiting the program. In a beginning or an introductory class or curriculum, the use of integrated software is beneficial because a teacher can quickly develop an entire year's syllabus. The instructor can design applications for specific projects and without losing valuable time waiting for "new" software to be loaded onto the network. The instructor will not have to reteach "new" software basics. Once the basics of a particular module of the integrated software are known, other modules will fall into place. For instance, if the integrated software's word processing module highlights *SAVE* under the dropdown *FILE* menu, its spreadsheet module will also highlight *SAVE* under the dropdown *FILE* menu.

ADVANTAGES OF USING INTEGRATED SOFTWARE

Integrated software is invaluable to the new learner of computer software, to application typing, and to a cost-conscious small business. The first advantage is its low cost which may be as little as $200 for five programs packaged as one piece of integrated software.

A second advantage is that there is only one program to install. If you are a manager of a computer network with fifty or more computers trying to access the same information at the same time, this is a significant advantage. With only one piece of software to troubleshoot, a network manager can become familiar with the little "quirks" of the program quickly. The downtime of the network then becomes minimal. There is also only one program to learn, which, of course, simplifies the learning task.

A third advantage is the ease and consistency of the interface from one module to another. Sharing data among the applications is almost effortless. For instance, one can easily add a spreadsheet, chart, and/or other graphic to a letter created in the word-processing module. As mentioned earlier, the basic functions and commands are found in the same location throughout the entire integrated software package. This consistency allows one to use the same methods for performing basic tasks. Most integrated software packages on the market today are designed so that all the applications work together.

A fourth advantage is integrated software's ability to share information between modules. For instance, an individual can first use the word-processing module to prepare a letter. Second, using the database module, the individual can create a database. Third, the individual can use the graphics module to design letterhead stationery as well as a standard format for, say, information on credit balances gathered from the data contained in the spreadsheet module. Finally, the database can be used to perform a mail merge, which involves individually addressing the letter created in the word processing module to each of the names in the database.

A final advantage is that usually there is only one manual to read and refer to when encountering a problem. If one had separate suites for each program, each would come with its own separate manual.

CREATING PROFESSIONAL-LOOKING DOCUMENTS

Integrated software provides the tools for creating professional-looking documents. Numerous typefaces, print sizes, and other features (such as **bold**, *italic*, and underlining) are usually available. Margins and tabs are easily set and changed. It requires minimal work to change line spacing, text alignment (i.e. left, right, or center align) and page size.

The word-processing module allows the user to:

- Print in columns
- Insert footnotes in a document
- Add titles, page numbers, or other information at the top and/or bottom of each page
- Add tables and/or figures to a document
- Check and correct spelling
- Replace one word with another
- Search a document for a word or phrase and replace it with something else
- Add a graphic or piece of clip art to the document

The spreadsheet module allows the user to:

- Calculate numbers automatically
- Change data within the spreadsheet (worksheet) and get immediate feedback
- Calculate and analyze mathematical and scientific data
- Enhance spreadsheets (worksheets) by adding *bold*, *italic*, and *underlining* to selected data as well as change font sizes and styles within the spreadsheet

- Make the spreadsheet into a graph or chart to aid in understanding of data

The database module allows the user to:

- Catalogue information
- Sort catalogued information by certain criteria
- Query a database to deliver only certain information (e.g. Which friends have the ZIP code 80015?)
- Do calculations in a database quickly and easily
- Merge information

The graphics module allows the user to:

- Include prepared drawings to add humor, draw attention, or illustrate a point
- Create custom-designed drawings to achieve the documents
- Shape and bend text to stylize it in titles, logos, and headlines
- Insert unique graphics into a document to give special meaning

COMMUNICATIONS

Communications is often an additional module with integrated software. With a modem, the user can use the communications module to log on to the Internet. Internet access allows use of the World Wide Web for research on, for instance, stock prices, which can then be imported into a spreadsheet. It also allows communication via e-mail.

SUMMARY

In summarizing the advantages of integrated software, *integrated* is the key word. The real power of integrated software lies in the software modules that allow you to combine two or more documents into one (word processing), insert pictures or other objects into a document (graphics), send files and/or messages electronically (e-mail), and compiling information by selecting the information from a list (database) and merging it into another document. Data from a table (spreadsheet) can also be incorporated into a document.

Virtually all parts of the business world are affected by information technology. Integrated software has helped to harness information and computing resources to maximize competitive advantage. Minimal specific skills are needed to integrate software effectively and efficiently. *Effortless*, *efficient*, *effective*, and *easy* are four summary words that explain why the use of integrated software has become so popular today.

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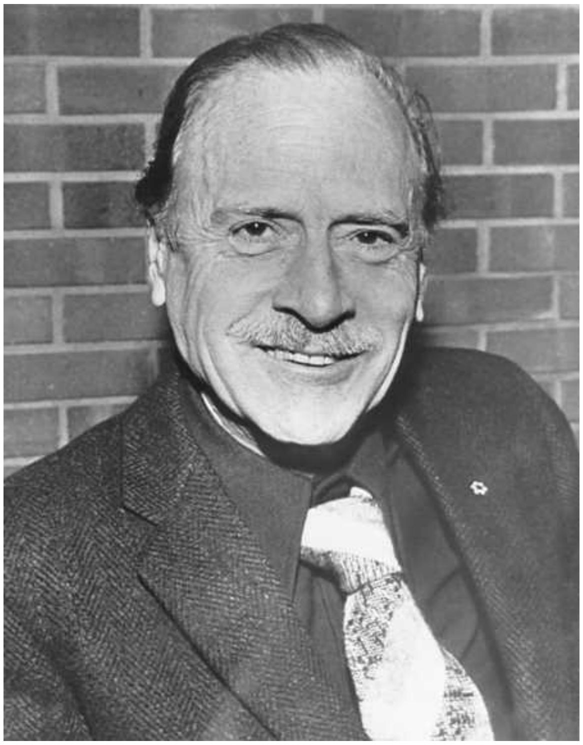
JUDITH CHIRI

INTERACTIVE TECHNOLOGY

Interactive is a new buzzword, but its sense is ancient, a lot more ancient than that of the telephone or telegraph. The interesting scientific question now is: How long have people been using words and sentences to communicate with each other? Humans are not a passive animal; they are very communicative.

The only 100% interactive (audio) technology remains today as it was at its beginning in 1875: the telephone—if interactive means truly equal two-way or multiple-way communication. Telegraphy, however, offers even more parallels with today's world than the telephone. It prefigured a major nonaudio trend in our current interactivity: computer nets which range from those used in local libraries and college classrooms to the worldwide Internet. All these, like the telegraph, use digital coding, not analog words.

The interactivity of e-mail and bulletin boards has contributed greatly to the popularity of the Internet. Mail or telephone communications are fine for a one-on-one discussion, but they are pretty expensive if one is trying to communicate with a group. It costs nearly a dollar to print and mail a letter and, on average, that much



Marshal McLuhan.

for a long-distance phone call. And to make such a call, one has to know the number and to have coordinated a time to talk. So it takes considerable time and effort to contact even a modest-size group. On a bulletin board, all one has to do is type a message once and it's available to all readers.

LINEAR VERSUS NONLINEAR TECHNOLOGY

One way to understand the benefits brought about by interactive technology is to compare linear and nonlinear multimedia. An example of linear multimedia is the typical presentation that combines video and sound, but without choices. You watch it from beginning to end. Users are reacting to, not reacting with, what they see.

Nonlinear, interactive multimedia combine the same technologies as linear ones, but with a twist. The viewer is hands-on, controlling what is viewed. Nonlinear multimedia are more complex to produce, because cogent vignettes must be worked through and likely viewer choices must be logically mapped out before the presentation. Distribution is also then limited to technology that can be dynamic in the presentation. For this category, one must pay greater attention to the interface methodology used that will let the viewer control the experience.

USES OF INTERACTIVE TECHNOLOGY

The uses of interactive technology are varied. They are utilized in such varied circumstances as education, training, marketing, and information gathering.

Education and Training. Computers with social interfaces present information in such a way that it is customized for the particular user. Different learning rates are accommodated, because computers are able to pay individual attention to independent learners. Regardless of ability or disability, each user will be able to work at an individual pace.

The interactive network allows learners to quiz themselves anytime in a risk-free environment. A self-administered quiz is a form of self-exploration. A mistake will not call forth a reprimand; it will trigger the system to help the student overcome a particuar misunderstanding. As a result, students should be less apprehensive about formal tests and such tests should contain fewer surprises, because ongoing self-quizzing gives us all a better sense of where we stand.

Interactivity is the key to successful on-line learning. Yet a survey of on-line instructional materials reveals a surprising deficiency in educational interactive programs, for three reasons: (1) Cyber-courses are largely a combination of conventional classroom and textbook material, neither of which are conducive to interactivity; (2) instructors tend to think of interactivity primarily as a means of assessment, instead of learning; (3) the concept itself is extended to cover everything from navigational buttons to chatrooms to on-line games.

Marketing. Interactive technology has two distinct advantages over traditional means of gathering consumer data. First, it allows the information to be gathered in real time, and therefore the response to the customer can be more timely than with traditional media. The more one orders from Amazon.com, for example, the more information about that consumer's reading tastes is acquired. This information is used immediately to update that buyer's "Recommend Reading List." This is critical; many sales are lost due to the lag time between the request for information and its provision.

Second, the information gathered is more specific, since the branching of questions can be as detailed as the marketer wishes. For example, if an initial set of questions asks the viewer to input his or her age and number of children, the next set of questions derives from the answer to the first, and so on. When this information is used to enhance a marketing database, marketers are able to respond to the individual needs of viewers, taking one-to-one marketing to its limits.

Gathering information. Interactive documents add value to traditional methods. Surveys that attempt to gauge satisfaction with expectations of, and responses to, new products can be more effective when done with interactive multimedia. In the previous example, Amazon.com would have more reliable information about a consumer's selections than it would have from any paper survey it might ask the public to complete. These surveys may gather more information by being more interesting than the paper alternatives. Once you get used to this sort of system, you find that being able to look at information in different ways makes the information more valuable. The flexibility invites exploration, and the exploration is rewarded with discovery.

INTERACTIVITY IS COOL

Using Marshall McLuhan's classic distinction between "hot" and "cool" media can make both the prospects and problems of interactivity clearer. In *Understanding the Media*, McLuhan (1964) explained that "a hot medium is one that extends one single sense in 'high definition.' High definition is the state of being well-filled with data (p. 22)." A cool medium, by contrast, is one in which "little is given and so much has to be filled in (p. 23)." McLuhan was primarily interested in the media themselves, and had little to say about that process of "filling in"—what today is called interactivity.

Learning is "cool" as a measure of the individual's involvement in the medium. One can easily recognize the difference between "hot" mindlessness of channel surfing and the "cool" absorption and involvement of learning. The challenge, then, is not only to produce a "cool" digital medium in which learning can take place, but to do so despite use of a screen that may remind us of television and the uninvolved behavior patterns it induces. The key to success in this challenge is interactivity—the activity of "filling in" the knowledge presented in the medium. Strategies for interactivity can be divided into three parts: passive, hyperlinked, and interpersonal.

PASSIVE INTERACTIVITY

Synchronous learning involves the simultaneous interaction of instructor and student. The standard classroom is the traditional example of synchronous interaction where the instructor and students are in the same place at the same time. Distance learning, where the instructor and students are at different locations at the same time, frequently involves audio/visual connections and "chat rooms." Asynchronous learning, on the other hand, involves the interaction of instructor and student at different times.

"Passive interactivity" need not be a contradiction in terms, because one of the problems with digital instruction is the loss of context—both physical and psychological—that a classroom setting provides. To compensate for this, on-line training needs to create a visual "focus" for the lesson at hand—a referential map of where the student has been, and where he or she is headed, to provide a context for where he or she is now. Such a context allows a student to relate the subject matter of an individual lesson to the larger scope of the course. Passively interactive page designs are thus "interactive" because the visual mapping succeeds in making the student actively aware of its importance by providing a broader context for the current lesson.

HYPERLINKED INTERACTIVITY

The key to asynchronous learning is "hyperlinked interactivity," a feature of HTML, which makes possible the creation of multiple-choice questions, expert systems, and other such branching-informational models. Branching models approximate the way people actually work through problems. Individuals take different paths, ask diferent questions, and need different information. While books can utilize limited branching schemes in a clumsy way, only computers have complex and speedy branching capabilities. Complete interaction, combined with accessibility at our convenience, exact repeatability, and uniform quality gives asynchronous on-line learning the potential, in suitable situations, of not merely replacing the traditional learning experience, but surpassing it.

INTERPERSONAL INTERACTIVITY

Even asynchronous projects benefit from the variety of communication options now available on the Internet, including e-mail, listservs, and bulletin boards. Such communication, which can be roughly grouped under the heading of "interpersonal interactivity," helps to reproduce online some of the advantages of collaborative peer learning. When utilized effectively, such communication can give people more direct and more convenient access to others and can make individual contributions more formal, thoughtful, and precise.

SUMMARY

All learning is a function of interaction. In taking training onto the Internet, instructors have an opportunity to script levels of interactivity in ways previously unavailable. To do so, however, requires rethinking on-line activities—not merely as means of assessment, but as the primary way to involve us and make learning "cool."

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PHILIP D. TAYLOR

INTEREST RATES(S)

An interest rate is a standardized measure of either: (1) the cost of borrowing money or (2) the return for lending money for a specified period of time (usually one year), such as 12% annual percentage rate (APR).

First consider the term "interest" from the perspective of a borrower. In this case, "interest" is the difference between the amount of money borrowed and the amount of money repaid. Interest expense is incurred as a result of borrowing money. On the other hand, interest revenue is earned by lending money.

For example, the amount of interest expense, as a result of borrowing $1000 on January 1, 20XX, and repaying $1120 on December 31, 20XX is $120 ($1120 − $1000). The lender, on the other hand, received $1120 on December 31, 20XX in exchange for lending $1000 on January 1, 20XX, or a total of $120 in interest revenue. Thus, with regard to any particular lending event, interest revenue equals interest expense.

The formula used to calculate the amount of interest is:

$$\text{interest} = \text{principal} \times \text{interest rate} \times \text{time} \quad [1]$$

where:

principal = amount of money borrowed

interest rate = percent paid or earned per year

time = number of years

Equation (1) can be rewritten as:

$$\text{interest rate} = \text{interest} \div \text{principal} \quad [2]$$

where:

time = one year

The principal is also known as the *present value*. The interest rate in equation (2) is called the annual percentage rate or *APR*. APR is the most useful measure of interest rate. (In the remainder of this discussion, the term "interest rate" refers to the APR.)

Equations (1) and (2) are useful in situations that involve only one cash flow (a single-payment scenario). Many economic transactions, however, involve multiple cash flows. For instance, a consumer acquires a good or service and in exchange promises to make a series of payments to the supplier. This type of transaction describes an annuity. An *annuity* is a series of equally spaced payments of equal amount. The annuity formula is:

$$\text{present value of annuity} = \text{annuity payment} \times \text{annuity factor}_{\text{i,n}} \quad [3]$$

where:

present value of annuity = value of the good or service received today (when the exchange transaction is finalized)

annuity payment = amount of the payment that is made each period

annuity factor = a number obtained from an ordinary annuity table that is determined by the interest rate (*i*) and the number of annuity payments (*n*).

An analysis of the effect of changes in interest rates requires controlling (or holding constant) two of the other three variables in equation (3).

The term "future cash flow(s)" describes cash that will be received in the future. Holding the number of payments and the amount of each payment constant, the present value of future cash flows is inversely related to the interest rate. Holding the number of payments and present value of the future cash flows constant, the amount of each payment is directly related to the interest rate. Holding the present value of the future cash flows and the amount of each payment constant, the number of payments is directly related to the interest rate. In summary, everything else held constant, increases in the interest rate (1) increase the amount of each payment, or (2) increase the number of payments required, or (3) decrease the present value of the future cash flows.

In order to understand the effect of changes in interest rates from a consumer's perspective, we first examine borrowing transactions in which the present value of the future cash flows and the number of payments are fixed. Consider, for instance, a thirty-year mortgage or a four-year auto loan. In each case, the effect of an increase in interest rates is an increase in the amount of the home or auto payment. This is shown in Table 1.

Well-known lending interest rates include the prime rate, the discount rate, and consumer rates for automobiles or mortgages. The *discount rate* is the rate that the Federal Reserve bank charges to banks and other financial institutions. This rate influences the rates these financial institutions then charge to their customers. The *prime rate* is the rate banks and large commercial institutions charge to lend money to their best customers. While the prime rate is not usually available to consumers, some consumer loans (such as mortgage lines of credit) are priced at "prime + 2 percent; that is, a consumer will pay 2 percent over the prime rate to borrow money. When the Federal Reserve raises the discount rate, typically banks raise the prime rate and consumers pay higher interest rates.

Individuals lend money by investing in debt instruments, such as Treasury bills and bonds. In this scenario, the investor receives periodic payments (annuity payments) and a lump sum when the debt instrument matures. This stream of cash flows is valued as follows:

$$\text{market value} = \text{annuity payment} \times \text{annuity factor}_{\text{i,n}} + \text{maturity value} \times \text{present value factor}_{\text{i,n}} \quad [4]$$

where:

market value = value of the debt instrument

annuity payment = amount of the payment that is made each period; it is equal

Effect of Changing Interest Rates On the Amount of Monthly Payments

Borrow $100,000 for home purchase		Borrow $20,000 for auto purchase	
Interest Rate	30-Year Mortgage Payment	Interest Rate	4-Year Auto Loan
6%	$599.55	7%	$478.93
8%	$733.76	10%	$507.25

Table 1

to the interest rate stated on the debt instrument multiplied by the face value of the debt instrument

annuity factor = a number obtained from an ordinary annuity table that is determined by the interest rate (i) and the number of annuity payments (n).

maturity value = amount received by the investor when the instrument matures, also known as the face value of the debt instrument

present value factor = a number obtained from a present value table that is determined by the interest rate (i) and the number periods until maturity (n).

When an investor purchases a debt instrument, the following factors are "fixed": (1) the amount of each annuity payment, (2) the amount of the maturity value, and (3) the number of periods until maturity (this is also the number of annuity payments that will be received in the future). As interest rates increase, the market value of the investment will decrease; that is, the price of debt securities is inversely related to the market rate of interest. This is shown in Table 2.

Effect of Changing Interest Rates on the Value of an Investment in Debt, Holding n constant

$20,000 Maturity Value Bonds paying 8% (stated) annual interest, Due in 25 years		$20,000 in Treasury Bills paying 0% Interest, Due in 90 Days	
Market Interest Rate	Market Value of the Bonds	Market Interest Rate	Market Value of the Treasury Bills
6%	$25,113	6%	$19,711
8%	$20,000	8%	$19,619
10%	$16,369	10%	$19,529

Table 2

The investors who keep the investment until the debt instrument matures will receive the market rate of interest on their investment from the date of purchase. The investor who sells their investment prior to maturity will receive the market rate of interest on the investment until it is sold. At that time, this investor will also receive either a gain or a loss due to changes in the market value of this investment. If market interest rates decrease, the investor will receive a gain. If market interest rates increase, the investor will receive a loss on the value of the investment.

HENRY H. DAVIS

INTERNAL CONTROL INTEGRATED FRAMEWORK (COSO REPORT)

(SEE: *Internal Control Systems*)

INTERNAL CONTROL SYSTEMS

Internal control can be described as any action taken by an organization to help enhance the likelihood that the objectives of the organization will be achieved. The definition of *internal control* has evolved over recent years as different internal control models have been developed. This article will describe these models, present the definitions of internal control they provide, and indicate the components of internal control. Various parties responsible for and affected by internal control will also be discussed.

THE COSO MODEL

In the United States many organizations have adopted the internal control concepts presented in the report of the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Published in 1992, the COSO report defines internal control as:

> *a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:*
>
> - effectiveness and efficiency of operations,
> - reliability of financial reporting, and
> - compliance with applicable laws and regulations.

COSO describes internal control as consisting of five essential components. These components, which are subdivided into seventeen factors, include:

1. The control environment
2. Risk assessment
3. Control activities
4. Information and communication
5. Monitoring

The COSO model is depicted as a pyramid, with control environment forming a base for control activities, risk assessment, and monitoring. Information and communication link the different levels of the pyramid. As the base of the pyramid, the control environment is arguably the most important component because it sets the tone for the organization. Factors of the control environment include employees' integrity, the organization's commitment to competence, management's philosophy and operating style, and the attention and direction of the board of directors and its audit committee. The control environment provides discipline and structure for the other components.

Risk assessment refers to the identification, analysis, and management of uncertainty facing the organization. Risk assessment focuses on the uncertainties in meeting the organization's financial, compliance, and operational objectives. Changes in personnel, new product lines, or rapid expansion could affect an organization's risks.

Control activities include the policies and procedures maintained by an organization to address risk-prone areas. An example of a control activity is a policy requiring approval by the board of directors for all purchases exceeding a predetermined amount. Control activities were once thought to be the most important element of internal control, but COSO suggests that the control environment is more critical since the control environment fosters the best actions, while control activities provide safeguards to prevent wrong actions from occurring.

Information and communication encompasses the identification, capture, and exchange of financial, operational, and compliance information in a timely manner. People within an organization who have timely, reliable information are better able to conduct, manage, and control the organization's operations.

Monitoring refers to the assessment of the quality of internal control. Monitoring activities provide information about potential and actual breakdowns in a control system that could make it difficult for an organization to accomplish its goals. Informal monitoring activities might include management's checking with subordinates to see if objectives are being met. A more formal monitoring activity would be an assessment of the internal control system by the organization's internal auditors.

OTHER CONTROL MODELS

Some users of the COSO report have found it difficult to read and understand. A model that some believe overcomes this difficulty is found in a report from the Canadian Institute of Chartered Accountants, which was issued in 1995. The report, *Guidance on Control*, presents a control model referred to as Criteria of Control (CoCo). The CoCo model, which builds on COSO, is thought to be more concrete and user-friendly. CoCo describes internal control as actions that foster the best result for an organization. These actions, which contribute to the achievement of the organization's objectives, center around:

- Effectiveness and efficiency of operations
- Reliability of internal and external reporting
- Compliance with applicable laws and regulations and internal policies.

CoCo indicates that control comprises:

> *those elements of an organization (including its resources, systems, processes, culture, structure and tasks) that, taken together, support people in the achievement of the organization's objectives.*

CoCo model recognizes four interrelated elements of internal control, including purpose, capability, commitment, and monitoring and learning. An organization that performs a task is guided by an understanding of the purpose (the objective to be achieved) of the task and supported by capability (information, resources, supplies, and skills). To perform the task well over time, the organization needs a sense of commitment. Finally, the organization must monitor task performance to improve the task process. These elements of control, which include twenty specific control criteria, are seen as the steps an organization takes to foster the right action.

In addition to the COSO and CoCo models, two other reports provide internal control models. One is the Institute of Internal Auditors Research Foundation's Systems Auditability and Control (SAC), which was issued in 1991 and revised in 1994. The other is the Information Systems Audit and Control Foundation's COBIT (Control Objectives for Information and Related Technology), which was issued in 1996.

The Institute of Internal Auditors issued SAC to provide guidance to internal auditors on internal controls related to information systems and information technology (IT). The definition of internal control included in SAC is:

> *a set of processes, functions, activities, sub-systems, and people who are grouped together or consciously segregated to ensure the effective achievement of objective and goals.*

COBIT focuses primarily on efficiently and effectively monitoring information systems. The report emphasizes the role and impact of IT control as it relates to business processes. This control model can be used by management to develop clear policy and good practice for control of IT. The following COBIT definition of internal control was adapted from COSO:

> *The policies, procedures, practices, and organizational structures are designed to provide reasonable assurance that business objectives will be achieved and that undesired events will be prevented or detected and corrected.*

While the specific definition of internal control differs across the various models, a number of concepts are very similar across these models. In particular, the models emphasize that internal control is not only policies and procedures to help an organization accomplish its objectives but also a process or system affected by people. In these models, people are perceived to be central to adequate internal control.

These models also stress the concept of reasonable assurance as it relates to internal control. Internal control systems cannot guarantee that an organization will meet its objectives. Instead, internal control can only be expected to provide reasonable assurance that a company's objectives will be met. The effectiveness of internal controls depends on the competency and dependability of the organization's people. Limitations of internal control include faulty human judgment, misunderstanding of instructions, errors, management override of controls, and collusion. Further, because of cost-benefit considerations, not all possible controls will be implemented. Because of these inherent limitations, internal controls cannot guarantee that an organization will meet its objectives.

PARTIES RESPONSIBLE FOR AND AFFECTED BY INTERNAL CONTROL

While all of an organization's people are an integral part of internal control, certain parties merit special mention. These include management, the board of directors (including the audit committee), internal auditors, and external auditors.

The primary responsibility for the development and maintenance of internal control rests with an organization's management. With increased significance placed on the control environment, the focus of internal control has changed from policies and procedures to an overriding philosophy and operating style within the organization. Emphasis on these intangible aspects highlights the importance of top management's involvement in the internal control system. If internal control is not a priority for management, then it will not be one for people within the organization either.

As an indication of management's responsibility, top management at a publicly owned organization will include in the organization's annual financial report to the shareholders a statement indicating that management has established a system of internal control that management believes is effective. The statement may also provide specific details about the organization's internal control system.

Internal control must be evaluated in order to provide management with some assurance regarding its effectiveness. Internal control evaluation involves everything management does to control the organization in the effort to achieve its objectives. Internal control would be judged as effective if its components are present and function effectively for operations, financial reporting, and compliance. The board of directors and its audit committee have responsibility for making sure the internal control system within the organization is adequate. This responsibility includes determining the extent to which internal controls are evaluated. Two parties involved in the evaluation of internal control are the organization's internal auditors and their external auditors.

Internal auditors' responsibilities typically include ensuring the adequacy of the system of internal control, the reliability of data, and the efficient use of the organization's resources. Internal auditors identify control problems and develop solutions for improving and strengthening internal controls. Internal auditors are concerned with the entire range of an organization's internal controls, including operational, financial, and compliance controls.

Internal control will also be evaluated by the external auditors. External auditors assess the effectiveness of internal control within an organization to plan the financial statement audit. In contrast to internal auditors, external auditors focus primarily on controls that affect financial reporting. External auditors have a responsibility to report internal control weaknesses (as well as reportable conditions about internal control) to the audit committee of the board of directors.

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AUDREY A. GRAMLING

INTERNATIONAL ACCOUNTING STANDARDS

Comparable, transparent, and reliable financial information is fundamental for the smooth functioning of capital markets. In the global arena, the need for comparable standards of financial reporting has become paramount because of the dramatic growth in the number, reach, and size of multinational corporations, foreign direct investments, cross-border purchases and sales of securities, as well as the number of foreign securities listings on the stock exchanges. However, because of the social, economic, legal, and cultural differences among countries, the accounting standards and practices in different countries vary widely. The credibility of financial reports becomes questionable if similar transactions are accounted for differently in different countries.

To improve the comparability of financial statements, harmonization of accounting standards is advocated. Harmonization strives to increase comparability between accounting principles by setting limits on the alternatives allowed for similar transactions. Harmonization differs from standardization in that the latter allows no room for alternatives even in cases where economic realities differ.

The international accounting standards resulting from harmonization efforts create important benefits. Investors and analysts benefit from enhanced comparability of financial statements. Multinational corporations benefit from not having to prepare different reports for different countries in which they operate. Stock exchanges benefit from the growth in the listings and volume of securities transactions. The international standards also benefit developing or other countries that do not have a national standard-setting body or do not want to spend scarce resources to undertake the full process of preparing accounting standards.

The most important driving force in the development of international accounting standards is the International Accounting Standards Committee (IASC), an independent private-sector body formed in 1973. The broad objective of the IASC is to further harmonization of accounting practices through the formulation of accounting standards and to promote their worldwide acceptance.

One hundred and forty-three professional accounting organizations in one hundred and four countries are IASC members. The IASC Board, presently consisting of sixteen member organizations, is responsible for establishing accounting and disclosure standards. The board follows due process in setting accounting standards, thus allowing for a great deal of consultation and discussion and ensuring that all interested parties can express their views at several points in the standard-setting process. The final standard requires approval by at least twelve member organizations.

On May 24, 2000, a new structure for IASC was approved unanimously by its membership. Under the new structure, IASC will be established as an independent organization that will have two main bodies, the Trustees and the Board. The Trustees will appoint the board members, exercise oversight and raise the funds needed, whereas the board will have sole responsibility for setting accounting standards. It is expected that the new structure would come into effect on January 1, 2001.

The IASC has issued forty International Accounting Standards (IASs) to date covering a range of topics, such as inventories, depreciation, research and development costs, income taxes, segment reporting, leases, business combinations, investments, earnings per share, interim financial reporting, intangible assets, employee benefits, impairment of assets, and financial instruments. It has also issued a Framework for the Preparation and Presentation of Financial Statements that sets forth the concepts underlying the preparation and presentation of financial statements for external users.

International Accounting Standards initially tended to be too broad, allowing many alternative accounting treatments to accommodate country differences. This was a serious weakness in achieving the objective of comparability. To gain acceptability of its standards, in 1989 the IASC undertook a project (called the Comparability Project) aimed at enhancing comparability of financial statements by reducing the alternative treatments. An important part of this effort was its work plan to produce a comprehensive core set of high-quality Standards (Core Standards project). The IASC has completed its Core Standards project, and the revised standards are a significant improvement over the earlier ones.

IASC standards are not mandatory. However, the acceptability of IASs has been on the rise, with an increasing number of companies stating that they prepare financial reports in accordance with IASs. Many countries endorse IASs as their own standards with or without modifications, and many stock exchanges accept IASs for cross-border listing purposes. For example, the Arab Society of Certified Accountants, comprising twenty-two Arab nations, has signed a declaration supporting IASs as the national accounting standards in all its member countries. Some European countries are developing legislation to allow not only foreign but also domestic companies to use IASs in their consolidated financial statements.

In the United States as of mid-2000, IASs are not an acceptable basis for financial statements filed with the Securities and Exchange Commission (SEC). Although the SEC has expressed support for the IASC's objective of developing accounting standards for financial statements used in cross-border offering, it has also stated that such standards must be comprehensive, possess high quality, and be subject to rigorous interpretation and application. The SEC is under increasing pressure to make U.S. capital markets more accessible to non-U.S. issuers.

Internationally, the International Organization of Securities Commissions (IOSCO), an organization comprised of securities regulators from more than eighty countries, as of mid-2000 is considering the endorsement of IASs for cross-border capital raising and listing purposes in all global markets.

Many other organizations also play an important role in the march toward international accounting standards. Among the more important are those discussed below.

IFAC. The International Federation of Accountants is a worldwide association formed in 1977 to develop the accounting profession, harmonize its auditing practices, and reduce differences in the requirements to qualify as a professional accountant in its member countries. It currently has a membership of one hundred and forty-three national professional organizations in one hundred and four countries representing more than 2 million accountants. The IFAC issues International Standards on Auditing (ISA) aimed at harmonizing auditing practices globally. The IFAC Council also appoints country representatives on the IASC Board (thirteen in total).

UN. Several organizations within the United Nations have been involved in international accounting standards. Its Group of Experts prepared a four-part report in 1976, "International Standards of Accounting and Reporting for Transnational Corporations." The report listed financial and nonfinancial items that should be disclosed by multinational corporations to host governments. More recently, it has worked to promote the harmonization of accounting standards by discussing and supporting best practices in a variety of areas, including environmental disclosures.

OECD. The Organization for Economic Cooperation and Development formed in 1960 currently has twenty-nine of the world's developed, industrialized countries as its members. A valuable contribution of the OECD is its surveys of accounting practices in member countries and its assessment of the diversity or conformity of such practices. Its Working Group on Accounting Standards supports efforts by regional, national, and international bodies promoting accounting harmonization. In 1998, the OECD issued "Principles of Corporate Governance" that support the development of high-quality, internationally recognized standards that can serve to improve the comparability of information between countries.

EU. The European Union, the powerful regional alliance of fifteen nations, aims to bring about a common market that allows free mobility of people, capital, and goods among member countries. To promote the cross-country economic integration, the EU has made significant progress in the harmonization of laws and regulations. Its Commission (European Commission) establishes standardization and harmonization of corporate and accounting rules through the issuance of Directives. Directives incorporate uniform rules (to be implemented exactly in all member states), minimum rules (which may be strengthened by individual governments), and alternative rules (which members can choose from). Directives are mandatory in that each member country has the obligation to incorporate them into its respective national law. However, each country is free to choose the form and method of implementation and also to add or delete options.

The Fourth and Seventh Directives deal exclusively with accounting issues. The Fourth Directive, adopted in 1978, covers financial statements, their contents, method of presentation, valuation methods, and disclosure of information. The Seventh Directive, adopted in 1983, requires worldwide consolidated financial statements regardless of the location of the parent company. Given the large variety of alternatives for consolidation permitted in member countries prior to its issuance, the Seventh Directive is regarded as a major development toward harmonization. The European Commission announced in 1995 its decision to rely heavily on IASC to produce results that meet the needs of capital markets. It is also investigating the possibility of requiring all member states to require listed companies to report under IASs.

NAFTA. The North American Free Trade Agreement was formed in 1993 among Canada, Mexico, and the United States to create a common market. It will phase out duties on most goods and services and promote free movement of professionals, including accountants, among the three countries. There are projects under way to analyze the similarities and differences between financial reporting and accounting standards of the member countries of NAFTA.

Other organizations. Some regional organizations—such as the Association of Southeast Asian Nations (ASEAN), Community of Sovereign States, Economic Cooperation Organization (ECO), Baltic Council, Asia Pacific Economic Cooperation (APEC), Confederation of Asian and Pacific Accountants (CAPA), and Nordic Federation of Accountants (NFA)—have made efforts toward harmonizing accounting and disclosure standards. G4—a group of standard-setting bodies in Australia, Canada, the United Kingdom, and the United States, has also started playing an important role in the harmonization of international accounting standards.

The process of harmonizing international accounting standards has come a long way on a path that has been far from smooth. While some critics still doubt the need and feasibility of such standards, it is becoming increasingly clear that the question is not whether but when the International Accounting Standards will be required and followed by business and other entities worldwide. The likely endorsement by the IOSCO and SEC will make that time sooner rather than later.

(SEE ALSO: *International Federation of Accountants*)

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MAHENDRA GUJARATHI

INTERNATIONAL FEDERATION OF ACCOUNTANTS

The International Federation of Accountants (IFAC) was officially constituted in October 1977 at the World Congress of Accountants in Munich. Its constitution was signed by sixty-three accountancy bodies in forty-nine countries. Its original terms of reference emphasized (1) the promotion of harmonized *accounting* standards, that is, measurement and disclosure standards, and (2) the development of harmonized *professional* standards, for example, auditing, education, and ethical standards. This duality of purpose placed IFAC in potential conflict with the International Accounting Standards Committee (IASC), whose mission also embraced accounting harmonization. To minimize duplication of effort, both organizations agreed in 1982 to have a uniform membership in which IASC would concentrate on promoting harmonized accounting standards while IFAC would focus on promoting harmonized professional standards.

MEMBERSHIP

Support for IFAC's quest to develop a truly international and cohesive accountancy profession is reflected in its expanded membership of one hundred twenty-three professional accountancy bodies in eighty-seven countries. As of 1999, IFAC recognizes three types of members.

1. Full membership is open to national accountancy organizations that have a professional standard-setting role and that possess rigorous credentialing standards.
2. Associate membership is confined to national accountancy organizations that do not meet full membership criteria.
3. Affiliate membership is open to international organizations that have an interest in the accountancy profession.

ORGANIZATION

IFAC's governance structure is made up of the following components:

1. An *Assembly* comprised of representative from each member accountancy organization. Meeting every two and half years, it is responsible for electing *Council* and approving changes to IFAC's constitution.
2. A *Council* consisting of elected representatives from eighteen countries serving two-and-a-half-year terms. It establishes broad policies, appoints various technical committees and task forces, and oversees IFAC's operations through an *Executive Committee.*
3. An *Executive Committee* comprised of a president, deputy president, director general, and three other members of Council. It is responsible for the implementation of Council's established policies.
4. A *Secretariat*, headquartered in New York City, that provides overall direction and administration.
5. *Technical Committees and Task Forces* that carry on the work of IFAC. Each issues professional guidelines and relevant documents.

COMMITTEE ACTIVITIES

Six standing committees make up the backbone of the IFAC:

Education Committee: issues guidelines on entry-level and continuing professional education requirements, including prequalification, formal education, tests of professional competence, practical experience requirements and continuing education

Ethics Committee: promotes a current code of ethics for accountants

Financial and Management Accounting Committee: works to increase financial and management accountants' awareness of their professional responsibilities via publications, sponsored research, and forums for the exchange of ideas

Public Sector Committee: produces guidelines and studies of international applicability to national, regional, and local governments and related agencies

Information Technology Committee: assesses and relates the impact of information technology on accountant's roles and responsibilities

Membership Committee: strives to increase IFAC's membership and maintain stringent membership criteria

IFAC's Council occasionally appoints special task forces to address important issues. Six task forces active in the mid-1990s include:

- Anti-Corruption
- General Agreement on Trade in Services
- Legal Liability
- Quality Assurance
- Small and Medium Enterprise
- Structure and Organization

IFAC has close ties with other international organizations such as IASC and the International Organization for Securities Commissions (IOSCO). The financial statements of an increasing number of companies are being audited in conformity with IFAC's International Standards on Auditing.

Further information on IFAC, its membership, activities, pronouncements and publications can be secured from the IFAC Web site, http://www.ifac.org/FactsAndFigures/index.html.

(SEE ALSO: *International Accounting Standards*)

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FREDERICK D. S. CHOI

INTERNATIONAL INVESTMENT

International business is not a new phenomenon; it extends back into history beyond the Phoenicians. Products have been traded across borders throughout recorded civilization, extending back beyond the Silk Road that once connected East with West from Xian to Rome. The Silk Road was probably the most influential international trade route of the last two millennia, literally shaping the world as we know it. For example, pasta, cheese, and ice cream, as well as the compass and explosives, among other things, were brought to the Western world from China via the Silk Road.

What is relatively new, beginning with large U.S. companies in the 1950s and 1960s and with European and Japanese companies in the 1970s and 1980s, is the large number of companies engaged in international investment with interrelated production and sales operations located around the world. At no other time in economic history have countries been more economically interdependent than they are today. Although the second half of the twentieth century saw the highest sustained growth rates of gross domestic product (GDP) in history, the growth in the international flow of goods and services has consistently surpassed the growth rate of the world economy. Simultaneously, the growth in international financial flows—including foreign direct investment, portfolio investment, and trading in currencies—has achieved a life of its own. Daily international financial flows now exceed $1 trillion.

Thanks to trade liberalization, heralded by the General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organization (WTO), the barriers to international trade and financial flows keep getting lower. While global GDP has grown fivefold since 1950, global trade has expanded seventeenfold during the same period. For forty-nine countries, average exports as a share of GDP also increased to approximately 24 percent in 1998 from 17 percent a decade earlier. Expanding world markets are a key driving force for the twenty-first-century economy. Although the severe slump in Asia in the late 1990s points up the vulnerabilities in

Country Competitiveness Report

Human Resources			Natural Resources			Capital Resources		
Country	**Score**	**Rank**	**Country**	**Score**	**Rank**	**Country**	**Score**	**Rank**
Japan	73.2	1	Russia	74.1	1	France	97.3	1
United States	73.0	2	Australia	69.1	2	Japan	96.9	2
Indonesia	72.1	3	Canada	62.8	3	Luxembourg	96.4	3
Thailand	70.9	4	Iceland	60.3	4	Singapore	96.3	4
Singapore	70.7	5	Austria	53.7	5	United Kingdom	96.2	5
Taiwan	69.0	6	Norway	53.1	6	Norway	96.0	6
Korea	67.9	7	France	48.6	7	Denmark	95.8	7
Hong Kong	67.7	7	United States	48.5	8	Netherlands	95.6	8
Malaysia	66.5	9	Spain	47.5	9	United States	95.6	9
Austria	65.7	10	Italy	47.5	10	Hong Kong	95.4	10

Table 1

SOURCE: Dong-Sung Cho and Hwy-Chang Moon. (1998). *The New Competitive Report.* The Institute of Industrial Policy Studies. http://www.ips.ok.kr.

the global marketplace, the long-term trends of increasing trade and investment and rising world incomes continue. As a consequence, even a firm that is operating in only one domestic market is not immune to the influence of economic activities external to that market. The net result of these factors has been the increased interdependence of countries and economies, increased competitiveness, and the concomitant need for firms to keep a constant watch on the international economic environment.

INTERTWINED WORLD ECONOMY

Human, natural, and capital resources shape the nature of international business. A country's relative endowments in those resources shape its competitiveness. Although wholesale generalizations should not be made, the role of human resources has become increasingly important as a primary determinant of industry and country competitiveness. As shown in Table 1, the Institute of Industrial Policy Studies' country competitiveness report in 1998 placed the Asian Tigers—Indonesia, Thailand, Singapore, Taiwan, Korea, Hong Kong, and Malaysia—among the world's top ten economies, along with Japan and the United States, in terms of human resources. A word of caution is in order when we use any aggregate reports. Although the rankings for human and natural resources may not vary much from year to year, the ranking for capital resources could change drastically from year to year because of their fluid nature. Once all these resources are combined, we could expect enormous complexity in country competitiveness.

The importance of international trade and investment cannot be overemphasized for any country. In general, the larger the country's domestic economy, the less dependent it tends to be on exports and imports relative to its GDP. For the United States (GDP = $7.43 trillion in 1998), international trade in goods and services (sum of exports and imports) rose from 10 percent of GDP in 1970 to about 20 percent in 1998. For Japan (GDP = $5.15 trillion), with approximately two-thirds the U.S. GDP, trade forms a little over 14 percent of GDP. For Germany (GDP = $2.37 trillion), with slightly less than

Leading Exporters and Importers in World Trade in Merchandise and Services, 1998

(IN $BILLION)

Rank	EXPORTERS	Value	Value per capita	Rank	IMPORTERS	Value	Value per capita
1	United States	911.6	3,320	1	United States	1,106.1	4,090
2	Germany	615.4	7,500	2	Germany	588.4	7,170
3	Japan	448.0	3,560	3	United Kingdom	392.2	6,650
4	France	385.6	6,560	4	Japan	390.0	3,100
5	United Kingdom	372.2	6,310	5	France	350.0	5,950
6	Italy	311.0	5,480	6	Italy	283.3	4,990
7	Netherlands	246.5	15,670	7	Canada	239.8	7,820
8	Canada	243.1	7,930	8	Netherlands	228.9	14,550
9	Hong Kong, China	208.3	31,080	9	Hong Kong, China	211.4	31,530
	Domestic exports	*24.3*			*Retained imports*[a]	*38.9*	
10	China	206.8	170	10	Belgium-Luxembourg	192.4	17,443

[a] Retained imports are defined as imports less re-exports.

Table 2

SOURCE: Computed from: *World Trade Growth Slower in 1998 After Unusually Strong Growth in 1997*. World Trade Organization, press release, April 16, 1999; *Statistical Abstract of the United States 1998*. Washington, DC: Census Bureau, 1998.

half the GDP of Japan, trade forms about 40 percent of GDP. For Taiwan (GDP = $0.27 trillion), trade forms as much as 82 percent of GDP. These trade statistics are relative to the country's GDP. In absolute dollar terms, however, a small relative trade percentage of a large economy still translates into large volumes of trade (Table 2). As shown in the last column for both exports and imports in Table 2, the per-capita amount of exports and imports is another important statistic for marketing purposes, since it represents, on average, how much each individual is involved in or dependent on international trade. For instance, individuals (consumers and companies) in the United States and Japan tend to be able to find domestic sources for their needs because their economies are diversified and extremely large. The U.S. per-capita values of exports and imports are $3320 and $4090, respectively. The numbers for Japan are very similar to those of the United States, with $3560 and $3100, respectively. On the other hand, individuals in rich but smaller economies tend to rely more heavily on international trade, as illustrated by the Netherlands, with per-capita exports and imports of $15,670 and $14,550, respectively, and by Hong Kong, with per-capita exports and imports of a whopping $31,080 and $31,530, respectively. Although China's overall exports and imports amounted to $206.8 billion and $168.8 billion (not shown in Table 2), respectively, per-capita exports and imports amounted to only $170 and $136, respectively, in 1998. One implication of these figures is that the higher the per-capita trade, the more closely intertwined is that country's economy with the rest of the world. Intertwining of economies by the process of specialization due to international trade leads to job creation in both the exporting country and the importing country.

However, beyond the simple figure of trade as a rising percentage of a nation's GDP lies the more interesting question of what rising trade does to the economy of a nation. A nation that is a successful trader—that is, it makes goods and services that other nations buy and it buys goods and services from other nations—displays a natural inclination to be competitive in the world market. The threat of a possible foreign competitor is a powerful incentive for firms and nations to invest in technology and markets in order to remain competitive. Also, apart from trade flows, foreign direct investment, portfolio investment, and daily financial flows in the international money markets profoundly influence the economies of countries that may be seemingly completely separate.

FOREIGN DIRECT INVESTMENT

Foreign direct investment—which means investment in manufacturing and service facilities in a foreign country—is another facet of the increasing integration of national economies. Between 1990 and 1997, the value of international trade grew by just under 60 percent in dollar terms, whereas foreign direct investment nearly doubled over the same period. Most of this investment went from one developed country to another, but a growing share is now going to developing countries, mainly in Asia. The overall annual world inflow of foreign direct investment reached $400 billion in 1997. Flows to developing countries in 1997 amounted to $149 billion, representing 37 percent of all global foreign direct investment, compared with $34 billion, or 17 percent of all foreign direct investment, in 1990.

In the past, foreign direct investment was considered to be an alternative to exports in order to avoid tariff barriers. However, today foreign direct investment and international trade have become complementary. For example, Dell Computer uses a factory in Ireland to supply personal computers in Europe instead of exporting from Austin, Texas. Similarly, Honda, a Japanese automaker with a major factory in Marysville, Ohio, is the largest exporter of automobiles from the United States. As firms invest in manufacturing and distribution facilities outside their home countries to expand into new markets around the world, they have added to the stock of foreign direct investment.

The increase in foreign direct investment is also promoted by the efforts of many national governments to attract multinationals and by the leverage that the governments of large potential markets, such as China and India, have in granting access to multinationals. Sometimes trade friction can also promote foreign direct investment. Investment in the United States by Japanese companies is, to some extent, a function of the trade imbalances between the two nations and of the U.S. government's consequent pressure on Japan to do something to reduce the bilateral trade deficit. Since most of the U.S. trade deficit with Japan is attributed to Japanese cars exported from Japan, Japanese automakers, such as Honda, Toyota, Nissan, and Mitsubishi, have expanded their local production by setting up production facilities in the United States. This localization strategy reduces Japanese automakers' vulnerability to retaliation by the United States under the Super 301 laws of the Omnibus Trade and Competitiveness Act of 1988.

PORTFOLIO INVESTMENT

The increasing integration of economies also derives from *portfolio investment* (or *indirect investment*) in foreign countries and from money flows in the international financial markets. Portfolio investment refers to investments in foreign countries that are withdrawable at short notice, such as investment in foreign stocks and bonds. In the international financial markets, the borders between nations have, for all practical purposes, disappeared. The enormous quantities of money that are traded on a daily basis have assumed a life of their own. When trading in foreign currencies began, it was as an adjunct to the international trade transaction in goods and services—banks and firms bought and sold currencies to complete the export or import transaction or to hedge the exposure to fluctuations in the exchange rates in the currencies of interest in the trade transaction. However, in today's international financial markets, traders usually trade currencies without an underlying trade transaction. They trade on the accounts of the banks and financial institutions they work for, mostly on the basis of daily news on inflation rates, interest rates, political events, stock and bond market movements, commodity supplies and demand, and so on. The weekly volume of international trade in currencies exceeds the annual value of the trade in goods and services.

The effect of this trend is that all nations with even partially convertible currencies are exposed to the fluctuations in the currency markets. A rise in the value of the local currency due to these daily flows vis-à-vis other currencies makes exports more expensive (at least in the short run) and can add to the trade deficit or reduce the trade surplus. A rising currency value will also deter foreign investment in the country and encourage outflow of investment. It may also encourage a decrease in the interest rates in the country if the central bank of that country wants to maintain the currency exchange rate and a decrease in the interest rate would spur local investment. An interesting example is the Mexican meltdown in early 1995 and the massive devaluation of the peso, which was exacerbated by the withdrawal of money by foreign investors. The massive depreciation of many Asian currencies in the 1997-1999 period, known as the Asian financial crisis, is also an instance of the influence of these short-term movements of money. Today, the influence of these short-term money flows is a far more powerful determinant of exchange rates than an investment by a Japanese or German automaker.

Despite its economic size, the United States continues to be relatively more insulated from the global economy than other nations. Most of what Americans consume is produced in the United States—which implies that, in the absence of a chain reaction from abroad, the United States is relatively more insulated from external shocks than, say, Germany and China.

The dominant feature of the global economy, however, is the rapid change in the relative status of various countries' economic output. In 1830, China and India alone accounted for about 60 percent of the manufactured output of the world. However, the share of the world manufacturing output produced by the twenty or so countries that today are known as the rich industrial economies increased from about 30 percent in 1830 to almost 80 percent by 1913. In the 1980s, the U.S. economy was characterized as "floundering" or even "declining," and many pundits predicted that Asia, led by Japan, would become the leading regional economy in the twenty-first century. Then the Asian financial crisis of the late 1990s changed the economic milieu of the world; today, the U.S. economy has been growing at a faster rate than that of any other developed countries. In recent years, the United States and Western European economies have become the twin engines of the world economy, driven by increased trade and investment as a result of continued deregulation, improved technology, and transatlantic mergers, among other things. Obviously, a decade is a long time in the ever-changing world economy; and indeed, no single country has sustained its economic performance continuously.

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MASAAKI KOTABE

INTERNATIONAL MONETARY FUND

The International Monetary Fund was established to foster international trade and currency conversion, which it does through consultation and loan activities. When created in 1946, the IMF had 39 member countries; by November 1999 the membership in the IMF had grown to 182 member countries. As of this writing, every major country is now a member, including the

Harry Dexter White.

former communist countries, as are includes numerous small countries. The only exceptions are Cuba and North Korea.

To join the IMF, a country must deposit a sum of money called a quota subscription, the amount of which is based on the wealth of the country's economy. Quotas are reconsidered every five years and can be increased or decreased based on IMF needs and the prosperity of the member country. In 1999, the United States contributed the largest percentage of the annual contributions—18 percent—because it had the largest, richest economy in the world. Voting rights are allocated in proportion to the quota subscription.

HISTORICAL DEVELOPMENT

The Depression in the 1930s devastated international trade and monetary exchange, creating a great loss of confidence on the part of those engaged in international business and finance. Because international traders lost confidence in the paper money used in international trade, there was an intense demand to convert paper money into gold—a demand beyond what the treasuries of countries could supply. Nations that defined the value of their currency in terms of a given amount of gold were unable to meet the conversion demand and had to abandon the gold standard. Valuing currencies in terms of given amounts of gold, however, had given currencies stable values that made international trade flow smoothly.

The relationship between money and the value of products became confused. Some nations hoarded gold to make their currency more valuable so that their producers could buy raw materials at lower prices. Other countries, desperate for foreign sales of their goods, engaged in competitive devaluations of their currencies. World trade became difficult. Countries restricted the exchange of currency, and even encouraged barter. In the early 1940s Harry Dexter White of the United States and John Maynard Keynes of the United Kingdom proposed the establishment of a permanent international organization to bring about the cooperation of all nations in order to achieve clear currency valuation and currency convertibility as well as to eliminate practices that undermine the world monetary system.

Finally, at an international meeting in Bretton Woods, New Hampshire, in July 1944, it was decided to create a new international monetary system and a permanent international organization to monitor it. Forty-four countries agreed to cooperate to solve international trade and investment problems, setting the following goals, for the new permanent, international organization:

- Unrestricted conversion of currencies
- Establishment of a value for each currency in relation to others
- Removal of restrictive trade practices

CREATION OF THE INTERNATIONAL MONETARY FUND

In 1946 in Washington, D.C., the international organization to monitor the new international monetary system came into existence—the International Monetary Fund (IMF). The purposes of the IMF are as follows:

> To promote international monetary consultation, cooperation, and collaboration
>
> To facilitate the expansion and balanced growth of international trade
>
> To promote exchange stability
>
> To assist in the establishment of a multilateral system of payments
>
> To make its general resources temporarily available to its members experiencing balance of payments difficulties under adequate safeguards
>
> To shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members

The Bretton Woods agreement created fixed exchange rates between countries based on the value of each country's currency in relation to gold or indirectly in relation to gold by relating their currency to the U.S. dollar. The United States in turn guaranteed that the dollar could be exchanged for gold at a fixed exchange rate. The United States, however, ultimately could not maintain the dollar's promised convertibility, ending it in 1971, in large part because of inflation and a subsequent run on the U.S. gold reserve. The fixed-exchange-rate system collapsed. This led to a managed flexible-exchange-rate system with agreement among major countries that they would try to coordinate exchange rates based on price indexes. However, without operational criteria for managing currency relationships, exchange rates have been increasingly determined by volatile international capital movements rather than by trade relationships.

ORGANIZATIONAL STRUCTURE

The organization of the IMF has at its top a board of governors and alternate governors, who are usually the ministers of finance and heads of central banks of each member country. Because of their positions, they are able to speak authoritatively for their countries. The entire board of governors and alternate governors meets once a year in Washington, D.C., to formally determine IMF policies. During the rest of the year, a twenty-four-member executive board, composed of representatives or the total board of governors, meets a number of times each week to supervise the implementation of the policies adopted by the board of governors. The IMF staff is headed by its managing director, who is appointed by the executive board. The managing director chairs meetings of the executive board after appointment. Most staff members work at IMF headquarters in Washington, D.C. A small number of staff members are assigned to offices in Geneva, Paris, and Tokyo and at the United Nations.

SURVEILLANCE AND CONSULTATIONS

At least annually, a team of IMF staff members visits each member country for two weeks. The team of four of five meets with government officials, makes inquiries, engages in discussions, and gathers information about the country's economic policies and their effectiveness. If there are currency exchange restrictions, the consultation includes inquiry as to progress toward the elimination of such restrictions. Statistics are also collected on such matters as exports and imports, tax revenues, and budgetary expenditures. The team reports the results of the visit to the IMF executive board. A summary of the discussion is transmitted to the country's government, and for countries agreeing to the release of the summary, to the public.

FINANCIAL ASSISTANCE

The IMF endeavors to stabilize the international monetary system by temporarily lending resources in the form of foreign currencies and gold to countries experiencing international payment difficulties. There are a number of reasons why a country may need such assistance. One possibility is that the country has a trade deficit, which is often offset by lending, capital investment, and possibly aid from richer countries. However, confidence in the country's economic system and its ability to repay its debts becomes diminished in such a situation. The IMF requires that the borrowing country provide a plan for reform that will ultimately result in resolving the payments problems. Reforms such as tighter fiscal and monetary policies, good government control of expenditures, elimination of corruption, and provision for greater disclosure are required.

The most immediate assistance to a member country with payments difficulty is permission to withdraw 25 percent of the quota subscription that was initially paid in the form of gold or convertible currency. If the country still cannot meet its payments obligations it can, ultimately, borrow up to three times its original quota payment. The borrowing country must produce a plan of reform that will overcome the payments problem.

The IMF has a number of additional lending plans to meet various problems experienced by its members as well as emergency lending programs. There are Stand-By Arrangements disbursed over one to two years for temporary deficits, the Compensatory and Contingency Financing Facility for sudden drops in export earnings, Emergency Assistance for natural disasters, Extended Fund Facility to correct structural problems with maturities of greater length, the Supplemental Reserve Facility to provide loans to countries experiencing short-term payments problems due to a sudden loss of market confidence in the country's currency, and the Systemic Transformation Facility for the former communist countries in Eastern Europe and Russia.

SPECIAL DRAWING RIGHTS (SDRS)

In the 1960s, during an expansion of the world economy while gold and the U.S. dollar were the reserve currencies, it appeared that reserves were insufficient to provide for international trade needs. The IMF was empowered to create a new reserve asset, called the special drawing right (SDR), which it could lend to member countries. The value assigned to the SDR is the average of the world's major currencies. Countries with strong currencies agreed to buy SDRs when needed by a country because of payment problems, and in turn sell other currencies. However, at present SDRs are used mostly for repayment of IMF loans. Creation of SDRs is limited by the IMF constitution to times when there is a long-term global reserve shortage. The board of governors and alternate governors is empowered to make such a determination.

LOANS TO POOR, INDEBTED COUNTRIES

The IMF has created various loan facilities such as the Trust Fund to provide loans to its poorest member countries. In addition, the IMF works cooperatively with the World Bank, other international organizations, individual countries, and private lenders to assist poor, debt-ridden countries. It encourages such countries to restructure their economies to create better economic conditions and better balance of payment conditions.

There have been critics of the IMF's effectiveness. Such critics have noted, for example, instances of massive corruption on the part of recipient governments that resulted in IMF funds being stolen and/or wasted. Also, there have been a number of instances in which IMF efforts have been assessed as unsuccessful. Recommended restrictive fiscal policies have been seen as causing troublesome conditions, such as food shortages and citizen unrest. Nobel-prize-winning economist Robert Mundell, for example, has taken the position that current IMF policy options are insufficient to achieve stable international currency exchange and thereby foster international trade. He recommends that a global currency and world central bank be created to establish a stable international currency.

(SEE ALSO: *Global Economy*; *International Investment*; *International Trade*)

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BERNARD H. NEWMAN

INTERNATIONAL TRADE

The world has a long, rich history of international trade among nations that can be traced back to early Assyrian, Babylonian, Egyptian, and Phoenician civilizations. These and other early civilizations recognized that trade can be tied directly to an improved quality of life for the citizens of all the partners. Today, the practice of trade among nations is growing by leaps and bounds. There is hardly a person on earth who has not been influenced in some way by the growing trade among nations.

WHY INTERNATIONAL TRADE?

One of the most logical questions to ask is, why do modern countries trade with one another? There are numerous reasons that countries engage in international trade. Some countries are deficient in critical raw materials, such as lumber or oil. To make up for these various deficiencies, countries must engage in international trade to obtain the resources necessary to produce the goods and/or services desired by their citizens. In addition to trading for raw materials, nations also exchange a wide variety of processed foods and finished products. Each country has its own specialties that are based on its economy and the skills of its citizens. Three common specialty classifications are capital, labor, and land.

Capital-intensive products, such as cars and trucks, heavy construction equipment, and industrial machinery, are produced by nations that have a highly developed industrial base. Japan is an example of a highly developed industrial nation that produces large quantities of high-quality cars for export around the world. Another reason Japan has adapted to producing capital-intensive products is that it is an island nation; there is little land available for land-intensive product production. Labor-intensive commodities, such as clothing, shoes, or other consumer goods, are produced in countries that have relatively low labor costs and relatively modern production facilities. China, Indonesia, and the Philippines are examples of countries that produce many labor-intensive products. Products that require large tracts of land, such as cattle production and wheat farming, are examples of land-intensive commodities. Countries that do not have large tracts of land normally purchase land-intensive products from countries that do have vast amounts of suitable land. The United States, for example, is one of the leading exporters of wheat. The combination of advanced farming technology, skilled farmers, and large tracts of suitable farmland in the Midwest and the Great Plains makes the mass production of wheat possible.

Over time a nation's work force will change, and thus the goods and services that nation produces and exports will change. Nations that train their workers for future roles can minimize the difficulty of making a transition to a new, dominant market. The United States, for example, was the dominant world manufacturer from the end of World War II until the early 1970s. But, beginning in the 1970s, other countries started to produce finished products more cheaply and efficiently than the United States, causing U.S. manufacturing output and exports to drop significantly. However, rapid growth in computer technology began to provide a major export for the United States. Practically speaking, the United States has been slowly transformed from a manufacturing-based economy into a new Information Age-based economy that relies on exporting cutting-edge technology as high tech software and computer companies proliferate.

POLITICAL ENVIRONMENT

Each country varies regarding international trade and relocation of foreign plants on its native soil. Some countries openly court foreign companies and encourage them to invest in their country by offering reduced taxes or some other investment incentives. Other countries impose strict regulations that can cause large companies to leave and open a plant in a country that provides more favorable operating conditions. When a company decides to conduct business in another country, it should also consider the political stability of the host country's government. Unstable leadership can create significant problems in recouping profits if the government falls of the host country and/or changes its policy towards foreign trade and investment. Political instability is often caused by severe economic conditions that result in civil unrest.

Another key aspect of international trade is paying for a product in a foreign currency. This practice can create potential problems for a company, since any currency is subject to price fluctuation. A company could lose money if the value of the foreign currency is reduced before it can be exchanged into the desired currency. Another issue regarding currency is that some nations do not have the necessary cash. Instead, they engage in countertrade, which involves the direct or indirect exchange of goods for other goods instead of for cash. Countertrade follows the same principles as bartering, a practice that stretches back into prehistory. A car company might trade new cars to a foreign government in exchange for high-quality steel that would be more costly to buy on the open market. The company can then use the steel to produce new cars for sale.

In a more extreme case, some countries do not want to engage in free trade with other nations, a choice known as self-sufficiency. There are many reasons for this choice, but the most important is the existence of strong political beliefs. For example, the former Soviet Union and its communist allies traded only with each other because the Soviet Union feared that Western countries would attempt to control their governments through trade. Self-sufficiency allowed the Soviet Union and its allies to avoid that possibility. However, these self-imposed trade restrictions created a shortage of products that could not be produced among the group, making the overall quality of life within the Soviet bloc substantially lower than in the West since consumer demand could not be met. When the Berlin Wall came down, trade with the West was resumed, and the shortage of products was reduced or eliminated.

ECONOMIC ENVIRONMENT

An important factor influencing international trade is taxes. Of the different taxes that can be applied to imported goods, the most common is a tariff, which is generally defined as an excise tax imposed on imported goods. A country can have several reasons for imposing a tariff. For example, a revenue tariff may be applied to an imported product that is also produced domestically. The primary reason for this type of tariff is to generate revenue that can be used later by the government for a variety of purposes. This tariff is normally set at a low level and is usually not considered a threat to international trade. When domestic manufacturers in a particular industry are at a disadvantage, vis-à-vis imports, the government can impose what is called a protective tariff. This type of tariff is designed to make foreign products more expensive than domestic products and, as a result, protect domestic companies. A protective tariff is normally very popular with the affected domestic companies and their workers because they benefit most directly from it.

In retaliation, a country that is affected by a protective tariff will frequently enact a tariff of its own on a product from the original tariff enacting country. In 1930, for example, the U.S. Congress passed the Smoot-Hawley Tariff Act, which provided the means for placing protective tariffs on imports. The United States imposed this protective tariff on a wide variety of products in an attempt to help protect domestic producers from foreign competition. This legislation was very popular in the United States, because the Great Depression had just begun, and the tariff was seen as helping U.S. workers. However, the tariff caused immediate retaliation by other countries, which immediately imposed protective tariffs of their own on U.S. products. As a result of these protective tariffs, world trade was severely reduced for nearly all countries, causing the wealth of each affected nation to drop, and increasing unemployment in most countries. Realizing that the 1930 tariffs were a mistake, Congress took corrective action by passing the Reciprocal Trade Agreements Act of 1934, which empowered the president to reduce tariffs by 50 percent on goods from any other country that would agree to similar tariff reductions. The goal was to promote more international trade and help establish more cooperation among exporting countries.

Another form of a trade barrier that a country can employ to protect domestic companies is an import quota, which strictly limits the amount of a particular product that a foreign country can export to the quota-enacting country. For example, the United States had threatened to limit the number of cars imported from Japan. However, Japan agreed to voluntary export quotas, formally known as "voluntary export restrictions," to avoid U.S. imposed import quotas. The power of import quotas has diminished because foreign manufacturers have started building plants in the countries to which they had previously exported in order to avoid such regulations.

A government can also use a nontariff barrier to help protect domestic companies. A nontariff barrier usually refers to government requirements for licenses, permits, or significant amounts of paperwork in order to allow imports into its country. This tactic often increases the price of the imported product, slows down delivery, and creates frustration for the exporting country. The end goal is that many foreign companies will not bother to export their products to those markets because of the added cost and aggravation. Japan and several European countries have frequently used this strategy to limit the number of imported products.

CULTURAL ENVIRONMENT

Before a corporation begins exporting products to other countries, it must first examine the norms, taboos, and values of those countries. This information can be critical to the successful introduction of a product into a particular country and will influence how it is sold and/or marketed. Such information can prevent cultural blunders, such as the one General Motors committed when trying to sell its Chevy Nova in Spanish-speaking countries. *Nova*, in Spanish, means "doesn't go"—and few people would purchase a car named "doesn't go." This marketing error—resulting simply from ignorance of the Spanish language—cost General Motors millions in initial sales—as well as considerable embarrassment.

Business professionals also need to be aware of foreign customs regarding standard business practices. For example, people from some countries like to sit or stand very close when conducting business. In contrast, people from other countries want to maintain a spatial distance between them and the people with whom they are conducting business. Thus, before businesspeople travel overseas, they must be given training on how to conduct business in the country to which they are traveling.

Business professionals also run into another practice that occurs in some countries—bribery. The practice of bribery is common in several countries and is considered a normal business practice. If the bribe is not paid to a businessperson from a country where bribery is expected, a transaction is unlikely to occur. Laws in some countries prohibit businesspeople from paying or accepting bribes. As a result, navigating this legal and cultural thicket must be done very carefully in order to maintain full compliance with the law.

PHYSICAL ENVIRONMENT

Other factors that influence international trading activities are related to the physical environment. Natural physical features, such as mountains and rivers, and human-made structures, such as bridges and roads, can have an impact on international trading activities. For example, a large number of potential customers may live in a country where natural physical barriers, such as mountains and rivers, make getting the product to market nearly impossible.

WORLD TRADE ORGANIZATIONS AND AGREEMENTS

After World War II, the world's leading nations wanted to create a permanent organization that would help foster world trade. Such an organization came into being in 1947 when representatives from the United States and twenty-three other nations signed the document creating the General Agreement on Tariffs and Trade (GATT), which now includes more than one hundred countries as signatories. The threefold purpose of GATT was to (1) foster equal, nondiscriminatory treatment for all member nations; (2) promote the reduction of tariffs by multilateral negotiations; and (3) foster the elimination of import quotas. GATT nations meet periodically to review progress toward established objectives and to set new goals that member countries want to achieve. The goals and objectives of GATT vary and change over time as trade issues evolve based on domestic and world economies.

Likewise, representatives from Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom came together to form the European Economic Community (EEC)—sometimes called the Common Market—in 1958. The purpose of the EEC was to create equal and fair tariffs for all of the nations in the organization so that trade could flourish in Europe. The EEC has generally been regarded as successful.

The United States and Canada signed the U.S. Canadian Free Trade Agreement in 1989, which provided for the removal of all trade barriers between the two countries—such as tariffs, quotas, or other trade restrictions—within a ten-year period. This act helped promote even more trade between the two countries, thus further strengthening an already strong trade relationship.

The United States, Canada, and Mexico signed the North American Free Trade Agreement (NAFTA) in 1994 in order to create a free-trade zone among the three countries. Leaders of these three countries realized that a large North American free-trade zone could compete effectively against the EEC and other trading blocs that might develop in the future. This competitive factor was a driving force in the nations' signing of the agreement, each believing that, over the long run, all three would benefit from the agreement.

In addition to feeling the impact of trade agreements and trade organizations per se, international trade is affected more indirectly by the financial stability and general economic well-being of all countries in our increasingly interconnected world. Thus two other international organizations ultimately affect the health of world trade.

To further promote trade among countries, the Allied nations of World War II met in 1944 in Bretton Woods, New Hampshire, to help set postwar global financial policies and thereby avoid future financial crises. The International Monetary Fund (IMF) was created as a result of that conference, its mission being to provide loans to countries that are in financial trouble. The IMF dictates the terms of the loans, which may include cutting domestic subsidies, privatizing government industries, and moderating trade policies. To fund these loans, IMF members make annual contributions, with each country's contribution determined by its size, national income, population, and volume of trade. Larger contributing countries, such as Britain and the United States, have more say as to what countries get loans and the terms of the loan.

The World Bank, with approximately 157 members, is another international organization to which the United States is a major contributor. The World Bank's mission is to help less developed countries achieve economic growth through improved trade. It does so by providing loans and guaranteeing or insuring private loans to nations in need of financial assistance. The World Bank has been characterized as (1) a last-resort lender, (2) a facilitator of development projects so as to encourage the inflow of private banking funds, and (3) a provider of technical assistance for fostering long-term economic growth.

SUMMARY

The world has a long history of international trade. In fact, trading among nations can be traced back to the earliest civilizations. Trading activities are directly related to an improved quality of life for the citizens of nations involved in international trade. It is safe to say that nearly every person on earth has benefited from international trading activities.

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Allen D. Truell
Michael Milbier

INTERNET

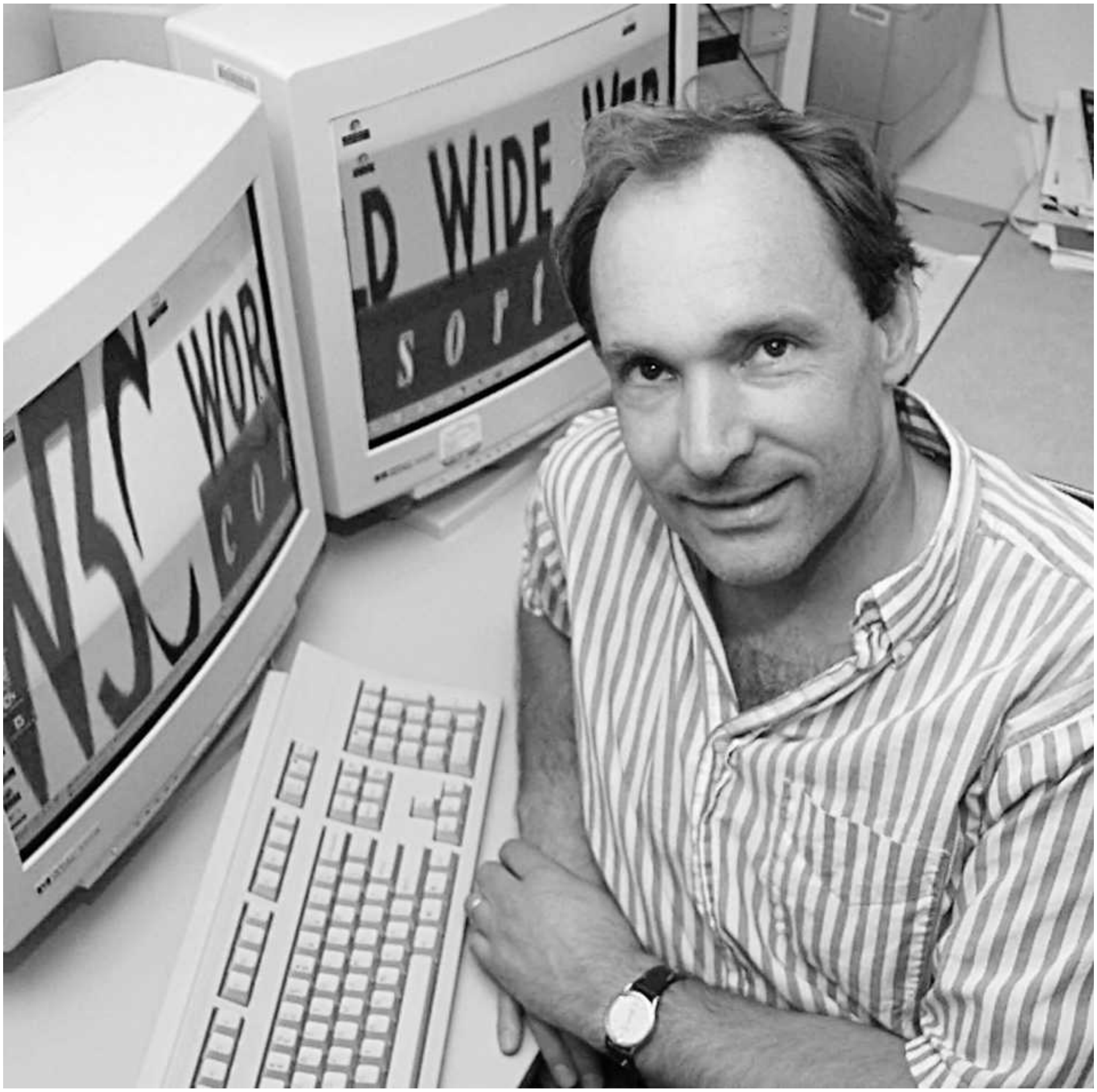
The Internet is a technology and electronic communication system such as the world has never seen before. In fact, some people have said that the Internet is the most important innovation since the development of the printing press.

HISTORY OF THE INTERNET

The Internet was created as a result of the Cold War. In the mid 1960s it became apparent that there was a need for a bomb-proof electronic communication system. A concept was devised to link computers by cable or wire throughout the country in a distributed system so that if some parts of the country were cut off from other parts, messages could still get through. In the beginning, only the federal government and a few universities were linked because the Internet was basically an emergency military communication system, operated by the Department of Defense's Advanced Research Project Agency (ARPA). The whole operation was referred to as ARPANET.

ARPA was linked to computers at a group of top research universities receiving ARPA funding. The first four universities connected to ARPANET were the University of California-Los Angeles, Stanford University, the University of California-Santa Barbara, and the University of Utah. Thus, the Internet was born. Because of a concept developed by Larry Roberts of ARPA and Glen Kleinrock at UCLA, called packet switching, the Internet was able to become a decentralized system, which would prevent large-scale destruction of any centralized system. The system allowed different types of computers from different manufacturers to send messages to one another. Computers merely transmitted information to one another in a standardized protocol packet. The addressing information in these packets told each computer in the chain where the packet was supposed to go.

As the Internet grew, more capability was added. A program called Telnet allowed remote users to run programs and computers at other sites. The File Transfer Protocol (FTP) allowed users to transfer data files and programs. Gopher programs, developed at the University of Minnesota and named after the university's mascot, allowed menu-driven access to data resources on the Internet. Search engines such as Archie and Wide Area Index Search (WAIS) gave users the ability to search the Internet's numerous libraries and indices. By the 1980s people at universities, research laboratories, private companies, and libraries were aided by a networking revolution. There were more than thirty thousand host computers and modems on the Internet. The forerunner of the Internet was the Bitnet, which was a



Tim Berners-Lee developed protocols for the exchange of Internet information.

network of virtually every major university in the world. E-mail became routine and inexpensive, since the Internet is a parasite using the existing multibillion-dollar telephone networks of the world as its carriers.

In 1972 Ray Tomlinson invented network e-mail, which became possible with the FTP. With e-mail and FTP, the rate at which collaborative work could be conducted between researchers at participating computer science departments was greatly increased. Although it was not realized at the time, the Internet had begun. TCP (Transmission Control Protocol) breaks large amounts of data down into packets of a fixed size, sequentially numbers them to allow reassembly at the recipient's end, and transmits the packets over the Internet using the Internet protocol.

After the invention of e-mail, it wasn't long before mailing lists were invented. This was a technique by which an identical message could be sent automatically to large numbers of people. The Internet continues to grow. In fact, it is estimated that almost 65 million adults go online on the Internet in the United States every month. Presently, no one operates the Internet. Although there are entities that oversee the system, "no one is in charge." This allows for a free transfer and flow of information throughout the world.

In 1984 the National Science Foundation (NSF) developed NSFNET. Later NASA, the National Institutes of Health, and others became involved, and nodes on the Internet were divided into basic varieties that are still used today. The varieties are grouped by the six basic Internet domains of GOV, MIL, EDU, COM, ORG, and NET. The ARPANET itself formally expired in 1989, a victim of its own success, and the use of TCP/IP (Transfer Control Protocol/Internet Protocol) standards for computer networks is now global.

If Internet invention had stopped at this point, we would probably still be using the Internet primarily just for e-mail. However, in 1989 a second miracle occurred. Tim Berners-Lee, a software engineer at the CERN physics lab in Switzerland, developed a set of accepted protocols for the exchange of Internet information, and a consortium with users was formed—thus creating the World Wide Web, the standard language for encoding information. Hypertext Markup Language (HTML) was adopted. Berners-Lee proposed making the idea global to link all documents on the Internet using hypertext. This lets users jump from one document to another through highlighted words. Other web standards, such as URL (Universal Resource Language) addresses on the Web page and HTTP (Hypertext Transfer Protocol), are also Berners-Lee's inventions. Berners-Lee could have been exceedingly rich based on his invention, but he left the fortune-building to others because he "wanted to do the revolution right."

As a result of Berners-Lee's invention, in 1993 a group at the University of Illinois, headed by Mark Andreesen, wrote a graphical application called Mosaic to make use of the Web easier. The next year a few students from that group, including Andreesen, co-founded Netscape after they graduated in May and released the browser for the World Wide Web in November 1994. The World Wide Web is making the Internet easier to use and has brought two giant advantages. Until the Web, the Internet communicated text only, but the Web permits exchange of uncoded graphics, color-coded graphics, color photographs and designs, even video and sound; and it formats typed copy into flexible typographic pages. The Web also permits use of hyperlinks, whereby users can click on certain words or phrases and be shown links to other information or pictures that explain the key words or phrases. As a result of the World Wide Web and Web browsers, it became easy to find information on the Internet and the Web. Various search engines have been developed to index and retrieve this information.

USING THE INTERNET

How does one use the Internet? First, one must have a computer with a connection to the outside world either by a modem connection, a fiber connection such as used in local cable television, or a wireless connection, which is becoming more important. The user is then connected to a system of linked computer networks that encircle the globe, facilitating a wide assortment of data communication services including e-mail, data and program file transfers, newsgroups and chatgroups, as well as graphic images, sound, and video of all kinds. One must choose the right tool to accomplish each task. Thus, one needs to understand the tools to travel this information superhighway.

The Internet is in cyberspace; think of it as a number of planets, each with a unique kind of data program or other type of information service. The only hitch is that each planet's communicating language is different, and one needs several communicating applications and tools. A person is responsible for selecting the proper software program or utility to access what he or she wants. Each program performs a specific task, ranging from providing basic connections, to accessing resources, to preparing e-mail. Common Internet tools include the following:

1. *Connection and log-on software.* This software provides access to log on to cyberspace. The software sets up the connections to the Internet. This software is usually provided by an Internet service provider.
2. *Web browser.* Web browsers are usually free. The most common Web browsers are Microsoft's Internet Explorer and Netscape's Navigator. These software programs can usually be downloaded free of charge; they also come with office suites such as Microsoft Office.
3. *E-mail manager and editor.* To communicate by e-mail users must have an e-mail manager and editor. This editor creates, sends, receives, stores, and organizes your e-mail. Again, many of these e-mail editors can be downloaded free from the Web. One of the most common editors is Eudora. However, office suites usually come with an e-mail manager as well.

A custom connect program starts the procedure for logging on to the Internet using TCP/IP. This is a set of standards and protocols for sharing data between computers and the Internet. Once the protocols have connected, a user must establish his or her identity and authorization to use the Internet services. The Internet service provider used has its own identity on the Internet, and this identity is known as a domain. Domain names, as mentioned previously, are all names listed to the right of the @ sign in the address with an extension such as .com or .edu. The computer then sends and receives data from a host computer over the Internet. A program such as Telnet breaks up the data into packets. The protocols specify how packets should be layered, or packaged. Different layers of packets address a variety of software and hardware needs to send information over different networks and communication links. After a user has properly logged on, he or she can begin using the Internet services.

After a user has completed an on-line work session, he or she must log off the Internet and, depending on the circumstances, disconnect from the Internet service provider. If a user is using an educational service provider such as a college or other educational institution, he or she probably logs off but does not disconnect, since the service is a virtual service provided to many others at the terminal or computer. If one is using a private commercial service provider, one must be sure that a complete disconnection has been made between the computer and provider or one may still be paying fees.

The Internet has spawned an entirely whole new industry called electronic commerce or sometimes electronic business. Businesses sell to other businesses and to consumers on the Internet using secure Web sites. The current market value of U.S. companies with substantial Internet revenue via e-commerce exceeds $3 trillion and is growing annually. It is estimated that by 2003 over 88 percent of all businesses will derive some of their revenue from e-commerce. It has also been said that the growth of the Internet and e-commerce has been one of the main causes of the robust economy in the United States.

Thus, the Internet has been one of the most productive technologies in recent history. The Internet can transport information from nearly any place on the globe to nearly any other place in seconds. The Internet has changed people's notion of how fast things happen. People say now they "did it in Internet time," meaning something was done in a fraction of the traditional or expected amount of time. The Internet is becoming a major cause of time compression.

FUTURE OF THE INTERNET

What does the future hold for the Internet? Predictions are that in the future nearly every Internet-connected device will communicate wirelessly. Low-power radio cells rather than fiber or copper wire, will connect and relay information. Before 2010, more than half of American homes will have at least one low power radio cell connected to Internet bandwidth. The future appears to hold a wireless Internet because of bandwidth problems with cable or wire.

The personal computer will continue to evolve, but there will be a lot of other Internet-smart appliances. Predictions are that there will be Internet wristwatches to match the person with the message. Televisions will, when prompted, record our favorite shows. Various kitchen appliances will start by Internet commands. The personal automobile will also be a mobile personal information store. Automobiles will have internal connectivity and easily carry a very large cache of favorite music, talk, interactive games, and pictures, while passengers will have the option of looking out the window at the real world or looking in the window of their in-car display. Like the explorers who discovered new continents, people are just beginning to discover the full impact of the Internet on information, space, and time.

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LLOYD W. BARTHOLOME

INTERPERSONAL RELATIONS

(SEE: *Human Relations*)

INTERSTATE COMMERCE

Interstate commerce is the transportation of products and services from one state to geographic points in other states. This involves the transportation of goods and services across state lines, creating a dependency on transportation modes and making the process subject to state laws regarding the transportation of goods.

Transportation plays an important role in determining the profitability of operating both farm and nonfarm businesses in rural areas. Farms, businesses, and industries in rural areas rely on transportation services to achieve necessary production outputs and to deliver commodities and products to market.

Interstate commerce has its roots in farming. During most of the first decade after the Civil War, farmers in seven midwestern states were responsible for approximately one-half of the nation's output of corn, wheat, and oats. Illinois farms were the leaders in the production of each of these grains; farmers to the north provided large amounts of the hard varieties of wheat, while those to the south and east produced most of the corn. Based on the presence of abundant feed, these producers established locations for fattening livestock and producing meat products. Given this state of affairs, farmers were in the market for transport services to carry livestock and crops to major produce exchanges located in other states.

Chicago and St. Louis were established as collection centers, but these centers were not the sites of final consumption. By 1870, there were well-established lines of supply between states. The Great Lakes steamers and schooners provided most of the service between Chicago and the northern portions of the Great Lakes area, and the four major railroads provided ground transportation. The two railroads with independent and complete service were the New York Central system and the Pennsylvania system.

Between 1874 and 1919, many laws were enacted that imposed economic regulation on the dominant means of interstate commerce in the United States: the railroad. However, federal transportation regulations were not of a sufficient magnitude to justify forming a cabinet-level department solely for matters of interstate commerce.

Economic conditions between 1874 and 1919 vacillated. Agricultural depression was extensive during the 1870s and 1880s and constituted a factor that ultimately resulted in the economic regulation of interstate railroads in 1887. Furthermore, an international depression occurred in 1893 that sent seventy-four railroad companies into financial distress. Between 1901 and 1919, U.S. society experienced relative prosperity; it was during this period that 145,000 miles of track were constructed to carry goods between states.

Executive and legislative agencies related to transportation functions proliferated between 1874 and 1919; it was during this same period that highway transportation began to increase in importance. Financing and planning of highway development within state lines was primarily the responsibility of each individual state. However, the Bureau of Public Roads began to play a significant role. In addition, the airline industry had its beginnings during the early part of the twentieth century.

The Interstate Commerce Commission (ICC), an independent U.S. government agency established in 1887, is responsible for the economic regulation of services of specified carriers engaged in transportation between states. The first regulatory agency formed within the federal government, it was established in response to mounting public indignation against railroad malpractices and abuses. The ICC's effectiveness, however, was limited by Congress's failure to give it enforcement power, by the Supreme Court's narrow interpretation of its powers, and by the vague language of its enabling act.

Beginning with the Hepburn Act of 1906, the ICC's domain was gradually extended beyond railroads to all common carriers except airplanes by 1940. It was also given the task of consolidating railroad systems and managing labor disputes in interstate transport. In the 1950s and 1960s, the ICC enforced U.S. Supreme Court rulings that required the desegregation of passenger terminal facilities.

Part I of the Interstate Commerce Act enacted of 1935 grouped together a series of laws that were enacted in the late 1800s and early 1900s. The first of these laws required that railroad carriers publicize their rate schedules and forbade rate changes without due notice to the public. Subsequent acts increased regulation and extended the ICC's jurisdiction. Part II of the act extended federal authority to motor carriers engaged in interstate commerce. Part III gave the federal government authority to regulate common carriers operating in interstate commerce in the coastal, intercoastal, and inland waters of the United States. Part IV comprised regulations governing the operations of freight operators.

Subsequently, the ICC's jurisdiction expanded to included trucking, bus lines, water carriers, freight forwarders, pipelines (those not already regulated by other agencies) and express delivery agencies. The ICC controlled rates and enforced federal and local laws against discrimination in these areas. The safety functions of its jurisdiction were transferred to the Department of Transportation in 1967, and the deregulation of the late 1970s and the 1980s further reduced the ICC's role. Most ICC control over interstate trucking was removed in 1994, and the agency was terminated at the end of 1995. Many of its remaining functions were transferred to the National Surface Transportation Board.

Interstate commerce is currently supervised by several federal agencies. The Civil Aeronautics Board was created by the Civil Aeronautics Act of 1938, to oversee the airline industry. This act dealt with the airline industry's ability to provide efficient service at reasonable charges without unjust discrimination, undue preferences, or advantages or unfair or destructive competitive practices. Forty years later, President Jimmy Carter signed into law the Airline Deregulation Act of 1978, which would phase out the Civil Aeronautics Board and let the airlines determine their own pricing and routes. It was thought that a lack of competition had made the industry unresponsive to consumers. As a result, the industry became deregulated and the pricing wars began.

There are many other federal regulatory agencies and laws that deal with govern interstate commerce. The Federal Trade Commission was established in 1914 with investigatory powers to be used in preventing unfair methods of competition. The FTC enforces laws and guidelines regarding business practices and takes action to stop false and deceptive advertising, pricing, packaging, and labeling. It assists businesses in complying with both state and federal laws, and it evaluates new business methods used each year. It holds conferences on electronic commerce, which is the most recent form of interstate commerce. When general sets of guidelines are needed to assist businesses involved in interstate commerce, the FTC encourages firms within that industry to establish a set of trade practices voluntarily.

The Clayton Act, passed in the same year that the FTC was created (1914), prohibits specific practices such as price discrimination, exclusive dealer arrangements, and stock acquisitions whose effect may notably lessen competition or tend to create a monopoly.

In addition, the Federal Communications Commission (FCC) has evolved as a crucial regulatory component in e-commerce development. The FCC regulates communication by wire, radio, and television in interstate and foreign commerce. This agency has been undergoing rapid changes as a result of the need for e-commerce regulation.

CURRENT INTERSTATE COMMERCE ENVIRONMENT

Today's transportation environment is much different from that of previous decades. The shift from a rural to an urban economic base, policy changes, and technological and organizational innovations have changed the way in which products and services are distributed in the United States. Today, less than 10 percent of the people living in nonmetropolitan areas are employed in farming, forestry, fisheries, or mining. Present-day farms tend to be larger and more capital-intensive. Large tractor-trailer trucks are rapidly replacing smaller vehicles in the delivery of production inputs to farms and products to market.

Nonagricultural demands for interstate commerce increased dramatically in the last quarter of the twentieth century. Manufacturing employment in nonmetropolitan areas grew at a rate three times that in metropolitan areas. Approximately 20 percent of nonmetropolitan residents were employed by manufacturing firms at the turn of the twenty-first century.

As a result of these changes, the amount and type of interstate traffic have also changed dramatically. The larger, heavier vehicles on these roads require major investments in bridges and in surfaces of paved roads. A recent Department of Transportation survey suggests that more than 50 percent of the local road mileage in the United States is structurally inadequate. This problem is one of surface type and condition and even safety deficiencies, such as inadequate lane widths or lack of shoulders.

The increased financial responsibility of local governments for construction and maintenance of rural road system is a special concern for those rural regions dependent on interstate commerce. Transportation deregulation is another major federal policy change likely to influence the cost and availability of transportation services and facilities needed for interstate commerce. Technological and organizational innovations have accompanied the new deregulated environment. Railroad mergers, for example, have resulted in reduced service on many routes, potentially affecting the relative competitiveness of regions as a location for business or industry. Developments of unit-train facilities and railroad contracts encourage consolidation and growth of processing firms.

Transportation improvements that result in lower operating costs for area enterprises aid rural communities in efforts to attract new business and industry and encourage the expansion of existing firms. Business surveys consistently find that firms rank transportation access, cost, and quality as high-priority considerations in choosing a business location. The availability of highway transportation is particularly important to a wide variety of rural businesses that depend on the ability to deliver their products to other states.

Freight carriers are dependent on the rural road systems, which are financed through a combination of local tax revenues. The shared state-highway user taxes and fees vary from state to state. A faltering local economy can severely limit a local government's ability to raise revenue for road system improvements, and the likely result of this is a cycle of decline in interstate commerce. Without additional revenues, local road systems will continue to deteriorate, thus further reducing the attractiveness of the area for business and industry and thus further eroding the area's tax base.

Interstate commerce involves the transportation of services as well as goods. Of particular importance is the transportation of people between states. Formerly, carriers were partially protected from competition in return for fulfilling public service obligations. Under this arrangement, common carriers were not free to choose customers, nor were they free to eliminate parts of their services without the consent of the public. This obligation placed liabilities for loss and damage with the interstate carriers who were responsible for transportation losses. In addition, common carriers had to serve all customers without discrimination and had to have their rate-change proposals reviewed by regulatory bodies to determine whether these changes were reasonable.

In return for fulfilling these public obligations, common carriers were protected from new competition. When a company proposed to expand service to another state, an existing transportation company could argue that it currently serviced the traffic adequately and could oppose entry of a new interstate carrier. Often, the opposition of existing carriers prevented the entry of new carriers.

In the early 1980s, however, Congress passed major legislation changing the government's role. Recent policy changes have essentially replaced the common carrier system with a market-transaction system similar to that of any other private business. The new market approach allows shippers and carriers to actively negotiate for transport services rather than accept one of a few alternatives offered by carrier consortiums. Deregulation increased economic efficiency in the provision of transportation services due to new flexibility on the part of carriers in adjusting to demand. Highways, railways, and airways are the arteries that enable shoppers and tourists to travel between states. Because of this, passenger transportation plays a key role in rural economic development. Many rural industries draw their workers from surrounding communities up to fifty miles away. For these industries, the interstate transportation system is a critical link providing them access to the labor force. Policies and investments that reduce the cost of interstate commerce rural regions are a potential catalyst for rural economic development.

The urgency of finding workable solutions to interstate commerce issues has prompted new ways of thinking. In 1982, the U.S. government appropriated $5 million to provide technical assistance to local agencies through the Rural Technical Assistance Program. The principal delivery system for the program was a network of Technology Transfer Centers. Under the Federal Highway Administration program, the Technology Transfer Centers were designed to provide training and other technology transfer products to local users. One of the primary objectives of the program is to serve as a communications link among the various sources of new technology and the state and local agencies that can apply the technology in daily operations. In 1983 there were ten Technology Transfer Centers. Today, there are more than fifty across the United States.

Today, the Federal Communication Commission (FCC) has come to the forefront because of its responsibility to regulate e-commerce. The FCC sought comment on two rule-making dockets in 2000: the Access Charge Reform rule making docket and the Complete Detariffing for Competitive Access Providers and Competitive Local Exchange Carriers (CLEC detariffing) rulemaking docket, which is involved with the regulatory or market-based approaches that would ensure that competitive local exchange carriers (CLEC) rates for interstate access are reasonable. There are many current proposals being discussed at these proceedings, and the FCC invites all interested parties to comment on whether mandatory detariffing of CLEC interstate access service rates would provide a market-based deterrent to excessive terminating access charges. In addition, the FTC has been sponsoring workshops throughout the country that are intended to educate people about how marketplaces work and explore the anticompetitive scenarios. The FTC will be involved in scrutinizing virtual competition in e-marketplaces.

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Patricia A. Spirou

INTERSTATE COMMERCE COMMISSION

The Interstate Commerce Act of 1887 created the Interstate Commerce Commission (ICC), the U.S. government's first regulatory agency. The initial purpose of the ICC was to control railroads and their unfair business practices. The U.S. government had to become a regulator because in 1886 the Supreme Court had ruled in the case of *Wabash Railroad v. Illinois* that states could not control interstate commerce.

WAITING ROOM
FOR WHITE ONLY
BY ORDER
POLICE DEPT.

Police lieutenant Beavers Armstrong places a segregation sign.

Railroads presented some special problems because they were capital-intensive, had high maintenance costs, and had two types of rail lines. This led to unfair pricing practices. For major trunk lines, where there was competition, the railroads charged lower rates and even gave rebates. For spur lines, where there was a monopoly, the railroad charged higher rates for the same type of cargo.

Even with the federal government taking charge of regulating railroads, the Interstate Commerce Commission still got off to a rocky start. In its first sixteen court actions, the ICC only won one case; and the Supreme Court had several judgments against the ICC which limited its power. However, later legislation gave the ICC rulings more power. The Elkins Act of 1903 was aimed at unfair competitive methods, and the Hepburn Act of 1906 eliminated the necessity of a court order to make ICC rulings binding and gave the ICC control of gas and water pipelines.

The Motor Carrier Act of 1935 placed the emerging trucking industry under ICC jurisdiction. Typical ICC duties included holding hearings to investigate complaints, approving transportation mergers, and overseeing consumer-protection programs.

By the 1960s, the ICC had grown into a massive bureaucracy, peaking at 2400 employees. Shortly thereafter, the agency came under severe criticism. Some groups argued that, because of regulation, the country's transportation was inefficient and perhaps corrupt. The major criticism—that regulation created artificially high rates—led to pressure for deregulation and signaled the beginning of the demise of the ICC. First, the Railroad Revitalization and Regulatory Reform Act of 1976 curtailed the ICC power to regulate rates unless the railroad had a monopoly on certain routes. In 1977, air cargo deregulation and the reforms taking place in the trucking industry further eroded the power of the ICC. After the early rocky years of deregulation, the transportation industry had become more efficient thanks to innovative technology, thereby reducing costs. The final act of deregulation came in 1994, when the ICC lost most of its control over the trucking industry.

By this time, the ICC had dropped from a high of 2400 employees to 300 and was constrained by a severely reduced budget. The Republicans, who had wanted to eliminate the ICC for a number of years, took control of Congress in 1995. As a first step, the fiscal 1996 spending bill (HR2002-FL 104-50) gave the ICC no budget. Then the House Transportation and Infrastructure Committee approved HR2539, and the debate began. The major objection from the Democratic side was centered on protection for railroad workers who might lose their jobs because of mergers. After ironing out their differences, Congress sent President Clinton legislation to terminate the ICC (HR2539-PL 104-88). On December 29, 1995, the 108-year-old Interstate Commerce Commission was disbanded.

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Mary Jean Lush
Val Hinton

INTRANET/EXTRANET

The first global electronic network was the Internet. Today there are also new Internet subsystems called an intranet and an extranet. While computer users may use all three systems throughout a single day, there are some similarities and differences among them that are important. To aid in understanding these three systems, let us use the example of a computer-using employee, Sally, in an automobile dealership. Sally might use the Internet to check flight schedules to plan for an upcoming sales meeting. Sally might also use the intranet to check on a shipment of cars for the automobile dealership. Sally could also use the extranet to check the latest wholesale pricing of tires.

DEFINITIONS AND RELATIONSHIPS

Internet Although the Internet has existed for more than a quarter of a century it is now used widely in schools, homes, and workplaces. The *CMP Net Online Encyclopedia* defines *Internet* as:

> *(1) A large network made up of a number of smaller networks. (2) "The" Internet is made up of more than 100,000 inter-connected networks in over 100 countries, comprised of commercial, academic and government networks. Originally developed for the military, the Internet became widely used for academic and commercial research . . . Today, the Internet has become commercialized into a worldwide*

> *information highway, providing information on every subject known to humankind.*

Intranet The same work defines *intranet* as:

> *An in-house Web site that serves the employees of the enterprise. Although intranet pages may link to the Internet, an intranet is not a site accessed by the general public.*

Note the important difference: The *intranet* is information that is available only to those who are "*in*-house," or some type of corporate partner. Some typical uses of an intranet include access to production schedules, inventory, meetings, and training. Thus if you worked for company A you could have ready access to the information posted on the company Website. However, most intranets also include an organization's partners. Let's say that company A manufactures computer monitors using cathode-ray tubes (CRTs) made by company B. Company A no doubt keeps an exact inventory of how many tubes it has in stock; and it is possible that company B is asked to monitor these numbers so that it can automatically ship CRTs to company A when needed. Of course, company B would not be granted access to other online data belonging to company A.

Extranet The *CMP Net Online Encyclopedia* defines *extranet* as:

> *A Web site for existing customers rather than the general public. It can provide access to paid research, current inventories and internal databases, virtually any information that is private and not published for everyone. An extranet uses the public Internet as its transmission system, but requires passwords to gain access.*

While company A allows public access via the Internet to its Website, it does not include highly sensitive information there. It has an intranet that can be accessed only by employees and selected companies having certain partnerships with it. It also has an extranet website that only their customers can access.

APPLICATIONS AND ISSUES

Access Individual employee access to the Internet, intranets, and extranets varies. Today employees in many organizations may use all of the terms interchangeably, although many employees commonly use the term "Internet" (or "Netscape" or "Internet Explorer") for what would technically be located on an intranet or extranet. An important issue for network administrators (or Webmasters) is access. To enforce proper access, they must know *exactly* who has authorization to the Internet, intranet, and/or extranet. Organizational decisions makers also need to be familiar with policy issues to ensure that the "wrong" people do not gain access to sensitive information. This raises an important issue: Do the benefits of "liberal" access outweigh the possible negative consequences? However, as Gibson (1998) noted: "If you can't trust your business partners, you probably shouldn't be doing business with them."

Usage Restrictions An intranet or extranet can technically be set up in several ways. One way is to have only one Web site but to restrict user access, with usage access authorized on an individual basis. With this method, individuals who attempt to gain access to a site for which they do not have proper "rights," whether accidentally or intentionally, will receive a message like the following from their screen:

> *Not Found. The requested object does not exist on this server. The link you followed is either outdated, inaccurate, or the server has been instructed not to let you have it. Please inform the site administrator of the referring pages.*

In this example, the Web page the individual requested actually exists, but it is available only to personnel who have the "clearance" to view the information. Totally separate Web sites are often designed for differing levels of access. Additionally, add-in products to assist in constructing intranets are also available, such IntraNetics and "intranet-in-a-box," which come configured with links to specific electronic commerce sites, such as Staples and American Express Business Travel ("Intranets," 1999).

INTRANET INNOVATIONS

An organizations intranet can be used in many different ways. A typical use is for training, but many unforeseen uses also arise. This section contains examples of intranet uses within organizations.

Employee Training The Dow Chemical Company is implementing a broad training program by employing the intranet to supplant and possibly eliminate much of the one million hours of classroom training they now offer. Schwartz (1999) noted that Dow spends $80 million yearly to train employees and contractors (Dow University Online) in areas from environmental safety to health issues using TopClass presentation software (WBT Systems) on their Webservers.

Online Conferencing Using the intranet to move beyond storing and sharing static information, Bell Atlantic formed a partnership with IBM's Lotus Development to become more competitive in the communication industry (Trager, 1999). One Lotus application allows Bell Atlantic to easily create and customize a meeting-room simulation on-line (on-line conferencing) for use in its intranet or extranet. Trager also pointed out that Bell Atlantic is interested in Lotus's Sametime real-time collaboration and LearningSpace for distance education.

Unexpected Outcomes Sharing information, such as inventories and shipping dates, via intranet with corporate partners has led to efficiencies. Additionally, other unplanned organizational changes have also evolved. According to Shachtman (1998):

> *Employees are using intranets to band together in far-flung groups of need and expertise that defy traditional corporate structure. Advanced intranets allow people to organize around information clusters, not hierarchical schemes, says Mike Gotta, program director at research firm the Meta Group. 'It's a move from a highly rigid workplace to a more organic workspace.'*

Shachtman further explains that while knowledge has always been associated with power, the intranet is rapidly breaking down rigid organizational structures.

Portals Intranets are continually changing as more uses are found for Web-based information. A recent innovation is a "portal," a search engine that includes easy links to all kinds of resources, from weather to stock pricess to late-breaking news. The search engines Yahoo, Excite, AltaVista, Lycos and many others have evolved into "portals" in their ever-increasing quest to obtain more users. Now corporate portals are being developed so that when employees use their intranet they easily and quickly find relevant information. Guglielmo (1998) described a corporate portal:

> *The concept is simple: Corporate employees turn on their computers and, instead of going to Yahoo! or Excite, go to their company's browser-based internal portal, where they receive easy-to-navigate, highly detailed information to help them do their jobs. They also can make travel arrangements and order office supplies.*

Some firms have already begun marketing specific software to create corporate portals. For example, Netscape Communications Corporation, the parent company of Yahoo, is licensing a customized version of its Netcenter portal site (Guglielmo, 1998). Marty Cagan, Netcenter's vice president of business-to-business services stated:

> *"Our strategy is to leverage our understanding of the portal market by turning our own portal, which during the business day is the busiest site in the world, into a platform that other customers can build on"* (quoted in Guglielmo, 1998).

IMPLICATIONS AND IMPACT

Intranet access to information has already drastically altered the way organizations communicate and conduct business. Robert Moon, Chief Information Officer of Micros Systems, says, "In less than three years, we've gone from the Web being a novelty to a critical application. It's now our main focus" (quoted in Booker, 1999, p. 32).

Indeed, the intranet concept will continue to alter the way organizations function both internally and externally in ways that cannot be imagined in the twentieth century.

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ARMAND SEGUIN
CYNTHIA SHELTON SEGUIN

INTRAPRENEURSHIP

(SEE: *Entrepreneurship*)

INVENTORY CONTROL

Inventory control is the implementation of management's inventory policies in a manner that assures that the goals of inventory management are met. Wise control of inventory is often a critical factor in the success of businesses in which inventories are significant. The goal of inventory control is to be sure that optimum levels of inventories are available, that there are minimal stockouts (i.e., running out of stock), and that inventory is maintained in a safe, secure place and is always readily accessible to the proper personnel.

Policies relate to what levels of inventories are to be maintained and which vendors will be supplying the inventory. How and when inventories will be replenished, how inventory records are created, managed, and analyzed, and what aspects of inventory management will be outsourced are also important components of proper inventory management.

IN THE BEGINNING

Prior to the eighteenth century, possessing inventory was considered a sign of wealth. Generally, the more inventory you had, the more prosperous you were. Inventory existed as stores of wheat, herds of cattle, and rooms full of pottery or other manufactured goods.

This phenomenon occurred for good reason. There were a number of concerns for businesspeople then. Communication was difficult and unreliable, easily interrupted, and often took long periods of time to complete. Stocks were difficult to obtain, and supply was uncertain, erratic, and subject to a wide variety of pitfalls. Quality was inconsistent. More often than not, receiving credit for a purchase was not an option and a person had to pay for merchandise before taking possession of it. The financial markets were not as complex or as willing to meet the needs of business as they are today. In addition, the pace of life was a lot slower. Because change occurred gradually, it was relatively easy to forecast market needs, trends, and desires. Businesses were able to maintain large quantities of goods without fear of sudden shifts in the market, and these inventories served as buffers in the supply line. Customers had a sense of security, knowing that there was a ready supply of merchandise in storage, and that comfort often helped to minimize hoarding.

In the eighteenth and early nineteenth centuries, markets were very specialized. There was often one supplier for each market in each area of business. Except for the basic necessities of life, there was much local specialization and distinct specialization by region. For example, although there might be more than one grist-mill in a community, there would often be only one general store. If customers were unhappy with their existing supplier, they had to suffer some incon-

Japan has a trade surplus of autos with the United States.

venience to find an alternate source because of the monopolies that existed. This made it easier for businesses to market their products and allowed them to maintain large stocks if they had the capital to do so.

Inventory management was a concern then, as it is now. Inventories had to be monitored for accuracy and quality. They had to be protected from the elements, from theft, from spoiling, and from changes in the local economy. Tax laws could have an enormous impact on inventory levels.

THE EARLY TWENTY-FIRST CENTURY

Today's business world shares few similarities with yesterday's. Communication is quick, easy, reliable, and available through a host of media. Supply is certain and regular in most environments of merchandising and manufacturing. Tax laws are generally consistent and reliable. However, market changes can be abrupt and difficult to forecast. Global competition exists everywhere for almost everything. Products are available from anywhere in the world, with delivery possible within in one day in many cases. Competition is driving the price of most products down to minimum profit levels. Inventories are managed for minimum stocking levels and maximum turnover. In the twenty-first century, high inventory is a sign of either mismanagement or a troubled economy. It is expensive and wasteful to hold and maintain high inventory levels. Proper utilization of space is also a critical component in today's business world, whether one is a retailer, wholesaler, or a manufacturer.

Modern retailers and manufacturers are equipped with an array of tools and support mechanisms to enable them to manage inventory. Technology is used in almost every area of inventory management to help control, monitor, and analyze inventory. Computers, especially, play an enormous role in modern inventory management.

INVENTORY MANAGEMENT SYSTEMS

Ongoing analyses of both inventory management and manufacturing processes have led to innovative management systems, such as just-in-time inventory or the economic-order quantity decision model.

Just-in-time inventory is a process developed by the Japanese based on a process invented by Henry Ford. David Wren (1999) descibes how the process started:

> *Henry Ford managed to cut his inventory by forty million dollars by changing how he obtained materials to produce automobiles. Through a process called vertical integration, Ford purchased mines and smelting operations to better control the source and supply of material to produce cars. In this way, he was able to reduce his standing inventory and increase turnover. In the 1950's, Taiichi Ohno, a mechanical engineer working for Toyota Motorcar Company, refined this process into what we know today as Just-in-Time inventory* (p. 1).

Just-in-time inventory usually requires a dominant face—a major partner that has the resources to start the process and keep it organized and controlled—that organizes the flow and communication so that all the parties in the supply process know exactly how many parts are needed to complete a cycle and how much time is needed in between cycles. By having and sharing this information, companies are able to deliver just the right amount of product or inventory at a given time. This requires a close working relationship between all the parties involved and greatly minimizes the amount of standing or idle inventory.

In the economic-order quantity decision model, an analysis is made to determine the optimum quantity of product needed to minimize total manufacturing or production costs. In other words, through a complex analysis, management attempts to determine the minimum amount of product needed to do the job and still keep the cost of inventory as low as possible. This analysis considers the amount of time needed to generate an order; to process, manufacture, organize, and ship each product; to receive, inventory, store, and consume each product; and to process the paperwork upon receipt through the final payment process. This is a more independent process than just-in-time inventory; by allowing for a variety of suppliers to participate, it ensures competitiveness. Many companies today employ a mixture of both processes in order to maintain independence yet still have a close relationship with suppliers. Retailers, for example, work closely with suppliers to maintain the lowest possible inventories but still have enough products to satisfy customer demand. Often, companies have access to information about each other's inventory levels, allowing management to further analyze inventories to ensure that each is carrying the correct amount of stock to satisfy market needs and maintain minimum levels.

THE INVENTORY PROCESS

Inventory is generally ordered by computer, through a modem, directly from a supplier or manufacturer. The persons ordering the product have an inventory sales or usage history, which enables them to properly forecast short-term needs and also to know which products are not being sold or consumed. The computer helps management with control by tying in with the sales or manufacturing department. Whenever a sale is made or units of a product are consumed in the manufacturing process, the product is deleted from inventory and made part of a history file that can be reviewed manually or automatically, depending on how management wishes to organize that department. The supplier and the buyer often have a close working relationship; the buyer will keep the supplier informed about product changes and developments in the industry in order to maintain proper stock levels, and the supplier will often dedicate equipment and personnel to assist the buyer.

Even though small companies may work closely with larger suppliers, it is still very important that these small companies manage their inventory properly. Goods need to be stored in a suitable warehouse that meets the needs of the products; some products require refrigeration, for example, while others require a warm and dry environment. Space is usually a critical factor in this ever-shrinking world: It is important to have enough space to meet the needs of customers and keep the warehouse from becoming overcrowded. Inventory needs to be monitored to prevent theft and inaccuracies. Taking physical inventory—physically checking each item against a list of items on hand—is a routine that should be performed a number of times a year. At the very least, inventories should always be checked each year just before the end of the fiscal year and compared against " book" or quantities listed as on hand in the computer or manual ledger. Adjustments can then be made to correct any inaccuracies. Taking inventory more than once a year, and thus looking at stocks over shorter periods of time, often results in discovering accounting or processing errors. It also serves as a notice to employees that management is watching the inventory closely, often deterring pilferage.

Alarm systems and closed-circuit television are just a few of the ways inventories can be monitored. Making sure that everyone allowed into inventory management systems has and uses his or her own password is critical to effective inventory control. By having redundant systems, management can also compare the two to make sure there is a balance. If they go too far out of balance, management is alerted.

IN THE END

Maintaining a clean, orderly, properly lighted, and secure warehouse or stockroom is the basic key to maintaining inventory control. Adding computer technology to aid in management and administration creates a system that is current and competitive. Properly training employees in modern techniques and standards results in a system that will be effective and profitable.

(SEE ALSO: *Costs*)

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MARK LEFEBVRE

J

JAPANESE MANAGEMENT METHODS

(SEE: *Management/Leadership Styles*)

JOB ANALYSIS AND DESIGN

Job analysis is the term used to describe the process of analyzing a job or occupation into its various components, that is, *organizational structure*, *work activities*, and *informational content*. The process results in a relevant, timely and tailored database of job-related information that can be used in a variety of ways: to develop conventional, individualized, computer-based and/or critical incident (discussed below) education and training programs and materials; to create and classify job titles; to write job descriptions; to prepare organization charts; to conduct time and motion studies; to determine quality assurance standards; and to write both knowledge- and performance-related employee evaluation measures. Also, job analyses are basic to the preparation of such government publications as the *Occupational Information Network (O'Net)*, *Standard Industrial Classification (SIC)*, *Standard Occupational Classification (SOC)*, *Occupational Outlook Handbook*, and other informational resources describing the job situation (See Figure 1).

Two terms often used interchangeably with *job analysis* are *occupational analysis* and *task analysis*. In the literature, job and occupational analysis most often are viewed as the same. The process focuses on the analysis of a job into its *occupational structure*, *work activities*, and *informational content*. Later, the data provided by the analysis guides the organization and development of the occupational training program.

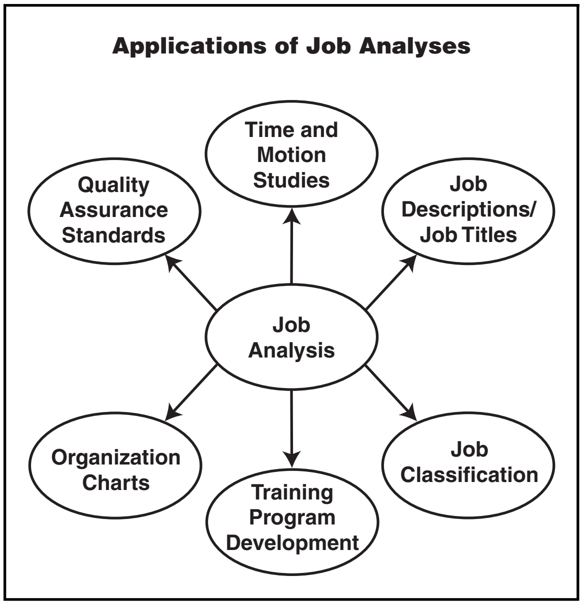
Applications of Job Analyses
Time and Motion Studies
Quality Assurance Standards
Job Descriptions/ Job Titles
Job Analysis
Organization Charts
Training Program Development
Job Classification

Figure 1

In contrast, *task analysis* is an integral part of the job analysis process. More specifically, task analysis addresses the process of analyzing a particular task into its various elements, that is, performance steps; performance step details; technical information topics; career and occupational guidance information topics; standards of performance; frequency, importance, and complexity; and tools, equipment, materials, supplies and technical references. The information resulting from the task analysis provides a basis for developing the knowledge- and performance-based learning activities of the training program.

PROCESS

A number of individual authors and organizations have detailed the process of conducting job analyses (American Society For Quality, 1996; Blank, 1982; Bortz, 1981; DACUM, 1985; Finch and Crunkilton, 1979; Fryklund, 1956; Mager and Beach, 1967; Mager and Piper, 1976; U.S. Department of the Air Force, 1998-99; U.S. Department of the Army 1990; U.S. Department of Labor, 1987; U.S. Department of the Navy, 1997). The analytical approaches of the various authors and groups differ somewhat in organization and procedural logic. Nonetheless, each analyzes a job or occupation with the intent of identifying its components and incorporating the findings into the development of related "products," that is, training programs and materials, job descriptions, job classifications, and so forth.

Three questions seem to be basic to the majority of the authors. These questions address the issues of organization, activity, and informational content:

- What is the *structure* of the occupation?
- What does the worker *do*?
- What does the worker *need to know*?

ORGANIZATIONAL STRUCTURE

The first question concerns the structure or framework of the occupation being analyzed (Bortz, 1981; DACUM, 1985). If the data derived from the job analysis are used in a situation where organizational structure is important to the "product" being developed, then the structure of the occupation can serve as a basis from which the organizational structure of the product is developed. For example, the hierarchical order of occupational titles in a functionally related family of occupations can serve as a basis for ordering and naming the units and courses of the training program resulting from the job analysis.

WORK ACTIVITIES

The second question addresses the activities of the worker in terms of both *tasks* and *performance steps.* Once identified, the tasks,—that is, completed units of work,—serve in various capacities ranging from the writing of learning objectives of a yet-to-be-developed competency-based training program to the classification of job titles and writing of job descriptions.

The performance steps for completing each task also will be used in the development of a variety of related materials. Whenever procedure is an issue, the performance steps of the tasks come into play. To use an example from the training of employees in psychomotor skills, the sequence of performance steps guides the instructor through a *demonstration* of the steps of the learning objective, to the student's *practice* of the procedural steps, to a final determination of the student's ability to perform the process on a *performance test.* In each of the three performance-related learning activities, procedure is fundamental to their identification and development.

INFORMATION CONTENT

The third question involves identifying the knowledge or informational component of the occupation. Depending on the author, the three types of information most often referred to are *technical information*, *general information*, and *career and occupational guidance information.*

Technical information is that information the worker *must know* to perform a specific task or group of tasks. Technical information gives the worker the judgment-forming, decision-making ability to perform the task(s) in a safe and correct manner. It is the knowledge base from which the worker can make informed decisions affecting and controlling his/her on-the-job performance.

General information, although related to the job itself or to the individual tasks comprising the job, does not have direct bearing on the performance of either the job or its component tasks. General information complements the activities of the workers but is not crucial to their outcome. For example, detailed knowledge about the manufacture of computer chips has no direct bearing on the performance of a computer programmer or systems analyst.

Career and occupational guidance information allows workers to make decisions about themselves and the workplace. It includes information on such topics as the short-, intermediate-, and long-range employment needs of the community; the career interests and abilities of individuals; work, work roles and responsibilities; job-seeking skills; the employment outlook; and local, state, national, and global economic trends.

APPLICATION

Each of the following are specific applications of the information gained from a completed job analysis. In some cases, most or all of the information is used in the development of the final product, in other cases, only a portion of the job analysis data is used. (See Figure 1.)

Training Program Development The organizational structure, work activities, and informational content identified in a job analysis serve as the basis for developing both the structure and content of a training program. The structure of the occupation determines the organization of the curricular components of the training program. The content of the training program depends on the activities and information needed to perform in the occupation. In a competency-based training program, the titles of the tasks become the titles of the corresponding learning objectives. The technical information topics and performance steps of the tasks, respectively, serve as the basis for identifying and organizing the *knowledge-* and *performance-related* learning activities of the learning objectives.

"Critical incident" training is the result of applying the activities and content of a job analysis in a specific training situation. As discussed by Davies (1981), the critical incident method of instruction "focuses upon collecting information on key tasks, particularly on those where problems occur" (p. 131). For these tasks, special training can be devised using the activities and informational content first identified in the job analysis and later, translated into learning objectives, curricula and instructional materials.

Job Classification A job classification is used to group occupations by *function level* or *ability*. To classify jobs by function means to categorize them by similarity of function or activity. For example, titles such as "marketing," "accounting," "production," "management," and "human resources development" imply that all people working in the one of these defined areas are performing a similar type of activity. Functional job classifications are regularly used in organizational development and in the preparation of organization charts.

In contrast, to classify occupations by ability level involves using terms that designate amount of on-the-job experience, skill level, and types of education and training. Terms such as "apprentice," "journeyman," "master," "entry-level," "technician," and "specialist" all reflect a classification of jobs by ability level. The classification of employees by ability levels also guides organizational management in establishing the wage and salary schedules of employees.

Job Descriptions/Job Titles A job description is a narrative statement defining a job, that is, what the employer expects of the employee in terms of on-the-job performance. As stated by Winning (1996), " A job description [or position description] is a list of responsibilities and functions . . . required in a particular position" (p. 1). A job description categorizes and defines the activities of a worker in more general terms then those used in a job analysis. The description is intended to provide a profile of the job rather than describe the occupation in the detail found in most job analyses. The entries in a well-written job description are introduced by a descriptive verb and closed by a noun defining the activity, for example, "maintains bank records."

Complementing the job description is the job title. Job titles are general in nature, in that they reflect all the activities contained in a job description. In one sense, a job title is more an extension of the job description than of a completed job analysis.

Organization Charts Organization charts visually depict the line/staff relationships and responsibilities of departments/units and individuals working in an organization. The information gleaned from a job description, together with that found in the accompanying job classification, serves as the basis for determining the final configuration and content of a completed organization chart.

Time and Motion Studies Time and motion studies address the issues of industrial production and efficiency, since they attempt to measure time on task, product quality, and worker safety. These studies are conducted in the workplace under normal working conditions. A completed job analysis provides the researcher with the necessary list of tasks and performance steps, that is, work activities performed by employees in the completion of their jobs. The focus of a time and motion study is to eliminate wasted motion and determine the most efficient way of performing a particular task.

Quality Assurance Standards As defined by Peach (1997), "Quality assurance includes all the planned and systematic activities implemented within the quality system" (p. 38). A job description provides the quality assurance professional with the list of tasks performed in a particular job and the performance steps (procedures) required to perform each of the tasks. Also, in a comprehensive job analysis, standards of performance for both the tasks and performance steps are included. The two sets of criteria assist in determining the quality outcomes of both the task (product) and procedural steps (process).

The same two sets of quality standards are also applicable in the education and training of people for the workplace. Again, the content of the completed job analysis would provide instructors with the standards used in preparing students for employment.

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RICHARD F. BORTZ

JOB DESCRIPTION

(SEE: *Job Analysis and Design*)

JOB ENRICHMENT

Job enrichment is a way to motivate employees by giving them increased responsibility and variety in their jobs. Many employers traditionally believed that money was the only true motivating factor for employees and that if you wanted to get more work out of employees, offering them more money was the only way to do it. While that may be true for a small group of people, the majority of workers today like to work and to be appreciated for the work they do. Job enrichment—allowing the employees to have more control in planning their work and deciding how the work should be accomplished—is one way to tap into the natural desire most employees have to do a good job, to be appreciated for their contributions to the company, and to feel more a part of the company team.

Job enrichment has its roots in Frederick Herzberg's *two-factor theory*, according to which two separate dimensions contribute to an employee's behavior at work. The first dimension, known as hygiene factors, involves the presence or absence of job dissatisfacters, such as wages, working environment, rules and regulations, and supervisors. When these factors are poor, work is dissatisfying and employees are not motivated. However, having positive hygiene factors does not cause employees to be motivated; it simply keeps them from being dissatisfied. The second dimension of Herzberg's theory refers to motivators, which are factors that satisfy higher-level needs such as recognition for doing a good job, achievement, and the opportunity for growth and responsibility. These motivators are what actually increase job satisfaction and performance. Job enrichment becomes an important strategy at this point because enriching employees' jobs can help meet some of their motivational needs. There are basically five areas that are believed to affect an individual employee's motivation and job performance: skill variety, task identity, task significance, autonomy, and feedback. Job enrichment seeks to find positive ways to address each of these areas and therefore improve employee motivation and personal satisfaction.

Skill variety involves the number of different types of skills that are used to do a job. This area is important because using only one skill to do the same task repeatedly can be quite boring, typically causing the employee's productivity to decrease after a period of time. However, using a variety of skills in a job will tend to keep the employee more interested in the job and more motivated.

One way businesses are focusing on this area is through *job rotation*, that is, moving employees from job to job within the company, thereby allowing employees a variety of tasks in their work and helping prevent boredom. While this process can be costly to the company because employees must be trained in several different areas, the cost tends to be balanced by the increase in morale and productivity. Job rotation also gives each employee the opportunity to see how the different jobs of a company fit together and gives the company more flexibility in covering tasks when workers are absent. However, while job rotation is a good way to enrich employees' jobs, it can also hinder performance: Having to know several different jobs in order to rotate, can prevent employees from becoming proficient at any of the jobs. Therefore, the advantages and disadvantages of job rotation as an enrichment strategy have to be carefully weighed.

Task identity is a matter of realizing a visible outcome from performing a task. Being able to see the end result of the work they do is an important motivator for employees. One way to make task identity clearer is through *job enlargement*, which means adding more tasks and responsibilities to an existing job. For example, instead of building just one component part of a humidifier, a team of employees builds the entire product from start to finish. When using job enlargement as an enrichment strategy, it is important that enlarging the job gives the employee more responsibility and more variety, not just more work.

Task significance involves how important the task is to others in the company, which is important in showing employees how the work they do fits in with that done in the rest of the organization. If employees can see how their work affects others, it will be a motivator to do the best job they can.

Many companies take new employees on a tour of the company and provide training sessions on how each part of the company works together with the other parts. In order to accept and handle responsibility, it is important that employees know how the various areas of the company work together; without this knowledge, it is very difficult for them to handle decision-making responsibilities. Putting employees from different areas of the company into planning teams can also help them see the significance of the tasks they perform.

Autonomy involves the degree of freedom, independence, and decision-making ability the employee has in completing assigned tasks. Most people like to be given responsibility; it demonstrates trust and helps motivate employees to live up to that trust. Responsibility can also help speed up work processes by enabling the employee to make decisions without having to wait for management approval. Autonomy is a very important part of job enrichment because it gives the employee power and a feeling of importance.

A type of job enrichment that restructures work to best match the employee to the job is *job redesign.* Job redesign can focus on combining existing jobs, forming work groups, and/or allowing closer contact between employees and individual suppliers or customers. The idea behind job redesign is to match employees with a job they like and are best qualified to perform. Self-managed teams are a type of job design whereby employees are grouped into teams and given certain guidelines to follow as well as goals to accomplish—and then left alone to accomplish those goals. Self-managed teams demonstrate the company's faith in the employees and give employees a feeling of power and pride in the work they accomplish.

Feedback describes how much and what type of information about job performance is received by the employee. It is one of the most important areas for motivation. Without feedback, employees have no way of knowing whether they are doing things correctly or incorrectly. Positive feedback helps to motivate employees by recognizing the efforts they have put into their work. While monetary rewards for doing a good job can be a strong incentive, sometimes saying "you did a really good job on that project" can mean just as much. Corrective feedback is also important because it lets employees know what areas need improvement.

There are many different types of job-enrichment activities and programs that companies can implement to encourage worker participation and enhance motivation. The team atmosphere is one way to enrich jobs. Grouping employees into teams and allowing the team the freedom to plan, make decisions, and accomplish their goals gives employees a feeling of importance and responsibility. It can also help employees come up with creative ideas on ways to improve work activities by giving them the opportunity to work closely with others. Asking for and encouraging employees to give input on company strategies and plans is another way to enrich jobs. Often times employees have the best input because they are the ones actually performing the activity on a daily basis. Holding company award ceremonies can also help to enrich jobs and motivate employees by recognizing individual employees for their contributions to the company.

The purpose of job enrichment is to improve the quality of an employee's job and therefore motivate the employee to accomplish more. However, in order for job enrichment to work, the employee has to desire and accept new ways of accomplishing tasks. Some employees lack the skills and knowledge required to perform enriched jobs, while others are quite happy doing routine jobs because they feel the current work situation is relatively stress-free. It is likely that these types of employees would not like job-enrichment activities and would not accept the new way of doing things. Therefore, asking for employee input and keeping communication lines open is essential to the success of job-enrichment programs.

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MARCY SATTERWHITE

JOB SATISFACTION

Job satisfaction, a worker's sense of achievement and success, is generally perceived to be directly linked to productivity as well as to personal well-being. Job satisfaction implies doing a job one enjoys, doing it well, and being suitably rewarded for one's efforts. Job satisfaction further implies enthusiasm and happiness with one's work. The Harvard Professional Group (1998) sees job satisfaction as the key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a general feeling of fulfillment.

IMPORTANCE TO WORKER AND ORGANIZATION

Frequently, work underlies self-esteem and identity while unemployment lowers self-worth and produces anxiety. At the same time, monotonous jobs can erode a worker's initiative and enthusiasm and can lead to absenteeism and unnecessary turnover. Job satisfaction and occupational success are major factors in personal satisfaction, self-respect, self-esteem, and self-development. To the worker, job satisfaction brings a pleasurable emotional state that often leads to a positive work attitude. A satisfied worker is more likely to be creative, flexible, innovative, and loyal.

For the organization, job satisfaction of its workers means a work force that is motivated and committed to high quality performance. Increased productivity—the quantity and quality of output per hour worked—seems to be a by-product of improved quality of working life. It is important to note that the literature on the relationship between job satisfaction and productivity is neither conclusive nor consistent. However, studies dating back to Herzberg's (1957) have shown at least low correlation between high morale and high productivity, and it does seem logical that more satisfied workers will tend to add more value to an organization. Unhappy employees, who are motivated by fear of job loss, will not give 100 percent of their effort for very long. Though fear is a powerful motivator, it is also a temporary one, and as soon as the threat is lifted performance will decline.

Tangible ways in which job satisfaction benefits the organization include reduction in complaints and grievances, absenteeism, turnover, and termination; as well as improved punctuality and worker morale. Job satisfaction is also linked to a more healthy work force and has been found to be a good indicator of longevity. And although only little correlation has been found between job satisfaction and productivity, Brown (1996) notes that some employers have found that satisfying or delighting employees is a prerequisite to satisfying or delighting customers, thus protecting the "bottom line." No wonder Andrew Carnegie is quoted as saying: "Take away my people, but leave my factories, and soon grass will grow on the factory floors. Take away my factories, but leave my people, and soon we will have a new and better factory" (quoted in Brown, 1996, p. 123).

CREATING JOB SATISFACTION

So, how is job satisfaction created? What are the elements of a job that create job satisfaction? Organizations can help to create job satisfaction by putting systems in place that will ensure that workers are challenged and then rewarded for being successful. Organizations that aspire to creating a work environment that enhances job satisfaction need to incorporate the following:

- Flexible work arrangements, possibly including telecommuting
- Training and other professional growth opportunities
- Interesting work that offers variety and challenge and allows the worker opportunities to "put his or her signature" on the finished product
- Opportunities to use one's talents and to be creative
- Opportunities to take responsibility and direct one's own work
- A stable, secure work environment that includes job security/continuity
- An environment in which workers are supported by an accessible supervisor who provides timely feedback as well as congenial team members
- Flexible benefits, such as child-care and exercise facilities
- Up-to-date technology
- Competitive salary and opportunities for promotion

Probably the most important point to bear in mind when considering job satisfaction is that there are many factors that affect job satisfaction and that what makes workers happy with their jobs varies from one worker to another and from day to day. Apart from the factors mentioned above, job satisfaction is also influenced by the employee's personal characteristics, the manager's personal characteristics and management style, and the nature of the work itself. Managers who want to maintain a high level of job satisfaction in the work force must try to understand the needs of each member of the work force. For example, when creating work teams, managers can enhance worker satisfaction by placing people with similar backgrounds, experiences, or needs in the same workgroup. Also, managers can enhance job satisfaction by carefully matching workers with the type of work. For example, a person who does not pay attention to detail would hardly make a good inspector, and a shy worker is unlikely to be a good salesperson. As much as possible, managers should match job tasks to employees' personalities.

Managers who are serious about the job satisfaction of workers can also take other deliberate steps to create a stimulating work environment. One such step is *job enrichment*. Job enrichment is a deliberate upgrading of responsibility, scope, and challenge in the work itself. Job enrichment usually includes increased responsibility, recognition, and opportunities for growth, learning, and achievement. Large companies that have used job-enrichment programs to increase employee motivation and job satisfaction include AT&T, IBM, and General Motors (Daft, 1997).

Good management has the potential for creating high morale, high productivity, and a sense of purpose and meaning for the organization and its employees. Empirical findings by Ting (1997) show that job characteristics such as pay, promotional opportunity, task clarity and significance, and skills utilization, as well as organizational characteristics such as commitment and relationship with supervisors and co-workers, have significant effects on job satisfaction. These job characteristics can be carefully managed to enhance job satisfaction.

Of course, a worker who takes some responsibility for his or her job satisfaction will probably find many more satisfying elements in the work environment. Everett (1995) suggests that employees ask themselves the following questions:

- When have I come closest to expressing my full potential in a work situation?
- What did it look like?
- What aspects of the workplace were most supportive?
- What aspects of the work itself were most satisfying?
- What did I learn from that experience that could be applied to the present situation?

WORKERS' ROLES IN JOB SATISFACTION

If job satisfaction is a worker benefit, surely the worker must be able to contribute to his or her own satisfaction and well-being on the job. The following suggestions can help a worker find personal job satisfaction:

- Seek opportunities to demonstrate skills and talents. This often leads to more challenging work and greater responsibilities, with attendant increases in pay and other recognition.
- Develop excellent communication skills. Employers value and reward excellent reading, listening, writing, and speaking skills.
- Know more. Acquire new job-related knowledge that helps you to perform tasks more efficiently and effectively. This will relieve boredom and often gets one noticed.
- Demonstrate creativity and initiative. Qualities like these are valued by most organizations and often result in recognition as well as in increased responsibilities and rewards.
- Develop teamwork and people skills. A large part of job success is the ability to work well with others to get the job done.
- Accept the diversity in people. Accept people with their differences and their imperfections and learn how to give and receive criticism constructively.
- See the value in your work. Appreciating the significance of what one does can lead to satisfaction with the work itself. This helps to give meaning to one's existence, thus playing a vital role in job satisfaction.
- Learn to de-stress. Plan to avoid burnout by developing healthy stress-management techniques.

ASSURING JOB SATISFACTION

Assuring job satisfaction, over the long term, requires careful planning and effort both by management and by workers. Managers are encouraged to consider such theories as Herzberg's (1957) and Maslow's (1943) Creating a good blend of factors that contribute to a stimulating, challenging, supportive, and rewarding work environment is vital. Because of the relative prominence of pay in the reward system, it is very important that salaries be tied to job responsibilities and that pay increases be tied to performance rather than seniority.

So, in essence, job satisfaction is a product of the events and conditions that people experience on their jobs. Brief (1998) wrote: "If a person's work is interesting, her pay is fair, her promotional opportunities are good, her supervisor is supportive, and her coworkers are friendly, then a situational approach leads one to predict she is satisfied with her job" (p. 91). Very simply put, if the pleasures associated with one's job outweigh the pains, there is some level of job satisfaction.

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BERYL C. MCEWEN

L

LABOR

(SEE: *Factors of Production*)

LABOR UNIONS

A labor union is defined as "a group of workers who have banded together to achieve common goals in the key areas of wages, hours, and working conditions" (Boone and Kurtz, 1999, p. 414). Originally, labor unions were primarily made up of male, blue-collar workers; but as the economy of the United States evolved from production industries to service industries, union membership has seen a dramatic increase in white-collar and female workers. In addition, one-fifth of all professionals in the United States are union members (Boone and Kurtz, 1999).

HISTORY AND EVOLUTION

Labor unions began to evolve in the United States in the 1700s and 1800s due to the need for safety and security for workers. Workers formed labor unions in response to intolerable working conditions, low wages, and long hours. In the wake of the Industrial Revolution, men, women, and even children worked in unsafe factories from dawn to dark every day of the week for only pennies a day. These oppressive conditions forced workers to look for ways to improve their situation. They gradually learned that by banding together and bargaining as a group, they could pressure employers to respond to their demands.

The progression of the Industrial Revolution and the formation of labor unions go hand in hand. The Industrial Revolution brought about specialization of employees in the workplace and a dramatic increase in production. This new factory system, which developed in the nineteenth and early twentieth centuries, brought to workers both prosperity (steady employment in good economic times) and hardship (bad working conditions and unemployment during depressions). Thus, the Industrial Revolution changed the American class structure, turning skilled tradesmen into the working class, who found it very difficult to escape factory life.

As more and more workers united to improve their situation, two types of labor unions emerged. Craft unions were made up of workers who were skilled in a specific trade. Many craft unions were organized in the 1790s, such as the Philadelphia shoemakers in 1792, the Boston carpenters in 1793, and the New York printers in 1794 (Estey, 1976).

Beginning in 1827, laborers who worked in the same industry, regardless of their specific job, formed industrial unions, such as the United Steel Workers and the Teamsters. The 1837 depression nearly wiped out these unions, but they were reborn shortly before the Civil War and became strong enough to survive recessions.

MAY
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Members of the NLRB watch a labor vote.

Five major labor organizations emerged between 1866 and 1936. The National Labor Union was organized in 1866. Though it became a political party and collapsed within six years, it did successfully bring together into a national federation both craft unions and reform groups. The Noble Order of the Knights of Labor, founded in 1869, sought to unite all workers, both skilled and unskilled; but in 1886, when its membership had reached more than 700,000, it split into two groups. The revolutionary socialist group wanted the government to take over production; the traditional group wanted to remain focused on the economic well-being of its members. This second group merged with a group of individual craft unions in 1886 to become the American Federation of Labor (AFL). This was the beginning of today's modern union structure. The AFL's first president, Samuel Gompers, kept the improvement of wages, hours, and working conditions as the objectives of the union (Boone and Kurtz, 1999). AFL membership grew rapidly until the 1920s, when there were few skilled craftworkers yet to be organized. By that time, three-fourths of the organized workers in the United States were members of the AFL (Boone and Kurtz, 1999).

In 1905, an organization called the Industrial Workers of the World was established. Though it was short-lived, this union introduced the sit-down strike and mass picketing.

In the early 1920s, workers in the steel, aluminum, auto, and rubber industries formed many individual industrial unions (groups of employees working in the same industry, yet not using the same skills). These unions did not agree with the craft union concept (grouping workers with the same specific skill), which was the organizational structure of the AFL. Therefore, in 1936, they split with the AFL and became a new group of affiliated unions called the Congress of Industrial Organizations (CIO). Organizing complete industries instead of individual crafts proved a successful way to deal with mass-production industries, and the CIO's membership soon grew to nearly that of the AFL.

GROWTH

Even with so much union organization activity going on, there were less than 1 million union members in the United States in 1900. Membership in labor unions grew slowly from 1920 to 1935, but the modern labor movement was born in the decade between 1933 and 1944. The combination of New Deal labor legislation, competition between the AFL and the CIO, and World War II quadrupled union membership, which by 1937 was more than 5 million. Union membership continued to increase from 1943 through 1956, reaching more than 15 million in 1950. One-fourth of the labor force were union members at that time, when the government officially sanctioned unions.

In 1955, the AFL and CIO settled their differences and merged into one extremely large labor organization. All the major national unions in the United States today except the National Education Association are affiliated with the AFL-CIO.

Union membership declined from 1956 to 1961, when white-collar workers outnumbered blue-collar workers for the first time, women were entering the work force in large numbers, and the economy was changing from a production to a service industry orientation. In 1961, growth resumed; from 1964 to 1974, especially during the time of the Vietnam War, unions gained 4 million members, largely public-sector employees and professionals.

DECLINE

The percentage of U.S. workers who are union members has fallen since the 1980s. This decline is largely due to the decrease in the number of blue-collar jobs, labor legislation protecting workers, better employee-management relationships, and the shift from a manufacturing to a service economy (bringing into the work force more women and young people, who are not easily organized). During the 1990s, despite the decline in the percent of workers who were unionized, nearly 17 million U.S. workers, between one-eighth and one-sixth of the labor force, belonged to labor unions. The six largest labor unions and their percentage of the total U.S. union membership are listed in Figure 1.

ORGANIZATION

Labor unions are organized on several different levels. Local unions represent members in a specific geographic area, such as a city, state, or region. These local unions make up the base of a national union, which unites all its affiliated local unions under one constitution. The Teamsters and the United Steel Workers of America are two examples of large national unions, each uniting many local unions. The decision-making process of national unions is decentralized, which allows decisions to be made at the local level, by those best qualified to make them. Thus, the national union recognizes the autonomy of each local union yet unites them under one set of rules and grants each local union its charter. Some unions have an international level. These international

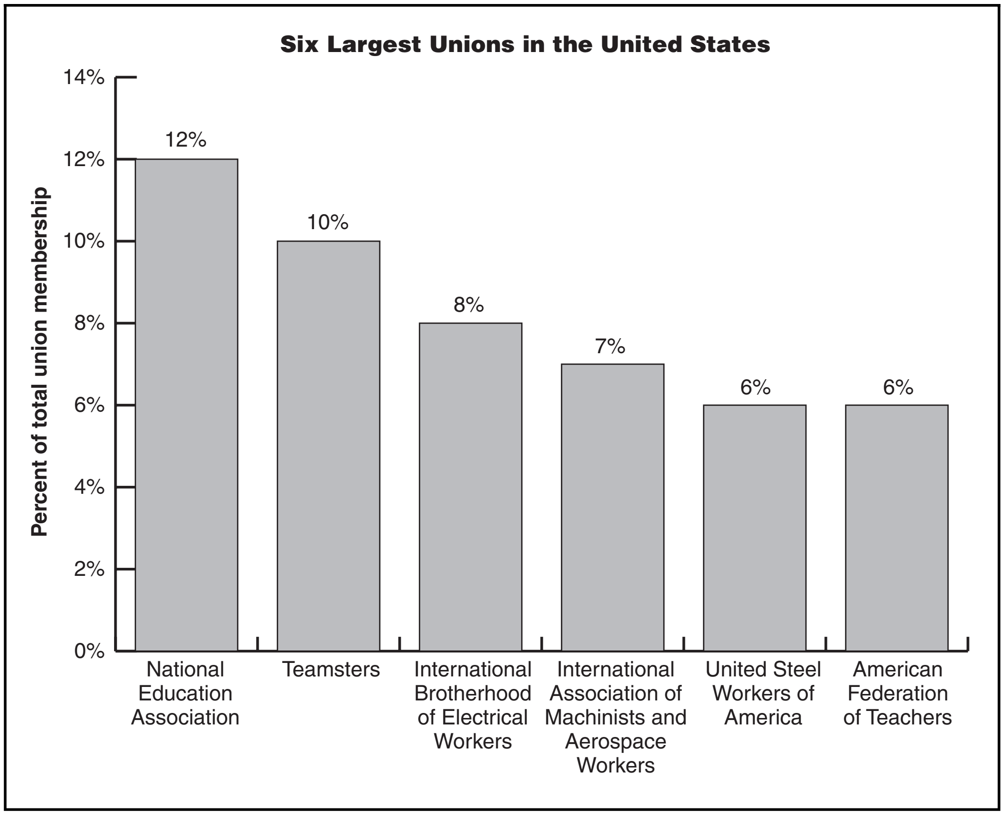

Figure 1

SOURCE: Boone, Louis E., and Kurtz, David L. (1993). *Contemporary Business.* Fort Worth, TX: Dryden Press.

unions have members both inside and outside the United States, such as in Canada. Their organization is similar to national unions, with local unions being the base of the union structure. The primary emphasis of national unions is economic. Their main function is collective bargaining, though much of the negotiation process occurs at the local union level. Bargaining labor-management contracts, which deal with wages, hours, and working conditions, and settling labor-management disputes are the primary roles of the local and national union leadership (See Collective Bargaining).

The top level of labor union organization is the federation, such as the AFL-CIO. Such a federation is made up of many national and/or international unions. The purpose of the federation level is to coordinate its affiliated unions, settle disputes between them, and serve as the political representative of the union members.

MEMBERSHIP POLICIES

Various employment policies have been used in business and industry to determine union membership. The closed-shop policy, which was outlawed by the Taft-Hartley Act in 1947, forced workers to join the union in order to be hired at a company and to remain a union member in order to continue employment. The union-shop policy requires all current employees of a company to join the union when it is certified as their bargaining agent (voted in by the majority of the workers). New employees must also join the union under the union-shop policy. However, the Taft-Hartley Act allows individual states to outlaw the union-shop policy. Most union contracts negotiated in the 1990s operate under the union-shop policy. The agency-shop policy allows both union and nonunion workers to be employed by an organization, but the nonunion employees must pay a union fee equal to union dues. This policy requires nonunion workers to pay their "fair share" of the expenses of the union's representing them in negotiations, but none of the cost of the union's political activities. The open-shop policy allows voluntary union membership or nonmembership for all workers. It does not require nonunion workers to pay any union dues or fees.

LABOR LEGISLATION

Both labor unions and management have been affected by federal legislation since 1932, when the Norris-LaGuardia Act was passed. This law protects union activities such as strikes and picketing by making it difficult for management to obtain injunctions against them. In 1935, the Wagner Act (also known as the National Labor Relations Act) made collective bargaining legal and forced employers to negotiate with union officials. The National Labor Relations Board (NLRB) was established by this act. The board oversees union elections and guards against unfair labor practices. The Fair Labor Standards Act of 1938 set a maximum of 40 hours for a basic workweek, outlawed child labor, and set a minimum wage. The Taft-Hartley Act of 1945 limited the power of unions by prohibiting unions from such activities as coercing employees to join unions, charging excessive fees, refusing to bargain collectively with an employer, and using union dues for political contributions. The Taft-Hartley Act was amended in 1959 by the Landrum-Griffin Act, which requires a union to have a constitution and bylaws, secret-ballot elections of officers, and a financial reporting procedure. Management procedures are also regulated by legislation, such as the Plant-Closing Notification Act of 1988, which requires employers to give workers a sixty-day warning of mass layoffs or plant closings.

OUTLOOK

Labor unions were born out of necessity, to protect the health and well-being of American workers. Through the years, they have provided a unified voice for workers and obtained fair treatment of them in the workplace. During the twentieth century, however, laws have been passed that guarantee employees many of the rights that once had to be negotiated in labor-management contracts. An increase in employee-management teamwork and communication has also reduced the need for workers to be represented by labor unions. Thus, labor unions no longer play the vital role they once did in American labor-management relations.

(SEE ALSO: *Collective Bargaining*)

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PAULA LUFT

LAND

(SEE: *Factors of Production*)

LAW IN BUSINESS

Law governs and regulates virtually all aspects of the business process, from the right to engage in a business or trade, to the legal form of a business, to agreements for buying and selling merchandise or rendering services. Law regulates the quality of products sold and the advertising of products for sale. Law governs the employment relationship, protects business property, and taxes business income. This article explores the relationship of business and law in several of these areas.

BUSINESS LAW AND LAWYERS

Business in the United States is regulated by the federal and state as well as by town and city ordinances. State law regulating forms of business, business agreements, and some taxes is the most important. Federal law regulates such things as advertising, civil rights, and protection of such property as inventions of computer programs. Local law typically regulates business hours, where one can do business (zoning) and some quality control (building codes).

To qualify as a lawyer today, a person usually must earn both a college degree and a three-year law degree and then pass a rigorous examination (the bar exam). Lawyers are certified in only one or possibly two states. Thus a lawyer certified in New York, for example, would not be qualified to answer a question about law in Texas or even a question about local law in a distant city even within the same state.

Lawyers also do not know a business as well as the owner does. All businesses need lawyers from time to time, but it is important for the businessperson to know as much as possible about the law when working with lawyers.

FORMS OF BUSINESS

There are three basic legal forms of business—sole proprietorship, partnership, and corporation.

Sole Proprietorship. Many businesses begin with an idea worked out at the kitchen table, in a garage workshop, or today, on the Internet. There are no legal impediments to or requirements for starting most businesses. One needs only an idea, perhaps inventory, and customers. When one simply starts a business with nothing more, it is called a sole proprietorship. For some business, licenses are necessary. Plumbers, beauticians, and, of course, lawyers and physicians must be licensed by the state, for example, but carpenters, psychologists, tax advisers, and bookkeepers, while they often have professional qualifications, do not need to be legally certified or licensed.

The sole proprietor is responsible for all the debts of the business and in turn receives, after taxes, all of the profits. The sole proprietor may hire employees under an employment agreement. Employees must be of legal age to work, which is normally fourteen or sixteen. A sole proprietorship usually tends to have up to twelve to fifteen employees. If the number of employees increases beyond this, the business normally evolves into another form.

Partnership. The law says that "a partnership is an association of two or more persons to carry on as co-owners a business for profit." [UPA 6(11)]. A number of factors differentiate this form of business from a sole proprietorship. More than one person is involved, and they are co-owners of the business. A partnership, like a sole proprietorship, may employ workers who are not owners.

Business is defined as "every trade, occupation, or profession." A partnership may be made up of members of any occupation. The goal of the partnership is profit; therefore, an organization of persons whose purpose is to, say, encourage recycling or advocate a political cause is not a partnership.

A partnership can be created very easily. If Sam and Mike are mechanics and put on a sign "Sam and Mike's Garage—Open for Business," they have formed a partnership under the law. Any income or losses are split half and half in the absence of an agreement that says otherwise. Normally a partnership is created by written document with the help of a lawyer. Suppose Jill and Joan wanted to start a sporting goods store. Suppose Jill could only work half time but could contribute $50,000 to start the business, while Joan had no money but knew the business and could work full time. With the help of a lawyer, they might agree as follows: The business would operate month to month. If there was income, Joan would draw the first $1500 as salary. Then Jill would draw $750 as salary. Additional income would pay Jill 6 percent per year on the $50,000 she contributed. Finally and hopefully, any additional income would be split evenly between the partners.

If Sam and Mike call their business "Quality Mechanics" or Jill and Joan call their business "Sports Unlimited," the names must be registered with the state and may not be the same as a name previously registered.

A partnership is easy to create, but its drawback is liability. Suppose Joan buys a large inventory that won't sell. Each partner is fully responsible for company debts. It may cost them their life savings. Protection from such liability can be found only in the form of a corporation.

Corporations. A corporation, which is the form of most large businesses and increasingly of small ones, begins when the state issues a charter to a group of promoters. Today, a single person may form a corporation, but normally it is a group. The owners or shareholders contribute money, property, or services for shares of ownership. Shares of larger companies are traded on stock markets, while shares of smaller corporations are held by a few individuals or a single person.

Shareholders elect a board of directors which hires employees. After salaries and other expenses are paid, the profits may be distributed to the shareholders in the form of dividends or reinvested in the corporation to allow it to grow. The corporation insulates the owners from liability. If Jill and Joan's sporting goods store lost money but was a corporation, it might go into bankruptcy, but Jill and Joan would not have to pay any remaining debt from their own money.

Those wishing to start a business would normally consult with a lawyer to determine which legal form the business should take.

BUYING AND SELLING GOODS

Contract law regulates the day-to-day business of buying and selling goods or performing services. A contract is defined in law as an agreement between two parties with an offer, acceptance, and consideration. Jill and Joan now have a corporation—Sports Unlimited, Inc. Ed comes in and decides to buy a tent priced at $225. He offers $225 to Sports Unlimited, which accepts the offer by ringing it up on the cash register. The consideration is what is exchanged; that is, $225 and the tent. When the store accepts the price, there is a binding contract. Suppose a sign clearly in Ed's view says "All returns must be made within thirty days with cash receipt." This sign becomes part of the agreement. If Ed brings the tent back twenty-nine days later, he can get his money back; if he brings it back thirty-one days later, it would be too late. Even though it is not stated by either party, if Ed used the tent on a camping trip, it would not be returnable. If, however, the tent leaked, it is not "fit for the purposes for which it was intended" and Ed could get his money back within a reasonable time.

Suppose Sam and Mike form Quality Mechanics partnership and Mary comes in and says, "The brakes aren't right, please fix them by 5 P.M." and Mike says, "It will be done!" A contract now exists, even though many terms are missing. Sam and Mike have agreed to fix what is wrong with the brakes, and Mary has agreed to pay a reasonable price. The brakes may need a simple adjustment or a complete overhaul—Sam and Mike agree to do only what is necessary. If they also tune up the engine, Mary need not pay for the tune-up.

WARRANTIES AND PRODUCTS LIABILITY

Warranties and guarantees are of two types—implied and express. If nothing else is said, it is implied that a product is guaranteed to be fit for the purposes for which it is intended. A tent will not leak for a reasonable time and an article of clothing will stand up to reasonable wear and tear. Today, most products come with express (written) warranties. Most common are limited warranties, whereby the manufacturer guarantees all parts and workmanship for a period of one year. If the product breaks down or wears out after that, the customer is responsible, although extended warranties can be purchased on many products, such as cars and appliances. Occasionally products are clearly labeled "Sold as is—no warranty of any kind."

EMPLOYMENT LAW

As a business grows, employees are normally hired, and the legal aspects can become very complicated. Basically, an agreement to employ is a contract of offer and acceptance, and the consideration is an exchange of services for a wage or salary. In the United States, contracts of employment can be quite simple. Bob agrees to work for Sports Unlimited, Inc., for $400 a week. He agrees to work under the direction of Jill and Joan for a set number of hours, doing as he is told. He, in the words of the law, is an "employee at will." He may quit at any time or be fired at any time. Sports Unlimited, Inc., is not required to give a reason if it fires him. Bob may request a raise at any time and has no legal right to health benefits or even vacation. However, if Bob brings special skills, he himself may negotiate a contract for any length of time (most common one or two years) and include features such as health insurance, a retirement plan, and vacation. The agreement is between Sports Unlimited, Inc. and Bob.

The law does make some unlimited requirements. Bob must earn at least minimum wage (in early 1999, $5.25/hour). If Sports Unlimited, Inc., hires a painter to paint the building or a lawyer to draw up the corporation papers, the service is done by an independent contractor. But Bob must follow the orders and direction of Jill and Joan because he is an employee. Sports Unlimited, Inc., must withhold wages for Bob's income tax and Social Security. It must also pay state workmen's compensation and unemployment insurance to compensate Bob if he is injured on the job or laid off. Typically a gardener who cuts the grass and trims the hedges is an independent contractor and is simply paid a sum of money. A cleaning person working inside the house under the direction of the owner is an employee, and thus the law requires additional paperwork and taxes.

Bob was free to negotiate with Sports Unlimited, Inc., as he chose. Federal law allows employees of most larger companies to form unions and make a single employment contract. This is known as collective bargaining. If employees wish, the government will conduct an election; if a majority of workers want a labor union, that union must be recognized by the employer and the employer must work out an employment contract with it. A typical contract spells out wages, benefits such as health insurance and vacation, rights to compete for promotions, and the circumstances in which an employee may be fired. Normally, the contract says employees may be fired only if they have committed a serious wrong. In the United States, unions represent a minority of employees.

CIVIL RIGHTS LAWS

It is well known that almost all workers are protected by the Civil Rights Act of 1964 as amended and the Equal Pay Act of 1963. Both apply to companies large and small, unionized and nonunionized. The law says that employees may not be discriminated against in terms of conditions of employment including hiring and promotion because of race, religion, creed, national origin, or sex. In the not too distant past, many companies would not hire members of racial or religious minorities for positions of authority regardless of their ability. Women were discouraged from entering many trades, such as construction, or professions, such as law, because they were thought to be unfeminine or forbidden to work in other areas, such as coal mining because they were dangerous—although they were no less dangerous for men.

Affirmative action is not a federal law but an executive policy (ordered by the president) that requires companies that do business with the government, or institutions such as schools that receive federal funds, to work to increase numbers of workers (or students) from underrepresented classes. This can be tricky because companies are required to seek out and promote members of certain minority groups without discriminating against others. This is not an easy task, but it is part of American policy.

BFOQ stands for "bona fide occupational qualification" and represents an exception to civil rights laws. One may discriminate if there is a good reason to do so. Since people have a right to privacy, an attendant in a restroom can be required to be of the same sex. Models for a line of dresses can be exclusively young, slim females, and casting for a movie or play may discriminate on any basis. In a recent case, guards in a male maximum security prison were required to be male. Some questions remain open. Could a Chinese restaurant wishing to create the atmosphere of China have only Chinese servers? That is an open question.

In the 1970's, Congress added older workers to the list of protected classes. Legal protection is given only to persons over forty. A company may refuse to hire a twenty-five-year old as being "too young" or in an actual case, a thirty-seven-year old as being "too old" for a job.

The most recent category to receive protection from discrimination is persons with disabilities—real or perceived—under the Americans with Disabilities Act (ADA) of 1990.

All businesses need to know a few basics about civil rights law. In interviews, no question may be asked about a person's health history or physical or mental condition except "is there any reason physical or otherwise that would prevent you from doing this job?" Reasonable accommodation must be made for those with disabilities. A simple example would be that a desk would be built a little higher for an employee in a wheelchair. The extent of "reasonable" remains an open question. A person subject to occasional seizures would be qualified to work for Sports Unlimited, Inc., as a clerk but probably not for Quality Mechanics as a test driver.

A business must also make sure it is accessible to customers with disabilities. This includes both access to facilities and equal service as a customer. Many open questions remain. For example, to what extent must an Internet sales company provide access to those with vision or hearing impairments? All companies should consult lawyers or specialists on ADA compliance.

There are exceptions. Someone with a history of drug problems need not be hired as an airline pilot or railroad engineer. If drug or alcohol problems come to light, employees must be given reasonable treatment; if they do not respond, they may be fired.

PROTECTION OF PROPERTY AND INTELLECTUAL PROPERTY

Local authorities, of course, provide police protection from theft of inventory and other company property by customers, employees, or outsiders. Yet there is another property that many businesses have that is at least as valuable which is also protected by law—secrets, patents, copyrights, and trademarks/names.

Business Secrets. Businesses frequently keep secret information that is the heart of this business. Customer lists for an insurance company or a stockbroker are examples. State and federal law severely punishes anyone who steals or makes use of such property. The most famous secret in the world might be the formula for Coca-Cola. If any person or company can duplicate Coca-Cola, they may produce and sell it under their own name. The law protects the secret from theft but not from duplication.

Patents. Patents are a protection given by the federal government for inventions. A patent gives the inventor the exclusive rights for seventeen years to use or license the invention. Anyone infringing on the patented product is subject to fine and imprisonment.

Copyrights. Copyrights give authors protection for their works for their lifetime plus fifty years. Works include literary works, musical compositions, and, very important today, computer programs, which includes software. While there are exceptions for classroom use, it is illegal to copy tapes, CDs, or software. This is theft and is punishable by fines. It is important for business today to set high legal standards for employees for proper business use of copyrighted material.

Trademarks and Trade Names. There has been substantial growth in this area in recent years. Trademarks and trade names can be of enormous value, and businesses work hard to protect their property. Coca-Cola and Coke, both the names and the distinctive script, are among the best known of these. Names and logos are now registered in large numbers, and protection is shown by the ™ by the name. Universities, for example, often make substantial money by licensing use of their name, logo, or other associated symbols on clothing and other items. Trademarks and trade names are registered with the federal government. Exclusive use of them lasts as long as they are used.

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CARSON H. VARNER

LEADERSHIP

Leadership is a fascinating subject for many people. The term conjures up a familiar scene of a powerful, heroic, triumphant individual with a group of followers returning home after winning a national championship or a war against the evil enemy. They all march through town surrounded by a crowd waving flags. Or an enthusiastic orator delivers an energetic speech, hands waving in the air, to thousands of people gathered in a plaza.

The widespread fascination with leadership may be because of the impact that leadership has on everyone's life. Stories of heroic leadership go back thousands of years: Moses delivering thousands of Hebrews from Egypt or Alexander the Great building a great empire. Why were certain leaders able to inspire and mobilize so many people, and how did they achieve what they achieved? There are so many questions to which we want answers, but many remain as puzzling as ever. In recent decades, many researchers have undertaken a systematic and scientific study of leadership.

Leadership is defined in so many different ways that it is hard to come up with a single working definition. Leadership is not just a person or group of people in a high position; understanding leadership is not complete without understanding interactions between a leader and his or her followers. Neither is leadership merely the ability or static capacity of a leader. We need to look into the dynamic nature of the relationship between leader and followers. In these unique social dynamics, all the parties involved attempt to influence each other in the pursuit of goals. These goals may or may not coincide: Participants actively engage in defining and redefining the goal for the group and for themselves.

Putting all these into a comprehensive statement: Leadership is a process in which a leader attempts to influence his or her followers to establish and accomplish a goal or goals. In order to accomplish the goal, the leader exercises his or her power to influence people. That power is exercised in earlier stages by motivating followers to get the job done and in later stages by rewarding or punishing those who do or do not perform to the level of expectation. Leadership is a continuous process, with the accomplishment of one goal becoming the beginning of a new goal. The proper reward by the leader is of utmost importance in order to continually motivate followers in the process.

What does leadership do for an organization? If we define leadership as a process involving interactions between a leader and followers, usually subordinate employees of a company, leadership profoundly affects the company: It defines or approves the mission or goal of the organization. This goal setting is a dynamic process for which the leader is ultimately responsible. A strong visionary leader presents and convinces followers that a new course of action is needed for the survival and prosperity of the group in the future. Once a goal is set, the leader assumes the role of ensuring successful accomplishment of the goal. Another vital role of leadership is to represent the group/organization and link it to the external world in order to obtain vital resources to carry out its mission. When necessary, leadership has to defend the organization's integrity.

CHARACTERISTICS OF SUCCESSFUL AND EFFECTIVE LEADERSHIP

What does it take to make leadership successful or effective? Early students of leadership examined great leaders throughout history, attempting to find traits that they shared. Among personality traits that they found were determination, emotional stability, diplomacy, self-confidence, personal integrity, originality, and creativity. Intellectual abilities included judgmental ability, knowledge, and verbal communication ability. In addition, physical traits cannot be ignored, such as age, height, weight, and physical attractiveness.

It is not only inborn personality traits that are important but also styles and behaviors that a person learns. Strong *autocratic* leaders set their goals without considering the opinions of their followers, then command their followers to execute their assigned tasks without question. *Consultative* leaders solicit the opinions and ideas of their followers in the goal-setting process but ultimately determine important goals and task assignments on their own. *Democratic* or *participative* leaders participate equally in the process with their followers and let the group make decisions. Extremely laid-back leaders, so called *laissez-faire* leaders, let the group take whatever action its members feel is necessary.

Inspired and led by Renis Likert, a research team at the University of Michigan studied leadership for several years and identified two distinct styles, which they referred to as *job-centered* and *employee-centered* leadership styles. The *job-centered* leader closely supervises subordinates to make sure they perform their tasks following the specified procedures. This type of leader relies on reward, punishment, and legitimate power to influence the behavior of followers. The *employee-centered* leader believes that creating a supportive work environment ultimately is the road to superior organizational performance. The employee-centered leader shows great concern about the employees' emotional well-being, personal growth and development, and achievement.

A leadership study group at Ohio State University, headed by Harris Fleishman, found similar contrasts in leadership style, which they referred to as *initiating structure* and *consideration.* The leadership style of *initiating structure* is similar to the job-centered leadership style, whereas *consideration* is similar to the employee-centered leadership style. It was the initial expectation of both research groups that a leader who could demonstrate both high initiating structure (job-centered) and high consideration (employee-centered) would be successful and effective in all circumstances.

Many students of leadership today believe that there is no one best way to lead, believing instead that appropriate leadership styles vary depending on situations. Fred Fiedler (1967), for instance, believes that a task-oriented leadership style is appropriate when the situation is either extremely favorable or extremely unfavorable to the leader. A favorable situation exists when the relationship between the leader and followers is good, their tasks are well-defined, and the leader has strong power; when the opposite is true, an unfavorable situation exists. When the situation is moderately favorable, a people-oriented leadership style is appropriate. Some theorists suggest that situational factors—the type of task, nature of work groups, formal authority system, personality and maturity level of followers, experience, and ability of followers—are critical in determining the most effective leadership style. For instance, when followers are inexperienced and lack maturity and responsibility, the directive leadership style is effective; when followers are experienced and willing to take charge, supportive leadership is effective.

LEADERSHIP IN A MULTICULTURAL SETTING

One major situational factor is the cultural values of the followers. People who have different cultural norms and values require different leadership styles. In a highly collective society such as Japan, the Philippines, Guatemala, or Ecuador, where the social bond among members is very strong and people look out for one another, a strong patriarch at the top of the social hierarchy tends to emerge as an effective leader. Such a leader is not only accepted by the followers but is also expected to protect their interests. China's Deng Xiao-Ping, whose influence continues even after his death, is a case in point.

On the other hand, in an extremely individualistic society, such as the United States (Hofstede, 1980), where the social bonds are loose and individuals are expected to take care of themselves, success and achievement are admired, and a competitive and heroic figure is likely to emerge as a leader. It is no surprise that John F. Kennedy became such a charismatic figure in the United States. His energetic and inspirational speeches are still vividly remembered.

CHARISMATIC AND TRANSFORMATIONAL LEADERSHIP

Regardless of culture and time, however, a great leader is remembered for his or her charisma, which means "divinely inspired gift" in Greek. Charismatic leaders have profound effects on followers. Through their exceptional inspirational and verbal ability, they articulate ideological goals and missions, communicate to followers with passion and inspiration, set an example in their own behaviors, and demand hard work and commitment from followers, above and beyond normal expectation.

Building on charismatic leadership, Bernard Bass (1985) proposed a theory of *transformational* leadership. Bass views leadership as a process of social exchange between a leader and his or her followers. In exchange for desired behaviors and task accomplishment, a leader provides rewards to followers. This nominal social exchange process is called transactional leadership. In contrast, a transformational leader places a higher level of trust in his or her followers and demands a much higher level of loyalty and performance beyond normal expectations. With unusual charismatic qualities and inspirational person-to-person interactions, a transformational leader transforms and motivates followers to make extra efforts to turn around ailing organizational situations into success stories. Lee Iacocca, when he took over Chrysler as CEO in 1979 and turned around this financially distressed company, was considered an exemplary transformational leader. He was able to convince many people, including employees and the U.S. Congress, to support the ailing company and to make it a success.

WAYS WOMEN LEAD

Leadership qualities such as aggressiveness, assertiveness, taking charge, and competitiveness are traditionally associated with strong, masculine characters. Even women executives tended to show these characteristics in the traditional corporate world. In fact, many of these women executives were promoted because they were even more competitive and assertive than their male counterparts. These successful women executives often sacrificed a family life, which their male counterparts did not necessarily have to do.

The business world is changing, however. Today, much research has found that women leaders are different from their male counterparts in management style: Women leaders tend to be more concerned with consensus building, participation, and caring. They often are more willing than men to share power and information, to empower employees, and to be concerned about the feelings of their subordinates.

Such an interactive and emotionally involved leadership style is not necessarily negative in today's business environment. Indeed, some researchers find it to be highly effective. Internally, a culturally diverse work force demands more interactive and collaborative coordination. Externally, culturally diverse customers demand more personable and caring attention. A caring and flexible management style serves such diverse employees and customers better than traditional methods of management.

LEADERSHIP AND MANAGEMENT

John Kotter (1988) distinguishes leadership from management. Effective management carefully plans the goal of an organization, recruits the necessary staff, organizes them, and closely supervises them to make sure that the initial plan is executed properly. Successful leadership goes beyond management of plans and tasks. It envisions the future and sets a new direction for the organization. Successful leaders mobilize all possible means and human resources; they inspire all members of the organization to support the new mission and execute it with enthusiasm. When an organization faces an uncertain environment, it demands strong leadership. On the other hand, when an organization faces internal operational complexity, it demands strong management. If an organization faces both an uncertain environment and internal operational complexity, it requires both strong leadership and strong management.

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LEE W. LEE

LEMON LAWS

(SEE: *Consumer Protection*)

LIFE CYCLE COSTING

(SEE: *Costs*)

LIFESTYLES

As the twenty-first century begins, consumers are demanding advancements in business operations to help simplify their hectic lifestyles. The progression of lifestyle changes, in combination with technological evolution, will influence the way business and marketing operations function. This article focuses on how family, job, cultural background, social class, social activities, and employment have revolutionized business and marketing operations.

FAMILY INFLUENCES ON BUSINESS OPERATIONS

Family life has changed quite a bit over the years. In the 1950s in the United States, it was not uncommon for children to grow up in large families with several siblings. It was also the norm for the mother to stay home to care for the children while the father worked to support the household.

More recently, family size has gotten drastically smaller, and mothers are not always home for the children: They are out in the work force pursuing careers and helping to support the family. In addition, there are many more single-parent homes. Because of both of these trends, many preschool children stay with day-care providers and many older children are at home alone for two or three hours after school until a parent gets home from work, making today's children more self-reliant than children in the past.

The amount of time that families spend together thus has changed significantly from previous generations. Parents do not have the time to do the errands and housework that were once part of their everyday life and still have time to spend with their children. Now, however, because of technological advances, businesses are providing time-saving services. For example, shopping—from grocery shopping to clothes shopping—can be done on-line and the purchases delivered right to their door. E-commerce businesses, such as Shoplink and Homeruns .com, are providing services that allow working parents to avoid spending time in the grocery and other stores.

JOB INFLUENCES ON BUSINESS OPERATIONS

In the past, businesses were managed very differently than they are today. New technology and its rate of advancement have revolutionized the way job objectives are met in business operations. For example, higher education has changed drastically because of technology. Distance learning is one response to adult learners' need for flexibile class schedules. Because today's students can attend classes from their homes, the jobs of faculty and the business operations of higher education have changed notably.

As discussed earlier, families spend less time together today. To remedy this situation, more and more working parents prefer to work out of their homes, and many companies are recognizing this reality and reorganizing their business operations to accommodate it. According to the American Home Business Revolution:

> *Estimates show that a home-based business starts in the United States every 11 seconds. That's 8,000 Americans starting a home-based business every day. At the beginning of the 1990's 24.3 million Americans worked either full time or part time from their homes. The trend has only gone up from there.*

Job structure has clearly affected the way business operations function in the twenty-first century.

CULTURAL INFLUENCES ON BUSINESS OPERATIONS

It is difficult to describe the culture of any country, but this is especially true of the United States because of the many different national and ethnic backgrounds of its citizens. But despite the evident diversity of American culture, there are distinct characteristics that are part of culture.

One significant cultural influence or business operation is the Christian religious calendar. Numerous offices recognize Christmas Day (December 25th) and Good Friday (the Friday before Easter) as two of the ten holidays during the calendar year. Indeed, many school vacations revolve around these same two holidays.

The overall culture of an organization is reflected in behaviors that are considered to be the "norm" as regards both verbal and non-verbal communication. Americans tend to speak directly to one another, maintaining eye contact with the person they are talking to. Hand gestures are commonly used while making presentations or in one-on-one conversation to better explain a point.

Generally, upper management determines any organization's corporate culture. Proper business attire was considered to be suits and ties for men and business suits for women. That is no longer the case in many organizations, where the business environment is more casual and jeans and slacks are now considered to be acceptable.

Then there is the role that gender plays in U.S. culture. Women, once relegated to more administrative and support-staff roles, are now upper-level managers alongside men. Jobs are no longer gender-specific in U.S. culture. For example, men now become nurses and women work on construction sites and as forklift operators. The point here is that gender no longer predetermines a person's role in business as it once did.

SOCIAL CLASS INFLUENCE ON BUSINESS OPERATIONS

What comprises social class? Is it the neighborhood one lives in? The occupation one has? The income one earns? The wealth one has acquired? There is no generally agreed-upon definition of social class, but most people agree that social class does exist. Grouping people together and assigning them a status in society is as old as society itself.

The social class of a particular group of people influences the role of business and marketing operations. The key to success in business and marketing operations is twofold. First, identify the market for your product. Second, identify the social class you are dealing with in that market. Businesses must become familiar with the customs and culture of the particular social class they are trying to do business with.

SOCIAL ACTIVITIES INFLUENCE ON BUSINESS OPERATIONS

Marketing to a particular group often incorporates depictions of social activities as a part of the advertising campaign. For example, Mountain Dew commercials portray young teenagers riding mountain bikes and engaging in extreme sports. A commercial for Grey Poupon mustard portrays high-class adults using the product while being chauffeured in a Mercedes. In both examples, the business first needed to verify who the constituted market was for their product. Second, it had to learn the characteristics of those people.

EMPLOYMENT INFLUENCE ON BUSINESS OPERATIONS

Jobs today have changed significantly because of technological advances and global influences. Many companies do business at an international level, which requires travel abroad for many employees. As virtual conferencing becomes more widespread, travel will most likely decline. Technological developments, such as the Internet and CD-ROMs, and global influences, have major implications for business and marketing procedures.

Business operations must integrate new and different marketing procedures to keep current with the changing job market. These changes in the job market require lifelong learning by both employees and employers. Vice President Al Gore embraced this lifelong learning process through his work on the national summit on twenty-first century skills for twenty-first century jobs. He asked more than three hundred leaders from the fields of training, labor unions, government, and management to establish a set of recommendations that would help ensure a prepared nation in the next century. Lifelong learning has a direct effect on businesses and their employees, particularly on marketing operations.

Workers, whether white-collar or blue-collar, are becoming increasingly technically savvy. Today's leaders recognize that each customer's needs are unique. With the cost of sales increasing and the product life cycle becoming shorter, the Internet will enable better and more economical customer service no matter what job market one is a part of.

Marketing operations must embrace e-commerce, internal links via intranets, and Internet marketing and retailing because these tools can extend operations and create new opportunities for businesses. As technology, lifestyle, and employment change, business and marketing operations must also change in innovative ways—or be left behind. It is a matter of survival.

CONCLUSION

Consumers today are demanding convenience to help simplify their hectic lifestyles. This requires business and marketing operations to be aware of the impact of such demographic variables as family, job, cultural background, social class, social activities, and employment.

All these demographic variables play an essential role in business operations. Lifestyles and technology have both changed radically, and the global marketplace is a reality. The key to business success is to understand the diversity that exists in the global marketplace and to respond innovatively to society's changing needs.

Companies that understand the shrinking amount of time families have to spend together and provide services that modern parents need in order to work at a full time job and still maintain a stable home for their children will succeed in the twenty-first century.

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Michelle Voto
Gina Mustoe

LISTENING SKILLS IN BUSINESS

Expressive skills and receptive skills make up the two skills of communication. Speaking and writing are generally referred to as expressive skills; they provide the means by which we express ourselves to others. The receptive skills, listening and reading, are the ways in which we receive information.

It has been reported that senior officers of major North American corporations spend up to 80 percent of their working time in meetings, discussions, face-to-face conversations, or telephone conversations. Most employees spend about 60 percent of the workday listening. Since such a large percentage of one's waking time is consumed by listening activities, it is clear that we could increase our productivity through listening training.

Listening consumes about half of all communication time, yet people typically listen with only about 25 percent of their attention. Ineffective listening is costly, whether it occurs in families, businesses, government, or international affairs. Most people make numerous listening mistakes every day, but the costs—financial and otherwise—are seldom analyzed. Because of listening mistakes, appointments have to be rescheduled, letters retyped, and shipments rerouted. Any number of catastrophes can arise from a failed communication regardless of the type of industry. Productivity is affected and profits suffer.

Research indicates that we hear only 25 percent of what is said and, after two months, remember only one-half of that. This has not always been the case. In first grade we heard 90 percent of what was said, in second grade 80 percent, in seventh grade 43 percent, and by ninth grade only 25 percent. It is imperative that we strive to improve our listening skills. When having difficulty understanding a document that we're reading, we can *reread* it for clarification. However, we cannot *relisten* to oral messages, unless they are mechanically recorded. The listener may misunderstand, misinterpret, or forget a high percentage of the original message. With proper training, though, listening skills can be improved. It has been proven that with extended, focused training in listening, one can more than double one's listening efficiency and effectiveness.

Communication involves message reception and interpretation. Studies of communication have routinely found that nearly everyone listens more than they talk, reads more than they write, and spends a lot more time receiving messages than sending them. The average person speaks at a rate of one hundred to two hundred words per minute. An average listener, however, can adequately process 400 words per minute. Given this differential between what is normally heard and what potentially can be processed, it is little wonder that people tend to ''tune out'' at certain times. Mental tangents are the obvious product of this differential, and managers who believe that subordinates are listening intently to every word they utter are deluding themselves.

Listening can be compared to exercising or wearing seat belts: Everybody knows it is desirable, but everybody finds it difficult to do on a regular basis. Most of us yearn to talk; we want to be center stage. If you listen to any casual conversation between friends, you will probably note that most people spend much of the conversation paying maximum attention to what they are going to say next. As we listen to others, we spend much time thinking about the next time *we* will be speaking.

Listening is more than just hearing what a speaker says. Hearing is simply the reception of sounds by your ears; listening is interpreting, or making sense of, the sounds that you hear. Hearing is a physical perception; listening is a mental activity. It requires concentration, cooperation, and an open mind.

Many situations at work demand skilled listening. Conferences, interviews, receiving instructions, handling complaints—all call for alert, sensitive listening. Whether you're listening in order to learn how to do a task, in order to make a decision, or in order to achieve friendly relations with your co-workers, it's important to make a concentrated effort to understand what the speaker is saying.

Three types of listening exist. The first type is casual, or informal. You usually don't need to remember details. The second type of listening is active, or formal. This type of listening takes concentration and requires that the listener absorb details. The last type of listening is nonverbal listening.

Speakers have the responsibility to communicate as effectively as they can, but listeners also have responsibilities. They cannot sit back and contentedly assume they have nothing to do. Like speakers, listeners also need to prepare themselves. As they listen, they must concentrate on both the verbal and nonverbal message of the speaker. Listeners are influenced by the speaker, the message, other listeners, physical conditions, and their emotional state at the time of the listening activity. While the first three cannot be controlled by the listener, the last two can.

To give complete attention to the speaker and the speaker's message, the listener should choose a position that allows a full view of the speaker's gestures. Fifty-five percent of a person's message involves nonverbal communication, 38 percent of the message derives from the speaker's voice inflection, and only 7 percent of the message involves the actual words spoken. In addition to the verbal message, the listener should also concentrate on the speaker's nonverbal messages, communicated through gestures, tone of voice, and physical movements. Do the speaker's gestures seem to reinforce or contradict the words? If the speaker is trying to paint herself as a sincere, dedicated woman, do you detect elements of dishonesty? Is the speaker actually timid even though he's trying to play the role of a man full of confidence? Only by carefully watching and analyzing a presenter's body language and thoughtfully listening to his words can you receive the full impact of the message.

As with the spoken word, body language has its own special pace, rhythm, vocabulary, and grammar. Just as in verbal language, there are ''letters'' that, when correctly joined, form unspoken ''words.'' Such ''words'' are then linked to create the ''phrases'' and ''sentences'' by which messages are exchanged. Relaxed gesturing on the part of the speaker, for example, is usually associated with confidence, while jerking and abrupt motions display nervousness and discomfort. Putting learned information about nonverbal communication to practical use can spell the difference between success or failure in many business and social encounters.

Whether one is involved in a serious negotiation, a job interview, a company meeting, or a personal interaction, the need to listen more effectively is vital. Active listening is important for the following reasons:

1. Listening enables us to gain important information.
2. Listening enables us to be more effective in interpreting a message.
3. Listening enables us to gather data to make sound decisions.
4. Listening enables us to respond appropriately to the messages we hear.

To become a better listener, you should do the following:

1. *Look the part:* Face the speaker and display feedback that the message is being heard and understood. Lean toward the speaker to show interest. Maintain eye contact at least 80 percent of the time. Do not distract the speaker with strange facial expressions and fidgeting.
2. *Listen for nonverbal messages:* Observe the speaker's body language, gestures, and the physical distance. Observe the speaker's facial expressions, eyes, mouths, and hands for hidden messages.
3. *Listen for the main points:* Filter out the nonessential and look for the principal message of the words.
4. *Be silent before replying:* Be certain that the speaker is completely finished speaking before you attempt to speak. Resist the temptation to interrupt unnecessarily.
5. *Ask questions:* It is appropriate to question the speaker in order to clarify meanings and reinforce messages heard.
6. *Sense how the speaker is feeling:* To receive the complete message, it is important to sift out any feelings the speaker is trying to convey. Determine what the speaker is *not* saying.
7. *Take notes:* Jotting down important ideas allows you to review the message at a later time and reinforces the information heard/learned.
8. *Be available:* To be spoken to, one must be available. Get out from behind your desk and papers. Stop your work and concentrate totally on the speaker.

Encourage others to listen by doing the following:

1. Lower your voice volume. It forces others to listen.
2. Make your talk interesting. Focus on your listener's favorite subject—him- or herself. Encourage others to participate by bringing them into the conversation.
3. Create the right environment. Speak where you can be easily heard and understood.
4. Be human to your listeners. Address people by name whenever possible; it helps to get their attention.

Good listening habits are an important ingredient in your journey to success. If you practice careful listening, you'll become more efficient in your job and more knowledgeable about all topics. Responsible, patient listening is a rare thing, but it is a skill that can be developed with practice.

JAN HARGRAVE

LOSS LEADERS

(SEE: *Promotion*)

M

MACROECONOMICS/ MICROECONOMICS

Economics is a broad subject that can be divided into two areas: macroeconomics and microeconomics. To differentiate between the two, the analogy of the forest and the individual trees can be helpful. Macroeconomics is the study of the behaviors and activities of the economy as a whole; hence, the forest. Microeconomics looks at the behaviors and activities of individual households and firms, the individual components that make up the whole economy; hence, the individual trees. Several examples are given below.

MACROECONOMICS

Macroeconomics, being the study of the behaviors and activities of the economy as a whole, looks at such areas as the Federal Reserve System, unemployment, gross domestic product, and business cycles.

The Federal Reserve System was created by the Federal Reserve Act of 1913, which divided the United States into twelve districts with a Federal Reserve Bank located in each. Each of these banks is owned by the member banks located within that district. The Federal Reserve System's most important function is to control the supply of money in circulation. Monetary policies made by the Federal Reserve System's Board of Governors have a tremendous impact on the total economy. These policies influence such factors as the amount of money member banks have available to loan, interest rates, and the overall price level of the economy. Three ways in which the Federal Reserve Board regulates the economy are by changing reserve requirements, changing the discount rate, and buying and selling government securities.

Macroeconomists also study unemployment, which simply defined is a very large work force and a small job market, to determine methods to control this serious economic problem. The U.S. Department of Labor estimates the level of unemployment in the economy by using results from monthly surveys conducted by the Bureau of the Census.

Unemployment means lost production for the economy and loss of income for the individual. One type of unemployment is frictional unemployment, which includes those people who are not employed because they have been fired or have quit their job. Cyclical unemployment follows the cycles of the economy. For example, during a recession, spending is low and workers are laid off because production needs are reduced. Structural unemployment occurs when a job is left vacant because a worker does not have the necessary skills needed or a worker does not live where there are available jobs. Some unemployment is due to seasonal factors; that is, employees are hired only during certain times of the year. To help lessen the problem of unemployment, the government can use its powers to increase levels of spending by consumers, businesses, and the government itself and by lowering taxes or giving tax incentives, which makes available more money with which to purchase goods and services. This in turn puts more laid-off workers back to work. The Federal Reserve System can also increase spending by lowering interest rates.

Total economic spending, which includes consumer, business, and government spending, determines the level of the gross domestic product (GDP), which is the market value of all final products produced in a year's time. GDP is one of the most commonly used measures of economic performance. An increasing GDP from year to year shows that the economy is growing. The nation's policy makers look at past and present GDPs to formulate policies that will contribute to economic growth, which would result in a steady increase in the production of goods and services. If GDP is too high or growing too rapidly, inflation occurs. If GDP is too low or decreasing, an increase in unemployment occurs.

Fluctuations in total economic activity are known as business cycles, and macroeconomists are concerned with understanding why these cycles occur. Most unemployment and inflation are caused by these fluctuations. There are four phases of the business cycle: prosperity (peak), recession, trough, and recovery. The length and duration of each cycle varies. From its highest point, prosperity, to its lowest point, trough, these phases are marked by increases and decreases in GDP, unemployment, demand for goods and services, and spending.

MICROECONOMICS

Microeconomics looks at the individual components of the economy, such as costs of production, maximizing profits, and the different market structures.

Business firms are the suppliers of goods and services, and most firms want to make a profit; in fact, they want to maximize their profits. Firms must determine the level of output that will result in the greatest profits. Costs of production play a major role in determining this level of output. Costs of production include fixed costs and variable costs. Fixed costs are costs that do not vary with the level of output, such as rent and insurance premiums. Variable costs are costs that change with the level of output, such as wages and raw materials. Therefore, total cost equals total fixed costs plus total variable costs ($TC = TFC + TVC$). Marginal cost, which is the cost of producing one more unit of output, helps determine the level at which profits will be maximized. Marginal cost (MC) measures the change (Δ) in total cost when there is a change in quantity (Q) produced ($MC = \Delta TC/\Delta Q$). Firms must then decide whether they should produce additional quantities.

Revenue, the money a firm receives for the product it sells, is also a part of the profit equation because total revenue minus total costs equal profit ($TR - TC =$ profit). Marginal revenue, which is the additional revenue that results from producing and selling one more unit of output, is also very important. As long as marginal revenue exceeds marginal cost, a firm can continue to maximize profits.

There are four basic categories of market structures in which firms sell their products. Pure competition includes many sellers, a homogeneous product, easy entry and exit, and no artificial restrictions such as price controls. A monopoly is the opposite of pure competition and is characterized by a single firm with a unique product and barriers to entry. An oligopoly has few sellers, a homogeneous or a differentiated product, and barriers to entry such as high start-up costs. Where products are differentiated, nonprice competition occurs; that is, consumers are persuaded to buy products without consideration of price. The fourth market structure is monopolistic competition. It includes many sellers, differentiated products, easy entry and exit, and nonprice competition.

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LISA S. HUDDLESTUN

MANAGEMENT

Throughout the years, the role of a manager has changed. Years ago, managers were thought of as people who were "the boss." While that might still be true today, many managers view themselves as leaders rather than as people who tell subordinates what to do. The role of a manager is comprehensive and often very complex. Not everyone wants to be a manager, nor should everyone consider being a manager.

A DEFINITION OF MANAGEMENT

Some would define management as an art, while others would define it as a science. Whether management is an art or a science isn't what is most important. Management is a process that is used to accomplish organizational goals; that is, a process that is used to achieve what an organization wants to achieve. An organization could be a business, a school, a city, a group of volunteers, or any governmental entity. Managers are the people to whom this management task is assigned, and it is generally thought that they achieve the desired goals through the key functions of (1) planning, (2) organizing, (3) directing, and (4) controlling. Some would include leading as a managing function, but for the purposes of this discussion, leading is included as a part of directing.

The four key functions of management are applied throughout an organization regardless of whether it is a business, a government agency, or a church group. In a business, which will be the focus here, many different activities take place. For example, in a retail store there are people who buy merchandise to sell, people to sell the merchandise, people who prepare the merchandise for display, people who are responsible for advertising and promotion, people who do the accounting work, people who hire and train employees, and several other types of workers. There might be one manager for the entire store, but there are other managers at different levels who are more directly responsible for the people who perform all the other jobs. At each level of management, the four key functions of planning, organizing, directing, and controlling are included. The emphasis changes with each different level of manager, as will be explained later.

Planning Planning in any organization occurs in different ways and at all levels. A top-level manager, say the manager of a manufacturing plant, plans for different events than does a manager who supervises, say, a group of workers who are responsible for assembling modular homes on an assembly line. The plant manager must be concerned with the overall operations of the plant, while the assembly-line manager or supervisor is only responsible for the line that he or she oversees.

Planning could include setting organizational goals. This is usually done by higher-level managers in an organization. As a part of the planning process, the manager then develops strategies for achieving the goals of the organization. In order to implement the strategies, resources will be needed and must be acquired. The planners must also then determine the standards, or levels of quality, that need to be met in completing the tasks.

In general, planning can be strategic planning, tactical planning, or contingency planning. Strategic planning is long-range planning that is normally completed by top-level managers in an organization. Examples of strategic decisions managers make are who the customer or clientele should be, what products or services should be sold, and where the products and services should be sold.

Short-range or tactical planning is done for the benefit of lower-level managers, since it is the process of developing very detailed strategies about what needs to be done, who should do it, and how it should be done. To return to the previous example of assembling modular homes, as the home is nearing construction on the floor of the plant, plans must be made for the best way to move it through the plant so that each worker can complete assigned tasks in the most efficient manner. These plans can best be developed and implemented by the line managers who oversee the production process rather than managers who sit in an office and plan for the overall operation of the company. The tactical plans fit into the strategic plans and are necessary to implement the strategic plans.

Contingency planning allows for alternative courses of action when the primary plans that have been developed don't achieve the goals of the organization. In today's economic environment, plans may need to be changed very rapidly. Continuing with the example of building modular homes in the plant, what if the plant is using a nearby supplier for all the lumber used in the framing of the homes and the supplier has a major warehouse fire and loses its entire inventory of framing lumber. Contingency plans would make it possible for the modular home builder to continue construction by going to another supplier for the same lumber that it can no longer get from its former supplier.

Organizing Organizing refers to the way the organization allocates resources, assigns tasks, and goes about accomplishing its goals. In the process of organizing, managers arrange a framework that links all workers, tasks, and resources together so the organizational goals can be achieved. The framework is called organizational structure, which is discussed extensively in another article. Organizational structure is shown by an organizational chart, also discussed extensively in another article. The organizational chart that depicts the structure of the organization shows positions in the organization, usually beginning with the top-level manager (normally the president) at the top of the chart. Other managers are shown below the president.

There are many ways to structure an organization, which are discussed extensively in the articles referred to previously. It is important to note that the choice of structure is important for the type of organization, its clientele, and the products or services it provides—all which influence the goals of the organization.

Directing Directing is the process that many people would most relate to managing. It is supervising, or leading workers to accomplish the goals of the organization. In many organizations, directing involves making assignments, assisting workers to carry out assignments, interpreting organizational policies, and informing workers of how well they are performing. To effectively carry out this function, managers must have leadership skills in order to get workers to perform effectively.

Some managers direct by empowering workers. This means that the manager doesn't stand like a taskmaster over the workers barking out orders and correcting mistakes. Empowered workers usually work in teams and are given the authority to make decisions about what plans will be carried out and how. Empowered workers have the support of managers who will assist them to make sure the goals of the organization are being met. It is generally thought that workers who are involved with the decision-making process feel more of a sense of ownership in their work, take more pride in their work, and are better performers on the job.

By the very nature of directing, it should be obvious that the manager must find a way to get workers to perform their jobs. There are many different ways managers can do this in addition to empowerment, and there are many theories about the best way to get workers to perform effectively and efficiently. Management theories and motivation are important topics and are discussed in detail in other articles.

Controlling The controlling function involves the evaluation activities that managers must perform. It is the process of determining if the company's goals and objectives are being met. This process also includes correcting situations in which the goals and objectives are not being met. There are several activities that are a part of the controlling function.

Managers must first set standards of performance for workers. These standards are levels of performance that should be met. For example, in the modular home assembly process, the standard might be to have a home completed in eight working days as it moves through the construction line. This is a standard that must then be communicated to managers who are supervising workers, and then to the workers so they know what is expected of them.

After the standards have been set and communicated, it is the manager's responsibility to monitor performance to see that the standards are being met. If the manager watches the homes move through the construction process and sees that it takes ten days, something must be done about it. The standards that have been set are not being met. In this example, it should be relatively easy for managers to determine where the delays are occurring. Once the problems are analyzed and compared to expectations, then something must be done to correct the results. Normally, the managers would take corrective action by working with the employees who were causing the delays. There could be many reasons for the delays. Perhaps it isn't the fault of the workers but instead is due to inadequate equipment or an insufficient number of workers. Whatever the problem, corrective action should be taken.

MANAGERIAL SKILLS

To be an effective manager, it is necessary to possess many skills. Not all managers have all the skills that would make them the most effective manager. As technology advances and grows, the skills that are needed by managers are constantly changing. Different levels of management in the organizational structure also require different types of management skills. Generally, however, managers need to have communication skills, human skills, computer skills, time-management skills, and technical skills.

Communication Skills Communication skills fall into the broad categories of oral and written skills, both of which managers use in many different ways. It is necessary for a manager to orally explain processes and give direction to workers. It is also necessary for managers to give verbal praise to workers. Managers are also expected to conduct meetings and give talks to groups of people.

An important part of the oral communication process is listening. Managers are expected to listen to their supervisors *and* to their workers. A manager must hear recommendations and complaints on a regular basis and must be willing to follow through on what is heard. A manager who doesn't listen is not a good communicator.

Managers are also expected to write reports, letters, memos, and policy statements. All of these must be written in such a way that the recipient can interpret and understand what is being said. This means that managers must write clearly and concisely. Good writing requires good grammar and composition skills. This is something that can be learned by those aspiring to a management position.

Human Skills Relating to other people is vital in order to be a good manager. Workers come in about every temperament that can be imagined. It takes a manager with the right human skills to manage this variety of workers effectively. Diversity in the workplace is commonplace. The manager must understand different personality types and cultures to be able to supervise these workers. Human skills cannot be learned in a classroom; they are best learned by working with people. Gaining an understanding of personality types can be learned from books, but practice in dealing with diverse groups is the most meaningful preparation.

Computer Skills Technology changes so rapidly it is often difficult to keep up with the changes. It is necessary for managers to have computer skills in order to keep up with these rapid changes. Many of the processes that occur in offices, manufacturing plants, warehouses, and other work environments depend on computers and thus necessitate managers and workers who can skillfully use the technology. Although computers can cause headaches, at the same time they have simplified many of the tasks that are performed in the workplace.

Time-Management Skills Because the typical manager is a very busy person, it is important that time be managed effectively. This requires an understanding of how to allocate time to different projects and activities. A manager's time is often interrupted by telephone calls, problems with workers, meetings, others who just want to visit, and other seemingly uncontrollable factors. It is up to the manager to learn how to manage time so that work can be completed most efficiently. Good time-management skills can be learned, but managers must be willing to prioritize activities, delegate, deal with interruptions, organize work, and perform other acts that will make them better managers.

Technical Skills Different from computer skills, technical skills are more closely related to the tasks that are performed by workers. A manager must know what the workers who are being supervised are doing on their jobs or assistance cannot be provided to them. For example, a manager who is supervising accountants needs to know the accounting processes; a manager who is supervising a machinist must know how to operate the equipment; and a manager who supervises the construction of a home must know the sequence of operations and how to perform them.

MANAGEMENT THOUGHT

There are many views of management, or schools of management thought, that have evolved over the years. What follows is a brief discussion of some of the theories of management that have greatly affected how managers manage today.

Classical Thought The classical school of management thought emerged throughout the late 1800s and early 1900s as a result of the Industrial Revolution. Since the beginning of time, managers have needed to know how to perform the functions discussed earlier. The Industrial Revolution emphasized the importance of better management as organizations grew larger and more complex. As industry developed, managers had to develop systems for controlling inventory, production, scheduling, and human resources. It was the managers who emerged during the Industrial Revolution, many who had backgrounds in engineering, who discovered that they needed organized methods in order to find solutions to problems in the workplace.

Classical management theorists thought there was one way to solve management problems in the industrial organization. Generally, their theories assumed that people could make logical and rational decisions while trying to maximize personal gains from their work situations. The classical school of management is based on scientific management which has its roots in Henri Fayol's work in France and the ideas of German sociologist Max Weber. Scientific management is a type of management that bases standards upon facts. The facts are gathered by observation, experimentation, or sound reasoning. In the United States, scientific management was further developed by individuals such as Charles Babbage (1792–1871), Frederick W. Taylor (1856–1915), and Frank (1868–1924) and Lillian (1878–1972) Gilbreth.

Behavioral Management Thought It was because the classical management theorists were so machine-oriented that the behavioralists began to develop their thinking. The behavioral managers began to view management from a social and psychological perspective. These managers were concerned about the well-being of the workers and wanted them to be treated as people, not a part of the machines.

Some of the early behavioral theorists were Robert Owen (1771–1858), a British industrialist who was one of the first to promote management of human resources in an organization; Hugo Munsterberg (1863–1916), the father of industrial psychology; Walter Dill Scott (1869–1955), who believed that managers need to improve workers' attitudes and motivation in order to increase productivity; and Mary Parker Follett (1868–1933), who believed that a manager's influence should come naturally from his or her knowledge, skill, and leadership of others.

In the behavioral management period, there was a human relations movement. Advocates of the human relations movement believed that if managers focused on employees rather than on mechanistic production, then workers would become more satisfied and thus more productive laborers. Human relations management supported the notion that managers should be paternalistic and nurturing in order to build work groups that could be productive and satisfied.

The behavioral science movement was also an important part of the behavioral management

Douglas McGregor.

school. Advocates of this movement stressed the need for scientific studies of the human element of organizations. This model for management emphasized the need for employees to grow and develop in order to maintain a high level of self-respect and remain productive workers. The earliest advocates of the behavioral science movement were Abraham Maslow (1908–1970), who developed Maslow's hierarchy of needs, and Douglas McGregor (1906–1964), who developed Theory X and Theory Y. These theories are discussed in depth in other articles.

Contemporary Management Thought In more recent years, new management thoughts have emerged and influenced organizations. One of these is the sociotechnical system. A system is a set of complementary elements that function as a unit for a specific purpose. Systems theorists believe that all parts of the organization must be related and that managers from each part must work together for the benefit of the organization. Because of this relationship, what happens in one part of the organization influences and affects other parts of the organization.

Another contemporary approach to managing involves contingency theories. This approach states that the manager should use the techniques or styles that are most appropriate for the situation and the people involved. For example, a manager of a group of Ph.D. chemists in a laboratory would have to use different techniques from a manager of a group of teenagers in a fast-food restaurant.

Closed Management Systems Within the classical and behavioral approaches to management, the managers look only within the organization to improve productivity and efficiency. This is a closed system—the organization operates as though it is in its own environment. Outside influence and information are blocked out.

Open Management Systems Another perspective is the open system. As one would expect, here the organization functions in conjunction with its external environment, acting with and relying upon other systems. Advocates of an open system believe that an organization cannot avoid the influence of outside forces.

SUMMARY

Management is a very complex process to which this article is but a brief introduction. Many other articles in this encyclopedia provide extensive insight into the many aspects of management.

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ROGER L. LUFT

MANAGEMENT: AUTHORITY AND RESPONSIBILITY

How can people be influenced to make commitments to the goals of the organization? In part, this question can be answered by how managers define and use power, influence, and authority. Deciding what type of authority system to create is part of the managerial responsibility of organizing. Compare, for example, two managers. One accepts or rejects all ideas generated at lower levels. The other gives the authority for making some decisions to employees at the level where these decisions will most likely affect those employees. How managers use their power, influence, and authority can determine their effectiveness in meeting the goals of the organization.

RESPONSIBILITY

Responsibility is the obligation to accomplish the goals related to the position and the organization. Managers, at no matter what level of the organization, typically have the same basic responsibilities when it comes to managing the work force: Direct employees toward objectives, oversee the work effort of employees, deal with immediate problems, and report on the progress of work to their superiors. Managers' primary responsibilities are to examine tasks, problems, or opportunities in relationship to the company's short- and long-range goals. They must be quick to identify areas of potential problems, continually search for solutions, and be alert to new opportunities and ways to take advantage of the best ones. How effectively goals and objectives are accomplished depends on how well the company goals are broken down into jobs and assignments and how well these are identified and communicated throughout the organization.

INFLUENCE AND POWER

Formal job definitions and coordinating strategies are not enough to get the work done. Managers must somehow use influence to encourage workers to action. If they are to succeed, managers must possess the ability to influence organization members. Influence is the ability to bring about change and produce results; people derive influence from interpersonal power and authority. Interpersonal power allows organization members to exert influence over others.

Power stems from a variety of sources: reward power, coercive power, information power, resource power, expert power, referent power, and legitimate power. *Reward power* exists if managers provide or withhold rewards, such as money or recognition, from those they wish to influence. *Coercive power* depends on the manager's ability to punish others who do not engage in the desired behavior. A few examples of coercion include reprimands, criticisms, and negative performance appraisals. Power can also result from controlling access to important *information* about daily operations and future plans. Also, having access to and deciding to limit or share the *resources* and materials that are critical to accomplishing objectives can provide a manager with a source of power. Managers usually have access to such information and resources and must use discretion over how much or how little is disseminated to employees. *Expert power* is based on the amount of expertise a person possesses that is valued by others. For example, some people may be considered experts with computers if they are able to use several software programs proficiently and can navigate the Internet with ease. Those who do not have the expert knowledge or experience need the expert's help and, therefore, are willing to be influenced by the expert's power. When people are admired or liked by others, *referent power* may result because others feel friendly toward them and are more likely to follow their directions and demonstrate loyalty toward them. People are drawn to others for a variety of reasons, including physical or social attractiveness, charisma, or prestige. Such politicians as John F. Kennedy were able to use their referent power to effectively influence others. *Legitimate power* stems from the belief that a person has the right to influence others by virtue of holding a position of authority, such as the authority of a manager over a subordinate or of a teacher over a student.

In some respects, everyone has power—the power to either push forward or obstruct the goals of the organization by making decisions, delegating decisions, delaying decisions, rejecting decisions, or supporting decisions. However, the effective use of power does not mean control. Power can be detrimental to the goals of the organization if held by those who use it to enhance their own positions and thereby prevent the advancement of the goals of the organization.

Truly successful managers are able to use power ethically, efficiently, and effectively by sharing it. Power can be used to influence people to do things they might not otherwise do. When that influence encourages people to do things that have no or little relationship to the organization's goals, that power is abused. Abuses of power raise ethical questions. For example, asking a subordinate to submit supposed business-trip expenses for reimbursement for what was actually a family vacation or asking a subordinate to run personal errands is an abuse of power. People who acquire power are ethically obligated to consider the impact their actions will have on others and on the organization.

Employees may desire a greater balance of power or a redistribution of authority within the existing formal authority structure. People can share power in a variety of ways: by providing information, by sharing responsibility, by giving authority, by providing resources, by granting access, by giving reasons, and by extending emotional support. The act of sharing information is powerful. When people don't share information, the need to know still exists; therefore, the blanks are filled in with gossip and innuendo. When people are asked to take on more responsibility, they should be provided with tasks that provide a challenge, not just with more things to increase their workload that don't really matter. People need the legitimate power to make decisions without having to clear everything first with someone higher up in the organization. People who have power must also have the necessary range of resources and tools to succeed. Access to people outside as well as inside the organization should be provided and encouraged. People should be told why an assignment is important and why they were chosen to do it. Emotional support can come in the form of mentoring, appreciation, listening, and possibly helping out.

Sharing power or redistributing authority does not necessarily mean moving people into positions of power; instead, it can mean letting people have power over the work they do, which means that people can exercise personal power without moving into a formal leadership role. The ability to influence organization members is an important resource for effective managers. Relying on the title "boss" is seldom powerful enough to achieve adequate influence.

AUTHORITY

Authority is seen as the legitimate right of a person to exercise influence or the legitimate right to make decisions, to carry out actions, and to direct others. For example, managers expect to have the authority to assign work, hire employees, or order merchandise and supplies.

As part of their structure, organizations have a formal authority system that depicts the authority relationships between people and their work. Different types of authority are found in this structure: line, staff, and functional authority. Line authority is represented by the chain of command; an individual positioned above another in the hierarchy has the right to make decisions, issue directives, and expect compliance from lower-level employees. Staff authority is advisory authority; it takes the form of counsel, advice, and recommendation. People with staff authority derive their power from their expert knowledge and the legitimacy established in their relationships with line managers. Functional authority allows managers to direct specific processes, practices, or policies affecting people in other departments; functional authority cuts across the hierarchical structure. For example, the human resources department may create policies and procedures related to promoting and hiring employees throughout the entire organization.

Authority can also be viewed as arising from interpersonal relationships rather than a formal hierarchy. Authority is sometimes equated with legitimate power. Authority and power and how these elements are interrelated can explain the elements of managing and their effectiveness.

What is critical is how subordinates perceive a manager's legitimacy. Legitimate authority occurs when people use power for good and have acquired power by proper and honest means. When people perceive an attempt at influence as legitimate, they recognize it and willingly comply. Power acquired through improper means, such as lying, withholding information, gossip, or manipulation, is seen as illegitimate. When people perceive the authority of others as illegitimate, they are less likely to willingly comply.

DELEGATION

In order for managers to achieve goals in an efficient manner, part of their work may be assigned to others. When work is delegated, tasks and authority are transferred from one position to another within an organization. The key to effective delegation of tasks is the transference of decision-making authority and responsibility from one level of the organization to the level to which the tasks have been delegated. In order to effectively delegate work, some guidelines should be followed: Determine what each worker can most effectively accomplish; decide whether the worker should just identify a problem or also propose a solution; consider whether the person can handle the challenge of the task; be clear in the objectives of the task; encourage questions; explain why the task is important; determine if the person has the appropriate resources—time, budget, data, or equipment—to get the job done on a deadline; create progress reviews as part of the project planning; and be prepared to live with less than perfect results. Authority should be delegated in terms of expected results. Generally, the more specific the goal, the easier it is to determine how much authority someone needs.

Some employees resist delegation for a variety of reasons. Initiative and responsibility involve risk that some people try to avoid. People tend to play it safe if risk results in criticism. Those who feel they already have more work than they can do avoid new assignments. Some people doubt their own abilities and lack the self-confidence to tackle new assignments. Delegation is an excellent professional development tool so long as it expands a worker's expertise and growth. Delegation can also compensate for a manager's weakness. A successful team is developed by building on the strengths of its members.

People develop most when stimulated to broaden themselves—when challenged. More authority can add challenge; too much challenge, however, can frustrate people and cause them to avoid new responsibilities. Delegation should involve acceptable challenge—enough to motivate but not so much as to frustrate.

In today's workplace, managers are compelled to rely more on persuasion, which is based on expert and referent power rather than reward, coercive, or inappropriate use of power. A manager who shares power and authority will be the one with the greatest ability to influence others to work toward the goals of the organization.

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CHERYL L. NOLL

MANAGEMENT BY OBJECTIVES

(SEE: *Strategic Management*)

MANAGEMENT: HISTORICAL PERSPECTIVES

Since the beginning of time, humans have been managing—managing other people, managing organizations, and managing themselves. Management has been dealt with in this publication as a process that is used to accomplish organizational goals. To some, management is thought of as an art; to others, as a science. Each of those perspectives is grounded in the early writings and teaching of a group of managerial pioneers.

INDUSTRIAL REVOLUTION

While it can be argued that management began well before the Industrial Revolution, it is often felt that what emerged as contemporary management thought was begat with the beginning of industrial development. The Industrial Revolution began in the mid-eighteenth century when factories were first built and laborers were employed to work in them. Prior to this period, most workers were active in an agrarian system of maintaining the land.

Adam Smith (1723–1790), the economist who wrote *The Wealth of Nations*, was an early contributor to management thought during the Industrial Revolution. He was considered a liberal thinker, and his philosophy was the foundation for the laissez-faire management doctrine. His thoughts about division of labor were fundamental to current notions of work simplification and time studies. His emphasis on the relationship between specialization of labor and technology was somewhat similar to the later thinking of Charles Babbage, discussed below.

Another early pioneer of management thought regarding the factory system was *Robert Owen* (1771–1858), an entrepreneur who tried to halt the Industrial Revolution because he saw disorder and evil in what was happening. Owen founded his first factory at the age on 18 in Manchester, England. His approach to managing was to observe everything and to maintain order and regularity throughout the industrial facility.

Owen moved on to a new venture in Scotland, where he encountered a shortage of qualified laborers for his factory. His approach to handling disciplinary problems with his workers was to appeal to their moral sense, not to use corporal punishment. He used silent monitors, a system whereby he awarded four types of marks to superintendents, who in turn awarded workers. The marks were color-coded in order of merit. Blocks of wood were painted with the different colors and placed at each workstation. Workers were rated at the end of each day, and the appropriate color was turned to face the aisle so that anyone passing by could see how the worker had performed the previous day. The system was an attempt to motivate laggards to perform better and good workers to maintain high performance.

Charles Babbage (1792–1871) was noted for his application of technological aids to human effort in the manufacturing process. Babbage invented the first computer, in the form of a mechanical calculator, in 1822; many more modern computers used basic elements of his design. Supervising construction of this invention led Babbage to an interest in management, particularly in the concept of division of labor in the manufacturing process. Babbage invented equipment that could monitor the output of workers, which led to a profit-sharing system in which workers, in addition to being paid a wage, were compensated based on the profits of the company as well as for suggestions that would improve the manufacturing processes.

SCIENTIFIC MANAGEMENT

Scientific principles for the management of workers, materials, money, and capital were introduced roughly during the period from 1785 through 1835. Scientific managers made careful and rational decisions, kept orderly and complete books, and were able to react to events quickly and expertly. Some of the people discussed above were important early contributors to the scientific management movement before others came along to solidify the thinking. Scientific management is with us today as introduced by several more contemporary thinkers.

Frederick Taylor (1856–1915) was an engineer who had a new and different approach to management. His approach was for managers, rather than being taskmasters, to adopt a broader, more comprehensive view of managing and see their job as incorporating the elements of planning, organizing, and controlling. His ideas of management evolved as he worked for different firms. As a result of his experiences as both a worker and a manager, he developed the concept of time and motion studies.

In what became the origin of contemporary scientific management, Taylor set out to scientifically define what workers ought to be able to do with their equipment and resources in a full day of work. In his process of time study, each job was broken into as many simple, elementary movements as possible and useless movements were discarded; the quickest and best methods for each elementary movement were selected by observing and timing the most skilled workers at each. His system evolved into the piece-rate system.

Frank (1868–1924) and *Lillian* (1878–1972) *Gilbreth* refined the field of motion study and laid the foundation for modern applications of job simplification, meaningful work standards, and incentive wage plans. The Gilbreths' were interested in more than just motion studies; they were interested in improving the totality of people and the environment, which they believed could be done through training, better work methods, improved environments and tools, and a healthy psychological outlook. Lillian Gilbreth had a background in psychology and management. Frank Gilbreth's fame did not come until after his death in 1924.

BEHAVIORAL MANAGEMENT

The behavioral school of management grew out of the efforts of some to recognize the importance of the human endeavor in an organization. These people felt that if managers wanted to get things done, it must be through people—the study of workers and their interpersonal relationships.

Henry L. Gantt (1861–1919) was one of the earliest of theses behavioral theorists. Some people would classify him in more than one category, but his passionate concern for the worker as an individual and his pleas for a humanitarian approach to management exemplify the behavioral approach. His early writing called for teaching and instructing workers, rather than driving them.

Mary Parker Follett (1868–1933), although trained in philosophy and political science, shifted her interests to vocational guidance, adult education, and social psychology. These led to her lifetime pursuit of developing a new managerial philosophy that would incorporate an understanding of the motivating desires of the individual and the group. She emphasized that workers on the job were motivated by the same forces that influenced their duties and pleasures away from the job and that the manager's role was to coordinate and facilitate group efforts, not to force and drive workers. Because of her emphasis on the group concept, the words "togetherness" and "group thinking" entered the managerial vocabulary.

Elton Mayo (1880–1949), best known for his Hawthorne experiments, introduced rest pauses in industrial plants and in so doing reduced employee turnover from 250 percent to 5 percent in some cases. He was concerned about human performance and working conditions. The work pauses, better known as breaks, reduced employee pessimism and improved morale and productivity.

MANAGEMENT PROCESS

The father of the management process school of thought was the Frenchman *Henri Fayol* (1841–1925), a mining engineer. He spent his entire working career with the same company, involved with coal mining and iron production. From his experiences as the managing director of the company, Fayol developed his general principles of administration. He thought that the study, analysis, and teaching of management should all be approached from the perspective of its functions, which he defined as forecasting and planning, organizing, commanding, controlling, and coordinating. He thought that planning was the most important and most difficult of these. Much of contemporary management thought revolves around the functions of management.

James D. Mooney (1884–1957) whose writings and research lent credence to the management process school of thinking, is credited with the notion that all great managers use the same principles of management. He emphasized a tight engineering approach to the manager's job of getting work done through others. He gave little

Frank and Lillian Gilbreth refined the field of motion study.

thought to the human element, but instead was exclusively process-oriented. His approach to organizational analysis is now classic.

CONCLUSION

This discussion has been far from exhaustive, and there are diverse opinions about the people who were the earliest developers of management thought. But this discussion has provided thumbnail sketches of some of the primary theorists, leaders, and teachers of management thought. Although there are many other theorists who can be credited with expanding or enhancing their teachings, the basics of each of the schools of thought can be credited to the individuals discussed.

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ROGER LUFT

MANAGEMENT INFORMATION SYSTEMS

Before one can explain management information systems, the terms *systems*, *information*, and *management* must briefly be defined. A *system* is a combination or arrangement of parts to form an integrated whole. A system includes an orderly arrangement according to some common principles or rules. A system is a plan or method of doing something.

The study of systems is not new. The Egyptian architects who built the pyramids relied on a system of measurements for construction of the pyramids. Phoenician astronomers studied the system of the stars and predicted future star positions. The development of a set of standards and procedures, or even a theory of the universe, is as old as history itself. People have always sought to find relationships for what is seen or heard or thought about.

A system is a scientific method of inquiry, that is, observation, the formulation of an idea, the testing of that idea, and the application of the results. The scientific method of problem solving is systems analysis in its broadest sense. Data are facts and figures. However, data have no value until they are compiled into a system and can provide information for decision making.

Information is what is used in the act of informing or the state of being informed. Information includes knowledge acquired by some means. In the 1960s and 70s, it became necessary to formalize an educational approach to systems for business so that individuals and work groups and businesses who crossed boundaries in the various operations of business could have appropriate information. Technical developments in computers and data processing and new theories of systems analysis made it possible to computerize systems. Much of this computerization of systems was an outgrowth of basic research by the federal government.

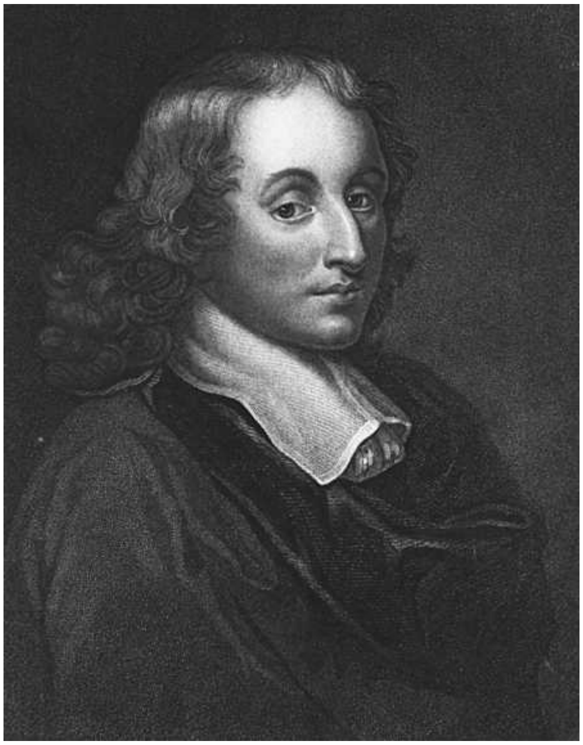
Management is usually defined as planning, organizing, directing, and controlling the business operation. This definition, which evolved from the work of Henri Fayol in the early 1900s, defines what a manager does, but it is probably more appropriate to define what management is rather than what management does. Management is the process of allocating an organization's inputs, including human and economic resources, by planning, organizing, directing, and controlling for the purpose of producing goods or services desired by customers so that organizational objectives are accomplished. If management has knowledge of the planning, organizing, directing, and controlling of the business, its decisions can be made on the basis of facts, and decisions are more accurate and timely as a result.

Management information systems are those systems that allow managers to make decisions for the successful operation of businesses. Management information systems consist of computer resources, people, and procedures used in the modern business enterprise. The term *MIS* stands for management information systems. MIS also refers to the organization that develops and maintains most or all of the computer systems in the enterprise so that managers can make decisions. The goal of the MIS organization is to deliver information systems to the various levels of corporate managers. MIS professionals create and support the computer system throughout the company. Trained and educated to work with corporate computer systems, these professionals are responsible in some way for nearly all of the computers, from the largest mainframe to the desktop and portable PCs.

BACKGROUND

Management information systems do not have to be computerized, but with today's large, multinational corporations, computerization is a must for a business to be successful. However, management information systems began with simple manual systems such as customer databases on index cards. As early as 1642, the French mathematician and philosopher Blaise Pascal invented the first mechanical adding machine so that figures could be added to provide information. Almost two hundred years later, Charles Babbage, a professor of mathematics at Cambridge University in England, wanted to make a machine that would compute mathematical tables. He attempted to build a computing machine during the 1880s. He failed because his ideas were beyond his technical capabilities, not because the idea was flawed. Babbage is often called the father of the computer. With the advent of the computer, management information systems became automated.

In the late 1890s, because of the efforts of Herman Hollerith, who created a punch-card system to tabulate the data for the 1890 census, it was possible to begin to provide data-processing equipment. The punch card developed by Hollerith was later used to form a company to provide data-processing equipment. This company evolved into International Business Machines (IBM). Mainframe computers were used for management information systems from the 1940s, 50s, 60s, and up until the 1970s. In the 1970s, personal computers were first built by hobbyists. Then Apple computer developed one of the first practical personal computers. In the early 1980s, IBM developed its PC, and since then, the personal computer industry has mushroomed. Almost every management information system revolves around some kind of computer hardware and software.



Blaise Pascal.

Management information systems are becoming more important, and MIS personnel are more visible than in the 1960s and 1970s, when they were hidden away from the rest of the company and performed tasks behind closed doors. So remote were some MIS personnel from the operations of the business that they did not even know what products their companies made. This has changed because the need for an effective management information system is of primary concern to the business organization. Managers use MIS operations for all phases of management, including planning, organizing, directing, and controlling.

THE MIS JOB TODAY

MIS personnel must be technically qualified to work with computer hardware, software, and computer information systems. Currently, colleges and universities cannot produce enough MIS personnel for business needs, and job opportunities are great. MIS managers, once they have risen through their technical ranks of their organization to become managers, must remember that they are no longer doing the technical work. They must cross over from being technicians to become managers. Their job changes from being technicians to being systems managers who manage other people's technical work. They must see themselves as needing to solve the business problems of the user, and not just of the data-processing department.

MIS managers are in charge of the systems development operations for their firm. Systems development requires four stages when developing a system for any phase of the organization:

> Phase I is systems planning. The systems team must investigate the initial problem by determining what the problem is and developing a feasibility study for management to review.
>
> Phase II identifies the requirements for the systems. It includes the systems analysis, the user requirements, necessary hardware and software, and a conceptional design for the system. Top management then reviews the systems analysis and design.
>
> Phase III involves the development of the systems. This involves developing technical support and technical specifications, reviewing users' procedures control, designing the system, testing the system, and providing user training for the system. At this time, management again reviews and decides on whether to implement the system.
>
> Phase IV is the implementation of the system. The new system is converted from the old system, and the new system is implemented and then refined. There must then be ongoing maintenance and reevaluation of the system to see if it continues to meet the needs of the business.

TYPES OF SYSTEMS

Management information systems can be used as a support to managers to provide a competitive advantage. The system must support the goals of the organization. Most organizations are structured along functional lines, and the typical systems are identified as follows:

> *Accounting management information systems*: All accounting reports are shared by all levels of accounting managers.
>
> *Financial management information systems*: The financial management information system provides financial information to all financial managers within an organization including the chief financial officer. The chief financial officer analyzes historical and current financial activity, projects future financial needs, and monitors and controls the use of funds over time using the information developed by the MIS department.
>
> *Manufacturing management information systems*: More than any functional area, operations have been impacted by great advances in technology. As a result, manufacturing operations have changed. For instance, inventories are provided just in time so that great amounts of money are not spent for warehousing huge inventories. In some instances, raw materials are even processed on railroad cars waiting to be sent directly to the factory. Thus there is no need for warehousing.
>
> *Marketing management information systems*: A marketing management information system supports managerial activity in the area of product development, distribution, pricing decisions, promotional effectiveness, and sales forecasting. More than any other functional area, marketing systems

rely on external sources of data. These sources include competition and customers, for example.

Human resources management information systems: Human resources management information systems are concerned with activities related to workers, managers, and other individuals employed by the organization. Because the personnel function relates to all other areas in business, the human resources management information system plays a valuable role in ensuring organizational success. Activities performed by the human resources management information systems include, work-force analysis and planning, hiring, training, and job assignments.

The above are examples of the major management information systems. There may be other management information systems if the company is identified by different functional areas.

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Lloyd W. Bartholome

MANAGEMENT/LEADERSHIP STYLES

MANAGEMENT VS. LEADERSHIP

Leading should not be considered the same as managing. Business leaders who do not understand the difference between the functions/roles of leading and managing are quite likely to misinterpret how they should carry out their duties to meet organizational goals. While some managers are high-quality leaders, others only manage resources and don't lead their subordinates. Leadership is one of the four primary activities that are used to influence others. As such, it is a subcategory of the management concept that focuses mainly on behavioral issues and opportunities. Managing is more comprehensive than leading. It involves dealing with resource issues as well as behavioral factors. Generally speaking, not all managers are necessarily leaders, yet the most effective managers, over the long term, are leaders.

Leadership is the process of guiding the behavior of others toward an organization's goals. Guiding, in this context, means causing individuals to behave in a particular manner or to follow a specific set of instructions. Ideally, the behavior exhibited is perfectly aligned with such factors as organizational goals, culture, policies, procedures, and job specifications. The main goal of leadership is to get things done through other people, making it one of the main activities that can enhance the management system. It is accomplished to a great degree through the use of effective communication. Because leadership is a prerequisite for business success, to be a successful business manager one must have a solid understanding of what leadership includes. Indeed, such issues as the increased capabilities afforded by enhanced communication technology and the rise of international business have made leadership even more important in today's business environment. The following sections describe the major theories underlying the most commonly accepted management/leadership practices and the concepts they are based on.

In today's business environment, possessing management skills is no longer sufficient to be successful. Contemporary business practices require that managers have knowledge and experience regarding the differences between management and leading and how both activities must be integrated for business success. Commonly, businesspeople believe that a manager makes sure tasks and duties are completed, while a leader is sensitive to the needs of people and what they need to be exceptional employees. Integrating these concepts allows business managers to apply logic and analytical skills to business activities and tactics while being sensitive to and working with workers as individuals with needs and desires related to their work and careers.

LEADERSHIP BASED ON TRAITS

The trait theory of leadership is based on research which implies that the abilities and dispositions necessary to make a good leader are inborn, not capable of being developed over time. The central thrust of this research is to describe leadership as accurately and analytically as possible. The reasoning is that a description of the full spectrum of managerial leadership traits would make it possible to easily identify individuals who possess them. An organization could then hire only those individuals who possess these traits and thus be assured of always having high-quality leaders.

Current management thoughts, however, suggests that leadership ability cannot be explained by an individual's inherited characteristics. To the contrary, business analysts believe that individuals can learn to be good or even exceptional leaders. Thousands of employees each year complete training to improve their leadership skills. Corporations and not-for-profit organizations continue to do this as an investment, which pays dividends.

IDENTIFYING LEADERSHIP BEHAVIORS

Since trait theory proved not to be aligned with leadership skill, researchers have analyzed other angles to explain leadership success or failure. Rather than looking at the traits successful leaders supposedly should possess, researchers began to investigate what good leaders really do. This behavioral approach was concerned with analyzing how a manager completed a task and whether the manager focused on such interpersonal skills as providing moral support and recognizing employees for their successes. Based on these research efforts, leaders can be accurately described by either their job-centered behavior or their employee-centered behavior, since this research indicated two primary dimensions of leader behavior: a work dimension (structure behavior/job-centered behavior) and a people dimension (consideration behavior/employee-centered behavior).

WHICH LEADERSHIP STYLES ARE MOST EFFECTIVE?

Caution should be exercised when considering what style of leadership is best. Research suggests that no single leadership style can be generalized as being most effective. Organizational situations are so complex that one particular leadership style may be successful in one situation but totally ineffective in another.

CONTINGENCY THEORY

Contingency theory, as applied to management/leadership, focuses on what managers do in practice. Because this theory suggests that how a manager operates and makes decisions depends upon, or is contingent upon, a set of circumstances, it is centered on situational analysis. Using contingency theory, managers read situations with an "if-then" mentality: If this situational attribute is present, then there is an appropriate response that a manager should make. This theory takes into consideration human resources and their interaction with business operations. Managers may take different courses of action to get the same result based on differences in situational characteristics. In general, contingency theory suggests that a business leader needs to outline the conditions or situations in which various management methods have the best chance of success. This theory thus runs directly counter to trait theory, discussed earlier. Some of the challenges to successfully using contingency theory are the need to accurately analyze an actual situation, then to choose the appropriate strategies and tactics, and finally to implement these strategies and tactics.

Managers encounter a variety of leadership situations during the course of their daily activities, each of which may require them to use leadership styles that vary considerably, depending on the situation. In using the contingency model, factors of major concern are leader-member relations, task structure, and the position power of the leader. The leader has to analyze these factors to determine the most appropriate style of response for meeting overall work-unit and organizational goals. Leader-member relations refer to the ongoing degree to which subordinates accept an individual leader or group of leaders. Task structure refers to the degree to which tasks are clearly or poorly defined. Position power is the extent to which a leader or group of leaders has control over the work process, rewards, and punishment. Taking these factors into consideration, leaders can adjust their style to best match the context of their decision making and leadership. For those leaders who have a breadth of leadership styles, knowing when to change styles gives them the tools to successfully deal with the varying nature of business decision making. For those leaders who have a limited repertoire of leadership styles, they and their superiors can use this information to better match work situations with the styles that a specific leader possesses.

Within this continuum, or range, of leadership behaviors, each type of behavior also relates to the degree of authority the manager can display, and inversly, to the level of freedom that is made available to workers. On one end of this continuum, business leaders exert a high level of control and allow little employee autonomy; on the opposite end, leaders exert very little control, instead allowing workers considerable autonomy and self-direction. Thus leadership behavior as it progresses across the continuum reflects a gradual change from autocratic to democratic leadership.

In today's business environment there are more complicated contexts and relationships within which managers and subordinates must work than existed in previous eras. And as contexts and relationships become increasingly complicated, it becomes significantly more difficult for leaders to determine how to lead. In addition, there are major societal and organizational forces that cause confusion about how to lead.

THEORY X AND THEORY Y

Based on the work of psychologists, organizational theorists, and human relations specialists in the 1960s and 1970s, two distinct assumptions, called Theory X and Theory Y, evolved about why and how people work for others. Theory X posits that people do not like to work and will avoid doing so if the opportunity presents itself. Because of this, most people need to be coerced into completing their required job duties and punished if they don't complete the quantity of work assigned at the level of quality required. Again, because of their dislike for work, most people do not want responsibility, prefer to be directed by others, and have little ambition; all they want is job security.

With an almost completely opposite perspective, Theory Y posits that people like to work and see it as a natural event in their lives. Therefore, punishment and threats are not the only means of motivating them to complete work assignments. People are willing to work hard for an organization; indeed, they will use self-direction and control to work toward goals that are understandable and communicated clearly. In this theory of human behavior and motivation, people are seen as seekers of learning and responsibility who are capable of and willing to be engaged with creative problem-solving activities that will help the organization reach its goals. According to Theory Y, leaders need to develop ways to expand the capabilities of their workers so that the organization can benefit from this significant potential resource.

Although Theory Y has much to offer and is widely followed, many organizations still use a variety of policies and practices that are based on Theory X principles. A further development in explaining human work behavior and then adjusting management/leadership practices to it is Theory Z.

THEORY Z

Probably the most prominent of the theories and practices coming from Japan is the Theory Z approach, which combines typical practices from the United States and Japan into a comprehensive system of management/leadership. This system includes the following principles of best management/leadership practice:

- Seek to establish a long-term employment culture within the organization.
- Use collective decision making as much as possible.
- Increase and reinforce the importance of individual responsibility.
- Establish a slow and long-term process for evaluation and promotion.
- Employ implicit, informal control that utilizes explicit, formal measures/tools of performance.
- Institute and use moderately specialized job descriptions and career paths.
- Develop policies and practices that support a holistic concern for and support of the individual both at work and at home (as regards family issues).

Theory Z has had a marked impact on the manner in which companies are led today. Theory Z strategies have been instrumental in building stronger working relationships between subordinates and their leaders because of the increased level of worker participation in decision making as well as leaders' higher level of concern for their subordinates.

MANAGERIAL GRID

Business researchers at the University of Texas have developed a two-dimensional grid theory to explain a leadership style based on a person's (1) concern for production and (2) concern for people. Each axis on the grid is a 9-point scale, with 1 meaning low concern and 9 meaning high concern. "Team" managers, often considered the most effective leaders, have strong concern both for the people who work for them and for the output of the group/unit. "Country club" managers are significantly more concerned about their subordinates than about production output. "Authority-compliance" managers, in contrast, are singularly focused on meeting production goals. "Middle-of-the-road" managers attempt to balance people and production concerns in a moderate fashion. And, finally, "impoverished" managers tend to be virtually bankrupt in both categories, usually not knowing much or caring much about either. Grid analysis can be quite useful in helping to determine managers' strengths, weak points, areas where they might best be utilized, and types of staff development they might need to progress.

PATH-GOAL LEADERSHIP THEORY

In path-goal leadership theory, the key strategy of the leader is to make desirable and achievable rewards available to employees. These rewards are directly related to achieving organizational goals. Basically, the manager articulates the objectives (the goal) to be accomplished and how these can and should be completed (the path) to earn rewards. This theory encourages managers to facilitate job performance by showing employees how their work behaviors directly affect their receiving desired rewards.

SYSTEMS THEORY AND THE LEADERSHIP/ MANAGEMENT FUNCTION

A system is a group of interrelated and dependent components that function holistically to meet common goals. Systems theory suggests that organizations operate much like the human biological system, having to deal with entropy, support synergy, and subsystem interdependence. The law of entropy states that there are limited resources available and that as they are used/consumed, their beneficial features are dispersed and are not available to the same degree as they were originally. The other two considerations in a systems approach are the achievement of synergy, or the creation of a total value greater than the value of separate parts, and of subsystem interdependence or the linkage of components in such a way that synergy can take place.

In the effort to enhance system performance, managers/leaders must consider the openness and responsiveness of their business organization and the external environment in which it operates. In this environment, leaders must consider the four major features of business system theory: inputs, organizational features, outputs, and feedback. The inputs for most systems include human labor, information, hard goods, and financing. Organizational features include the work process, management functions, and production or service technology. Outputs include employee satisfaction, products or services, customer and supplier relationships, and profits/losses. In guiding a unit or the whole organization, business leaders need to consider features of their organization's system as it interacts with and responds to customers, suppliers, competitors, and government agencies.

TRANSFORMATIONAL LEADERSHIP

Transformational leadership inspires organizational success by dramatically affecting workers' attitudes about what an organization should be as well as their basic values, such as trust, fairness, and reliability. Transformational leadership, which is similar to charismatic or inspirational leadership, creates in workers a sense of ownership of the organization, encourages new ways of solving problems and promotes lifelong learning for all members of the organization. Although the topic of transformational leadership is both appealing and exciting, more research is needed to develop insights regarding how one becomes a successful transformational leader.

CONFLICT MANAGEMENT

Of all the skills that a manager/leader needs, none is more important than managing the conflicts that inevitably arise in any organization. Conflicts can arise between members in the same work unit, between the work group and its leader, between group leaders, and between different work groups. Some of the most common causes of conflict are communications breakdowns, personality clashes, power and status differences, goal discrepancies, disputed authority boundaries, and allocation of resources.

The following processes are among those usually suggested to eliminate, reduce, and prevent conflict:

- Focus on the facts of the matter; avoid unsupported assertions and issues of personality.
- Develop a list of all possible resolutions of the conflict that will allow the adversarial parties to view the issue from a different perspective.
- Maintain a balance of power and accessibility while addressing the conflict.
- Seek a realistic resolution; never force a consensus, but don't get bogged down in a never-ending debate to achieve one.
- Focus on the larger goals/mission of the organization.
- Engage in bargaining/negotiating to identify options to address the conflict.
- If needed, use a third party to mediate the differences. Bringing in an outside person can add objectivity and reduce personality issues.
- Facilitate accurate communications to reduce rumors and to increase the common understanding of the facts and issues.

There is a widely accepted model for understanding how individuals approach situations involving conflict resolution. This model is two-dimensional. On one axis is the dimension of cooperativeness; on the other, the dimension of assertiveness. As discussed earlier, effective leaders vary their style to meet the needs of a specific situation. Hence, during a conflict situation in which time is a critical concern, an assertive style is needed to resolve the conflict so that time is not lost during a drawn-out negotiation process. Oppositely, when harmony is critical, especially when relationships are new or in their early stages, a collaborative and cooperative approach to conflict resolution is needed. This model for conflict resolution fits well with and supports the notion of contingency and situational leadership.

JAPANESE MANAGEMENT/LEADERSHIP METHODS

In the decades since the end of World War II, business leaders around the world have marveled at the ability of Japanese managers to motivate and successfully lead their subordinates to levels of outstanding performance in terms of both the quantity and quality of production. Therefore, Japanese approaches to management and leadership have been studied intensely to find similarities and differences between local practices and theirs. Among the approaches that have been cited as contributing to Japanese success are the following:

- Japanese corporations make the effort to hire employees for a lifetime, rather than a shorter period of time. This helps workers to feel a close relationship with the organization and helps build employee ownership of the organization's success.
- Employees are elevated to a level of organizational status equivalent to that of management by leveling the playing field with regard to dress, benefit packages, support services/amenities, restrooms, stock ownership plans, and so forth.
- Employees are shown that they are valued and a critical part of the company. This is done by having ceremonies to honor employees, providing housing at nominal cost to employees, having facilities for social activities that are sponsored by the organization, offering competitive salaries, and so forth.
- A significant effort is made to build positive and strong working relationships between leaders and their subordinates. This includes making sure that leaders take time to get to know their employees and become cognizant of their main concerns. Such a relationship can have a marked impact on the extent to which employees value the organization and their leaders.
- There is collective responsibility for the success of the organization. Individual accountability is downplayed to the climate that prevails in U.S. organizations.
- Implied control mechanisms are based on cultural values and responsibility.
- Nonspecialized career pathways are typical. Employees work in a number of job categories over the course of their tenure so that they can gain a broader sense of the nature of all the work that is done in the organization.
- There is a holistic concern for the welfare of every employee. Organizations and their leaders take the time to assist employees with personal issues and work opportunities.
- The Japanese are generally concerned with how the company performs and how individual work groups perform rather than how an individual performs. Therefore, incentives for individuals are less likely to be effective than incentives associated with the performance of a work group or of a whole unit. In addition, Japanese leaders and workers focus much less on monetary rewards than on esteem and social rewards.

Another major development in the manufacturing and handling of goods was developed in Japan. This development was *kanban*, or what we know as the just-in-time (JIT) inventory and materials handling system. In this system managers/leaders locate high-quality suppliers within a short distance of their operations. They also establish specific quality standards and delivery requirements, as well as materials handling procedures, that these suppliers are contractually obligated to adhere to.

Although these techniques have proven to be successful in Japan, attempts to duplicate them in another culture may have disappointing results. The importance of cultural mores cannot be underestimated. What may work in Japan, France, or the United States may not work anywhere else simply because of cultural factors. Yet Japanese management/leadership principles have taught managers around the world to consider new approaches in order to achieve the higher standards of organizational effectiveness necessary in today's global economy. Business leaders around the world are examining their practices in light of the success that the Japanese and others have had in the areas of strategy building, organizational development, group/team cooperation, and establishing competitive advantage.

(SEE ALSO: *Leadership*)

THOMAS HAYNES

MANAGERIAL GRID

(SEE: *Management/Leadership Styles*)

MANUFACTURING

One can trace the origins of modern manufacturing management to the advent of agricultural production, which meant that humans didn't constantly have to wander to find new sources of food. Since that time, people have been developing better techniques for producing goods to meet human needs and wants. Since they had additional time available because of more efficient food sources, people began to develop techniques to produce items for use and trade. They also began to specialize based on their skills and resources. With the first era of water-based exploration, trade, and conflict, new ideas regarding product development eventually emerged, over the course of the centuries, leading to the beginning of the Industrial Revolution in the mid-eighteenth century. The early twentieth century, however, is generally considered to mark the true beginning of a disciplined effort to study and improve manufacturing and operations management practices. Thus, what we know as modern manufacturing began in the final decades of the twentieth century.

The late 1970s and early 1980s saw the development of the manufacturing strategy paradigm by researchers at the Harvard Business School. This work focused on how manufacturing executives could use their factories' capabilities as strategic competitive weapons, specifically identifying how what we call the five P's of manufacturing management (people, plants, parts, processes, and planning) can be analyzed as strategic and tactical decision variables. Central to this notion is the focus on factory and manufacturing trade-offs. Because a factory cannot excel on all performance measures, its management must devise a focused strategy, creating a focused factory that does a limited set of tasks extremely well. Thus the need arose for making trade-offs among such performance measures as low cost, high quality, and high flexibility in designing and managing factories.

The 1980s saw a revolution in management philosophy and the technologies used in manufacturing. Just-in-time (JIT) production was the primary breakthrough in manufacturing philosophy. Pioneered by the Japanese, JIT is an integrated set of activities designed to achieve high-volume production using minimal inventories of parts that arrive at the workstation "just in time." This philosophy—coupled with total quality control (TQC), which aggressively seeks to eliminate causes of production defects—is now a cornerstone in many manufacturers' practices.

As profound as JIT's impact has been, factory automation in its various forms promises to have an even greater impact on operations management in coming decades. Such terms as "computer-integrated manufacturing" (CIM), "flexible manufacturing systems" (FMS), and "factory of the future" (FOF) are part of the vocabulary of manufacturing leaders.

Another major development of the 1970s and 1980s was the broad application of computers to operations problems. For manufacturers, the big breakthrough was the application of materials requirements planning (MRP) to production control. This approach brings together, in a computer program, all the parts that go into complicated products. This computer program then enables production planners to quickly adjust production schedules and inventory purchases to meet changing demands during the manufacturing process. Clearly, the massive data manipulation required for changing the schedules of products with thousands of parts would be impossible without such programs and the computer capacity to run them. The promotion of this approach by the American Production and Inventory Control Society (APICS) has been termed the MRP Crusade.

The hallmark development in the field of manufacturing management, as well as in management practice in general, is total quality management (TQM). Although practiced by many companies in the 1980s, TQM became truly pervasive in the 1990s. All manufacturing executives are aware of the quality message put forth by the so-called quality gurus—W. Edwards Deming, Joseph M. Juran, and Philip Crosby. Helping the quality movement along was the creation of the Baldrige National Quality Award in 1986 under the direction of the American Society of Quality

Control and the National Institute of Standards and Technology. The Baldrige Award recognizes up to five companies a year for outstanding quality management systems.

The ISO 9000 certification standards, issued by the International Organization for Standardization, now play a major role in setting quality standards, particularly for global manufacturers. Many European companies require that their vendors meet these standards as a condition for obtaining contracts.

The need to become or remain competitive in the global economic recession of the early 1990s pushed companies to seek major innovations in the processes used to run their operations. One major type of business process reengineering (BPR) is conveyed in the title of Michael Hammer's influential article "Reengineering Work: Don't Automate, Obliterate." The approach seeks to make revolutionary, as opposed to evolutionary, changes. It does this by taking a fresh look at what the organization is trying to do, and then eliminating non-value-added steps and computerizing the remaining ones to achieve the desired outcome.

The idea is to apply a total system approach to managing the flow of information, materials, and services from raw material suppliers through factories and warehouses to the end customer. Recent trends, such as outsourcing and mass customization, are forcing companies to find flexible ways to meet customer demand. The focus is on optimizing those core activities in order to maximize the speed of response to changes in customer expectations.

Based on the work of several researchers, a few basic operations priorities have been identified. These priorities include cost, product quality and reliability, delivery speed, delivery reliability, ability to cope with changes in demand, flexibility, and speed of new product introduction. In every industry, there is usually a segment of the market that buys products—typically products that are commodity-like in nature like sugar, iron ore, or coal—strictly on the basis of low cost. Because this segment of the market is frequently very large, many companies are lured by the potential for significant profits, which they associate with the large unit volumes of the product. As a consequence, competition in this segment is fierce—and so is the failure rate.

Quality can be divided into two categories: product quality and process quality. The level of a product's quality will vary with the market segment to which it is aimed because the goal in establishing the proper level of product quality is to meet the requirements of the customer. Overdesigned products with too high a level of quality will be viewed as prohibitively expensive. Underdesigned products, on the other hand, will result in losing customers to products that cost a little more but are perceived as offering greater benefits.

Process quality is critical since it relates directly to the reliability of the product. Regardless of the product, customers want products without defects. Thus, the goal of process quality is to produce error-free products. Adherence to product specifications is essential to ensure the reliability of the product as defined by its intended use.

A company's ability to deliver more quickly than its competitors may be critical. Take, for example, a company that offers a repair service for computer-networking equipment. A company that can offer on-site repair within one or two hours has a significant advantage over a competing firm that only guarantees service only within twenty-four hours.

Delivery reliability relates to a firm's ability to supply the product or service on or before a promised delivery due date. The focus during the 1980s and 1990s on reducing inventory stocks in order to reduce cost has made delivery reliability an increasingly important criterion in evaluating alternative vendors.

A company's ability to respond to increases and decreases in demand is another important factor in its ability to compete. It is well known that a company with increasing demand can do little wrong. When demand is strong and increasing, costs are continuously reduced because of economies of scale, and investments in new technologies can be easily justified. Scaling back when demand decreases may require many difficult decisions regarding laying off employees and related reductions in assets. The ability to deal effectively with dynamic market demand over the long term is an essential element of manufacturing strategy.

Flexibility, from a strategic perspective, refers to a company's ability to offer a wide variety of products to its customers. In the 1990s companies began to adjust their processes and outputs to dynamic and sometimes volatile customer needs. An important component of flexibility is the ability to develop different products and deliver them to market. As new technologies and processes become widespread, a company must be able to respond to market demands more and more quickly if it is to continue to be successful.

Manufacturing strategy must be linked vertically to the customer and horizontally to other parts of the enterprise. Underlying this framework is senior management's strategic vision of the firm. This vision identifies, in general terms, the target market, the firm's product line, and its core enterprise and operations capabilities. The choice of a target market can be difficult, but it must be made. Indeed, it may lead to turning away business—ruling out a customer segment that would simply be unprofitable or too hard to serve given the firm's capabilities. Core capabilities are those skills that differentiate the manufacturing from its competitors.

In general, customers' new-product or current-product requirements set the performance priorities that then become the required priorities for operations. Manufacturing organizations have a linkage of priorities because they cannot satisfy customer needs without the involvement of R&D and distribution and without the direct or indirect support of financial management, human resource management, and information management. Given its performance requirements, a manufacturing division uses its capabilities to achieve these priority goals in order to complete sales. These capabilities include technology, systems, and people. CIM, JIT, and TQM represent fundamental concepts and tools used in each of the three areas.

Suppliers do not become suppliers unless their capabilities in the management of technology, systems, and people reach acceptable levels. In addition, most manufacturing capabilities are now subjected to the "make-or-buy" decision. It is current practice among world-class manufacturers to subject each part of a manufacturing operation to the question: If we are not among the best in the world at, say, metal forming, should we be doing this at all, or should we subcontract to someone who *is* the best?

The main objectives of manufacturing strategy development are (1) to translate required priorities into specific performance requirements for operations and (2) to make the necessary plans to assure that manufacturing capabilities are sufficient to accomplish them. Developing priorities involves the following steps:

1. Segment the market according to the product group.
2. Identify the product requirements, demand patterns, and profit margins of each group.
3. Determine the order winners and order qualifiers for each group.
4. Convert order winners into specific performance requirements.

It has been said that America's resurgence in manufacturing is *not the result of* U.S. firms being better innovators than most foreign competitors. This has been true for a long time. Rather, it is because U.S. firms are proving to be very effective copiers, having spent a decade examining the advantages of foreign rivals in product development, production operations, supply chain management, and corporate governance then putting in place "functional equivalents" that "incrementally improve" on their best techniques. Four main adaptations on the part of U.S. firms underscore this success:

1. New approaches to product-development team structure and management have resulted in getting products to market

faster, with better designs and manufacturability.

2. Companies have improved their manufacturing facilities through dramatic reductions of work-in-process, space, tool costs, and human effort, while simultaneously improving quality and flexibility.
3. New methods of customer-supplier cooperation, which borrow from the Japanese *keiretsu* (large holding companies) practices of close linkages but maintain the independence of the organizations desired by U.S. companies, have been put in place.
4. Better leadership—through strong, independent boards of directors that will dismiss managers who are not doing their jobs effectively—now exists.

In sum, the last few decades of the twentieth century witnessed tremendous change and advancement in the means of producing goods and the manner of managing these operations that have led to higher levels of quality and quantity as well as greater efficiency in the use of resources. In the new millennium, because of global competition and the expansive use of new technologies, including the Internet, a successful firm will be one that is competitive with new products and services that are creatively marketed and effectively financed. Yet what is becoming increasingly critical is the ability to develop manufacturing practices that provide unique benefits to the products. The organization that can develop superior products, sell them at lower prices, and deliver them to their customers in a timely manner stands to become a formidable presence in the marketplace.

THOMAS HAYNES

MARKDOWNS

(SEE: *Pricing*)

MARKETING

The term *market* is the root word for the word *marketing. Market* refers to the location where exchanges between buyers and sellers occur. *Marketing* pertains to the interactive process that requires developing, pricing, placing, and promoting goods, ideas, or services in order to facilitate exchanges between customers and sellers to satisfy the needs and wants of consumers. Thus, at the very center of the marketing process is satisfying the needs and wants of customers.

NEEDS AND WANTS

Needs are the basic items required for human survival. Human needs are an essential concept underlying the marketing process because needs are translated into consumer wants. Human needs are often described as a state of real or perceived deprivation. Basic human needs take one of three forms: physical, social, and individual. Physical needs are basic to survival and include food, clothing, warmth, and safety. Social needs revolve around the desire for belonging and affection. Individual needs include longings for knowledge and self-expression, through items such as clothing choices. Wants are needs that are shaped by both cultural influences and individual preferences. Wants are often described as goods, ideas, and services that fulfill the needs of an individual consumer. The wants of individuals change as both society and technology change. For example, when a computer is released, a consumer may want it simply because it is a new and improved technology. Therefore, the purpose of marketing is to convert these generic needs into wants for specific goods, ideas, or services. Demand is created when wants are supported by an individual consumer's ability to purchase the goods, ideas, or services in question.

Consumers buy products that will best meet their needs, as well as provide the most fulfillment resulting from the exchange process. The first step in the exchange process is to provide a product. Products can take a number of forms such as goods, ideas, and services. All products are produced to satisfy the needs, wants, and demands of individual buyers.

The second step in the satisfaction process is exchange. Exchange occurs when an individual receives a product from a seller in return for something called consideration. Consideration usually takes the form of currency. For an exchange to take place, it must meet a number of conditions. (1) There must be at least two participants in the process. (2) Each party must offer something of value to the other. (3) Both parties must want to deal with each other. (4) Both participants have the right to accept or to reject the offer. (5) Both groups must have the ability to communicate and deliver on the mutual agreement. Thus, the transaction process is a core component of marketing. Whenever there is a trade of values between two parties, a transaction has occurred. A transaction is often considered a unit of measurement in marketing. The earliest form of exchange was known as barter.

HISTORICAL ERAS OF MARKETING

Modern marketing began in the early 1900s. In the twentieth century, the marketing process progressed through three distinct eras—production, sales, and marketing. In the 1920s, firms operated under the premise that production was a seller's market. Product choices were nearly nonexistent because firm managers believed that a superior product would sell itself. This philosophy was possible because the demand for products outlasted supply. During this era, firm success was measured totally in terms of production. The second era of marketing, ushered in during 1950s, is known as the sales era. During this era, product supply exceeded demand. Thus, firms assumed that consumers would resist buying goods and services deemed nonessential. To overcome this consumer resistance, sellers had to employ creative advertising and skillful personal selling in order to get consumers to buy. The marketing era emerged after firm managers realized that a better strategy was needed to attract and keep customers because allowing products to sell themselves was not effective. Rather, the marketing concept philosophy was adopted by many firms in an attempt to meet the specific needs of customers. Proponents of the marketing concept argued that in order for firms to achieve their goals, they had to satisfy the needs and wants of consumers.

MARKETING IN THE OVERALL BUSINESS

There are four areas of operation within all firms: accounting, finance, management, and marketing. Each of these four areas performs specific functions. The accounting department is responsible for keeping track of income and expenditures. The primary responsibility of the finance department is maintaining and tracking assets. The management department is responsible for creating and implementing procedural policies of the firm. The marketing department is responsible for generating revenue through the exchange process. As a means of generating revenue, marketing objectives are established in alignment with the overall objectives of the firm.

Aligning the marketing activities with the objectives of the firm is completed through the process of marketing management. The marketing management process involves developing objectives that promote the long-term competitive advantage of a firm. The first step in the marketing management process is to develop the firm's overall strategic plan. The second step is to establish marketing strategies that support the firm's overall strategic objectives. Lastly, a marketing plan is developed for each product. Each product plan contains an executive summary, an explanation of the current marketing situation, a list of threats and opportunities, proposed sales objectives, possible marketing strategies, action programs, and budget proposals.

The marketing management process includes analyzing marketing opportunities, selecting target markets, developing the marketing mix, and managing the marketing effort. In order to analyze marketing opportunities, firms scan current environmental conditions in order to determine potential opportunities. The aim of the marketing effort is to satisfy the needs and wants of consumers. Thus, it is necessary for marketing managers to determine the particular needs and wants of potential customers. Various quantitative and qualitative techniques of marketing research are used to collect data about potential customers, who are then segmented into markets.

MARKET SEGMENTATION

In order to better manage the marketing effort and to satisfy the needs and wants of customers, many firms place consumers into groups, a process called market segmentation. In this process, potential customers are categorized based on different needs, characteristics, or behaviors. Market segments are evaluated as to their attractiveness or potential for generating revenue for the firm. Four factors are generally reviewed to determine the potential of a particular market segment. Effective segments are measurable, accessible, substantial, and actionable. Measurability is the degree to which a market segment's size and purchasing power can be measured. Accessibility refers to the degree to which a market segment can be reached and served. Substantiality refers to the size of the segment in term of profitability for the firm. Action ability refers to the degree to which a firm can design or develop a product to serve a particular market segment.

Consumer characteristics are used to segment markets into workable groups. Common characteristics used for consumer categorizations include demographic, geographic, psychographic, and behavioral segmentation. Demographic segmentation categorizes consumers based on such characteristics as age, gender, income level, and occupation. It is one of the most popular methods of segmenting potential customers because it makes it relatively easy to identify potential customers. Categorizing consumers according to their locations is called geographic segmentation. Consumers can be segmented geographically according to the nations, states, regions, cities, or neighborhoods in which they live, shop, and/or work. Psychographic segmentation uses consumers' activities, interests, and opinions to sort them into groups. Social class, lifestyle, or personality characteristics are psychographic variables used to categorize consumers into different groups. In behavioral segmentation, marketers divide consumers into groups based on their knowledge, attitudes, uses, or responses to a product.

Once the potential market has been segmented, firms need to station their products relative to similar products of other producers, a process called product positioning. Market positioning is the process of arranging a product so as to engage the minds of target consumers. Firm managers position their products in such a way as to distinguish it from those of competitors in order to gain a competitive advantage in the marketplace. The position of a product in the marketplace must be clear, distinctive, and desirable relative to those of its competitors in order for it to be effective.

COVERAGE STRATEGIES

There are three basic market-coverage strategies used by marketing managers: undifferentiated, differentiated, and concentrated. An undifferentiated marketing strategy occurs when a firm focuses on the common needs of consumers rather than their different needs. When using this strategy, producers design products to appeal to the largest number of potential buyers. The benefit of an undifferentiated strategy is that it is cost-effective because a narrow product focus results in lower production, inventory, and transportation costs. A firm using a differentiated strategy makes a conscious decision to divide and target several different market segments, with a different product geared to each segment. Thus, a different marketing plan is needed for each segment in order to maximize sales and, as a result, increase firm profits. With a differentiated marketing strategy, firms create more total sales because of broader appeal across market segments and stronger position within each segment. The last market coverage strategy is known as the concentrated marketing strategy. The concentrated strategy, which aims to serve a large share of one or a very few markets, is best suited for firms with limited resources. This approach allows firms to obtain a much stronger position in the segments it targets because of the greater emphasis on these targeted segments. This greater emphasis ultimately leads to a better understanding of the needs of the targeted segments.

MARKETING MIX

Once a positioning strategy has been determined, marketing managers seek to control the four basic elements of the marketing mix: product, price, place, and promotion, known as the four P's of marketing. Since these four variables are controllable, the best mix of these elements is determined to reach the selected target market.

Product. The first element in the marketing mix is the product. Products can be either tangible or intangible. Tangible products are products that can be touched; intangible products are those that cannot be touched, such as services. There are three basic levels of a product: core, actual, and augmented. The core product is the most basic level, what consumers really buy in terms of benefits. For example, consumers do not buy food processors, per se; rather, they buy the benefit of being able to process food quickly and efficiently. The next level of the product is the actual product—in the case of the previous example, food processors. Products are typically sorted according to the following five characteristics: quality, features, styling, brand name, and packaging. Finally, the augmented level of a product consists of all the elements that surround both the core and the actual product. The augmented level provides purchasers with additional services and benefits. For example, follow-up technical assistance and warranties and guaranties are augmented product components. When planning new products, firm managers consider a number of issues including product quality, features, options, styles, brand name, packaging, size, service, warranties, and return policies, all in an attempt to meet the needs and wants of consumers.

Price. Price is the cost of the product paid by consumers. This is the only element in the marketing mix that generates revenue for firms. In order to generate revenue, managers must consider factors both internal and external to the organization. Internal factors take the form of marketing objectives, the marketing-mix strategy, and production costs. External factors to consider are the target market, product demand, competition, economic conditions, and government regulations. There are a number of pricing strategies available to marketing managers: skimming, penetration, quantity, and psychological. With a price-skimming strategy, the price is initially set high, allowing firms to generate maximum profits from customers willing to pay the high price. Prices are then gradually lowered until maximum profit is received from each level of consumer. Penetration pricing is used when firms set low prices in order to capture a large share of a market quickly. A quantity-pricing strategy provides lower prices to consumers who purchase larger quantities of a product. Psychological pricing tends to focus on consumer perceptions. For example, odd pricing is a common psychological pricing strategy. With odd pricing, the cost of the product may be a few cents lower than a full-dollar value. Consumers tend to focus on the lower-value full-dollar cost even though it is really priced closer to the next higher full-dollar amount. For example, if a good is priced at $19.95, consumers will focus on $19 rather than $20.

Place. Place refers to where and how the products will be distributed to consumers. There are two basic issues involved in getting the products to consumers: channel management and logistics management. Channel management involves the process of selecting and motivating wholesalers and retailers, sometimes called middlemen, through the use of incentives. Several factors are reviewed by firm management when determining where to sell their products: distribution channels, market-coverage strategy, geographic locations, inventory, and transportation methods. The process of moving products from a manufacturer to the final consumer is often called the *channel of distribution.*

Promotion. The last variable in the marketing mix is promotion. Various promotional tools are used to communicate messages about products, ideas, or services from firms and their customers. The promotional tools available to managers are advertising, personal selling, sales promotion, and publicity. For the promotional program to be effective, managers use a blend of the four promotional tools that best reaches potential customers. This blending of promotional tools is sometimes referred to as the *promotional mix.* The goal of this promotional mix is to communicate to potential customers the features and benefits of products.

INTERNATIONAL MARKETING

International business has been practiced for thousands of years. In modern times, advances in technology have improved transportation and communication methods; as a result, more and more firms have set up shop at various locations around the globe. A natural component of international business is international marketing. International marketing occurs when firms plan and conduct transactions across international borders in order to satisfy the objectives of both consumers and the firm. International marketing is simply a strategy used by firms to improve both market share and profits. While firm managers may try to employ the same basic marketing strategies used in the domestic market when promoting products in international locations, those strategies may not be appropriate or effective. Firm managers must adapt their strategies to fit the unique characteristics of each international market. Unique environmental factors that need to be explored by firm managers before going global include trade systems, economic conditions, political-legal, and cultural conditions.

The first factor to consider in the international marketplace is each country's trading system. All countries have their own trade system regulations and restrictions. Common trade system regulations and restrictions include tariffs, quotas, embargoes, exchange controls, and nontariff trade barriers. The second factor to review is the economic environment. There are two economic factors which reflect how attractive a particular market is in a selected country: industrial structure and income distribution. Industrial structure refers to how well developed a country's infrastructure is while income distributed refers to how income is distributed among its citizens. Political-legal environment is the third factor to investigate. For example, the individual and cultural attitudes regarding purchasing products from foreign countries, political stability, monetary regulations, and government bureaucracy all influence marketing practices and opportunities. Finally, the last factor to be considered before entering a global market is the cultural environment. Since cultural values regarding particular products will vary considerably from one country to another around the world, managers must take into account these differences in the planning process.

Just as with domestic markets, managers must establish their international marketing objectives and policies before going overseas. For example, target countries will need to be identified and evaluated in terms of their potential sales and profits. After selecting a market and establishing marketing objectives, the mode of entry into the market must be determined. There are three major modes of entry into international markets: exporting, joint venture, and direct investment. Exporting is the simplest way to enter an international market. With exporting, firms enter international markets by selling products internationally through the use of middlemen. This use of these middlemen is sometimes called indirect exporting. The second way to enter an international market is by using the joint-venture approach. A joint venture takes place when firms join forces with companies from the international market to produce or market a product. Joint ventures differ from direct investment in that an association is formed between firms and businesses in the international market. Four types of joint venture are licensing, contract manufacturing, management contracting, and joint ownership. Under licensing, firms allow other businesses in the international market to produce products under an agreement called a license. The licensee has the right to use the manufacturing process, trademark, patent, trade secret, or other items of value for a fee or royalty.

Firms also use contract manufacturing, which arranges for the manufacture of products to enter international markets. The third type of joint venture is called management contracting. With this approach, the firms supply the capital to the local international firm in exchange for the management know-how. The last category of joint venture is joint ownership. Firms join with the local international investors to establish a local business. Both groups share joint ownership and control of the newly established business. Finally, direct investment is the last mode used by firms to enter international markets. With direct investment, a firm enters the market by establishing its own base in international locations. Direct investment is advantageous because labor and raw materials may be cheaper in some countries. Firms can also improve their images in international markets because of the employment opportunities they create.

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Allen D. Truell

MARKETING CONCEPT

Business philosophy has experienced three major shifts during the history of commerce in the United States. It has moved from a production orientation to a sales orientation to the current consumer orientation. Each of these philosophies has reflected the economic environment of its time.

From the early years of the country into the late 1920s, businesses had limited production capacity and continuous demand for their products. Under those circumstances, it was inevitable that the prevailing philosophy would be "produce as much as you can and it will sell." Business goals based on that belief naturally focused on production. Marketing concerns were limited to order taking and product distribution.

With the introduction of mass production in the late 1800s, the gap between production and the demand for goods and services began to narrow. By the 1930s, production capacity had caught up with and, in many areas, exceeded demand. In order to maintain or regain production and sales levels, businesses adopted a sales-oriented philosophy. This philosophy held that "if you do enough advertising, promotional activities, and direct selling, you can convince the market to buy all of your output." Initially, companies capitalized on the emergence of the radio as an advertising vehicle and the employment of large sales forces to reach prospective customers in new markets. In the 1940s, the introduction of television enabled them to expand sales efforts even further.

After the end of World War II, two forces combined to create an explosion in demand for goods and services. One was the pent-up demand for products resulting from wartime shortages. The other was the enormous added demand generated by the return of G.I.s who were establishing new homes and families. The spending boom caused by these forces was sustained by the baby boom and the increased standard of living that followed. At the same time, wartime production capacity and technological developments were shifted to civilian applications, production continued to increase, and new ventures were formed to take advantage of the opportunities.

The net result of all this economic activity was heavy competition for the consumer dollar. Businesses quickly came to realize that if they were going to get their share of those dollars, they were going to have to become more consumer-oriented. This change in philosophy became known as the *marketing concept.*

Although this philosophy had been taking shape for nearly seven years, it was not articulated until it appeared in the 1952 annual report of General Electric. One widely used definition evolving from the report's description is "an organization-wide consumer orientation with the objective of achieving long-range profitability." As this definition implies, there are three parts to the marketing concept. They are:

1. *A customer focus:* The marketing concept begins with the premise that the starting point for business decisions is the customer's needs and wants. Those needs and wants are carefully researched and thoroughly analyzed. Then, goods and services are identified and/or developed to satisfy them.
2. *A profit goal:* The marketing concept dictates that goods and services made available by a business must be produced and sold at a profit. The profit objective is integral to the survival and growth of the business. Without it, the business would not be available to serve the needs and wants of customers.
3. *A total company effort:* Effective implementation of the marketing concept requires involvement of employees from all departments at all levels of the business. Training must be provided and employees must be motivated to achieve the common goals of maximum customer satisfaction and profitability.

Businesses that have embraced the marketing concept have found that it has had a strong impact on sales. They have also found that, in many respects, it has changed the way they operate.

Most of the changes in management practice have been related to changes in thinking inherent in the marketing concept. These include making decisions on the basis of customer needs and wants instead of production schedules and sales goals, viewing profit as an objective rather than an accounting outcome, and taking an active interest in *all* aspects of the business. Putting the marketing concept into practice has also forced managers to think through what they are going to do and their reasons for doing it.

Changes in marketing activities that have occurred under the concept involve both marketing strategies and marketing functions. Market research has become a prominent tool. Data gathered to determine customer needs and wants and to provide feedback on company performance has been put to use. Special attention has been paid to product quality and to targeting services, as well as goods, to customer preferences. The customer's interest has been designated as the first priority in all marketing activities. In selling, for example, helping the customer has been given greater emphasis than getting the sale. In addition, the search for innovative ways to reach and serve the customer has become an ongoing enterprise.

Changes in production brought about by use of the marketing concept, such as closely controlled inventories, have centered on efficiency. Changes in operations, such as extended hours and immediate delivery, have focused on convenient product availability. Additional changes in business practice have been aimed at cost control to give customers maximum value for the price they pay.

During the 1990s, attempts were made to improve on the marketing concept by extending it and broadening it. The effort to extend the concept involved combining it with total quality management (TQM). The intent to take customer satisfaction to a higher level and meet customer's exact needs. This initiative met with limited success. Efforts to broaden the marketing concept expanded it to include social concerns. The assumption was that by addressing broader customer concerns (the environment, AIDS, etc.), along with basic needs and wants, customer satisfaction—and profitability—would also be expanded. Some companies have had success with this wider concept.

(SEE ALSO: *Marketing research*; *Market segmentation*; *Quality management*; *Target marketing.*)

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EARL C. MEYER
WINIFRED L. GREEN

MARKETING: HISTORICAL PERSPECTIVES

This article is an introduction to the historical development of marketing, one of the major functional areas of a business firm. First, marketing is described and defined. Then, the evolution of marketing in the United States is described, touching on several major eras, including the simple trade era, the production era, the sales era, the marketing department era, the marketing company era, and the relationship marketing era.

WHAT IS MARKETING?

> *"Marketing is advertising, like those false or deceptive ads on television that try to get you to buy something that you don't really want."*
>
> *"Marketing is like those pushy car salespeople, or those salespeople that come to our front doors selling overpriced vacuum cleaners."*
>
> *"I hate those rude telemarketers calling at all times of the day and night."*

Some individuals think that marketing involves deceptive, high-pressure tactics to get people to buy something they don't really want. Those individuals are incorrect. While marketing usually involves advertising or personal selling, marketing (practiced correctly) should not try to get people to buy things they don't want, nor should marketers use deceptive or pushy tactics to get people to buy. In fact, marketing is really the process of developing products to *satisfy* customers through proper pricing, promotion, and distribution.

The basic goal behind marketing is to satisfy the customer. Satisfied customers are much more valuable than customers who have been deceived into buying something. For example, satisfied customers are more likely to buy your product again. Furthermore, satisfied customers are more likely to speak well of the product to friends and acquaintances, which can increase the possibility that they, in turn, will buy the firm's product. Indeed, marketing is really the process of developing and maintaining long-term exchange relationships. However, companies have not always practiced this philosophy. The remainder of this article describes how company beliefs have changed over time.

THE SIX STAGES OF MARKETING EVOLUTION

Marketing as it exists today is a relatively recent phenomenon, even though its roots reach back into the nineteenth century. In the early nineteenth century a woman who wanted a new dress had two choices: to make her own or to hire someone to make one for her. If she decided to hire someone, she would pick out the fabric and get measured, and the dress would be custom-made for her. There were no standard sizes as there are today. Standard sizes are the result of modern mass-manufacturing processes.

The Simple Trade Era Prior to the Industrial Revolution, people made most of what they consumed. Any excess household production could be brought to town and sold or traded for other goods. This type of economy is commonly referred to as a pure subsistence economy. In a pure subsistence economy, there is little need for marketing (to facilitate exchanges), since each household produces what it consumes.

However, with the advent of the Industrial Revolution, businesses rather than households became the producers of many types of goods. When the producers of products are not also the consumers of those products, exchanges must

An early assembly line in Highland Park, Michigan.

take place. Thus serious thinking about the exchange process—that is, marketing—began in the wake of the Industrial Revolution. The evolution of marketing into the most important business function in many firms was first recognized by Robert Keith (1960), an executive at Pillsbury, and was substantiated by other business leaders at other firms. According to Keith, marketing evolved into its present-day prominence within Pillsbury during four distinct periods beginning after the simple trade era in American history. Keith called these periods the production era, the sales era, the marketing era, and the marketing company era.

The Production Era The production era is so named because many companies' main priority was the reduction of the cost of production. Companies felt that exchanges could be facilitated merely by lowering manufacturing costs and, in turn, passing along the cost savings to customers in the form of lower prices.

This focus on production (which lasted from just after the Civil War until the 1920s) was fueled by such milestones as Henry Ford's invention of the assembly line and the more efficient work principles advanced by Fredrick W. Taylor's scientific management movement (Haber, 1964). These two innovations made business managers aware that mass production resulted in steeply declining unit costs of production. In turn, the declining unit costs of production made profit possibilities look fabulous.

The rationale for mass production seemed sound at the time. According to Michael Porter (1980), reduced production costs can lead to reduced selling prices, which appeal to the largest segment of customers. Unfortunately, turbulent economic conditions associated with the late 1920s through the 1940s caused many companies to fail even though they had adopted this *production-oriented* philosophy. As a result, companies looked for other ways to facilitate the exchange process.

The Sales Era The next era of marketing evolution is called the sales era because many companies' main priority was to move their products out of the factory using a variety of selling techniques. During the sales era, companies felt that they could enhance their sales by using a variety of promotional techniques designed to inform potential customers about and/or persuade them to buy their products. This type of thinking was initiated by the economic climate of the time.

When Herbert Hoover was elected president in 1928, the mood of the general public was one of optimism and confidence in the U.S. economy. Few people had any reason to believe that prosperity would not continue. In his acceptance speech for the Republican presidential nomination, Hoover said: "We in America today are nearer to the final triumph over poverty than ever before in the history of any land. The poorhouse is vanishing from among us."

However October 29, 1929—"Black Tuesday"—marked the beginning of the Great Depression. This was the single most devastating financial day in the history of the New York Stock Exchange. Within the first few hours that the stock market was open, prices fell so far as to wipe out all the gains that had been made in the previous year. Since the stock market was viewed as the chief indicator of the American economy, public confidence was shattered. Between October 29 and November 13 (when stock prices hit their lowest point), more than $30 billion disappeared from the American economy—comparable to the total amount the United States had spent on its involvement in World War I (Schultz, 1999).

The amount of disposable and discretionary income that consumers had to spend on necessities and luxuries also decreased dramatically as the unemployment rate approached 25 percent. Companies found that they could no longer sell all the products that they produced, even though prices had been lowered via mass production. Firms now had to get rid of their excess products in order to convert those products into cash. In order to get rid of products, many firms developed sales forces and relied on personal selling, advertising signs, and singing commercials on the radio to "move" the product. Theodore Levitt (1960), a prominent marketing scholar, has noted that these firms were not necessarily concerned with satisfying the customer, but rather with selling the product. This *sales orientation* dominated business practice through the 1930s until World War II, when most firms' manufacturing facilities were adapted to making machinery and equipment for the war effort. Of course, the war dramatically changed the environment within which business was conducted. This also changed companies' philosophies of doing business.

The Marketing Department Era The manufacturing capability of most industrialized countries—except the United States—had been destroyed during World War II. Therefore U.S. firms once again found it relatively easy to sell the products they manufactured because there was little competition from abroad. Armed with sales concepts developed during the sales era, as well as new manufacturing capabilities and large research and development (R & D) departments developed during the war, firms realized that they could produce hundreds of new and different products.

Firms realized that they needed a set of criteria to determine which products would be manufactured and which would not, as well as a new management function that would incorporate many related functions such as procurement, advertising, and sales into one department, the marketing department. It was also at this time that many firms realized that the company's purpose was no longer to manufacture a variety of products, but to satisfy their customers.

The change in company thinking or purpose from that of manufacturing products to that of satisfying customers was truly revolutionary and had many implications. Firms that see themselves as manufacturers of products use selling techniques that are preoccupied with converting products into cash. Firms that see themselves as marketers focus on satisfying the needs of buyers through the products that are sold, as well as all those functions associated with developing the product, delivering the product, and consuming the product. In short, selling focuses on the needs of the seller; marketing focuses on the needs of the buyer.

Theodore Levitt (1960) has pointed out that Henry Ford's development of the assembly line illustrates the difference between firms that focus on production (a production orientation) and those that focus on customers (a customer orientation). Ford is widely known as a production genius for developing the assembly line. Many incorrectly believe that the reduced manufacturing cost made possible by the assembly line allowed Ford to sell millions of $500 cars (a production orientation). However, Ford's thinking was actually the reverse. He invented the assembly line because he concluded that millions of buyers would be willing to pay $500 for an automobile (a customer orientation). His main task was to reduce manufacturing costs (in whatever way possible) so that he could sell cars at $500 and still make a profit. The assembly line was the result, not the cause, of his low price. As Ford himself put it:

> *We first reduce the price to the point where we believe that more sales will result. Then we go ahead and try to make the prices. We do not bother about the costs. The new price forces the cost down . . . because what earthly use is it to know the cost if it tells you that you cannot manufacture at a price at which an article can be sold? But more to the point is the fact that, although one may calculate what a cost is, and of course all of our costs are carefully calculated, no one knows what a cost ought to be. One way of discovering . . . is to name a price so low as to force everybody in the place to the highest point of efficiency.* (Ford, 1923)

In short, during the marketing department era, many companies changed their thinking or purpose from that of manufacturing products to that of satisfying customers. Firms with a *customer orientation* attempt to create satisfying products that customers will want to buy. Beginning in the 1960's some firms had implemented this customer-oriented philosophy to the point where the marketing department set the agenda for the entire company. These types of firms are referred to as *marketing companies.*

The Marketing Company Era Firms that have moved from simply having a marketing department that follows a customer orientation to having the marketing department guide the company's direction are called marketing companies. In marketing companies, the marketing department sets company operating policy, including technical research, procurement, production, advertising, and sales. A press release from Two-Ten News Network (1998) exemplifies the strategy of a marketing-driven firm:

> *Atlanta—AGCO Corporation, a leading worldwide designer, manufacturer and distributor of agricultural equipment, today announced management appointments to strengthen and expand its global marketing and sales functions. According to Robert J. Ratliff, Chairman of the Board and Chief Executive Officer of AGCO, "These appointments will strengthen AGCO's position as a marketing-driven*

> *company. Marketing is the key function that has been the basis of AGCO's worldwide profitable growth. AGCO's strategy is to vigorously expand our sales and marketing strength around the world while implementing aggressive reductions to manufacturing costs to adjust to industry conditions. These appointments reflect AGCO's commitment to further expand AGCO's market leadership around the world and to maintain profitability."*

As can be seen with AGCO, marketing is the basic motivating force for all activities within the corporation, from finance to sales to production, with the objective of satisfying the needs of the customer. Firms that practice this philosophy of bringing all departments together with the objective of satisfying their customers are practicing the *marketing concept.*

The marketing concept states that if all of the organization's functions are focused on customer needs, profits can be achieved by satisfying those needs. The satisfaction of customer needs can be accomplished through product changes, pricing adjustments, increased customer service, distribution changes, and the like.

Today, some firms take the marketing concept one step further by establishing long-term relationships with their customers, as discussed in the next section.

The Relationship Marketing Era Relationship marketing is the process whereby a firm builds long-term satisfying relations with its customers in order to retain the customers' loyalty in buying the firm's products. Philip Kotler (1997), a noted author of several books on marketing, has pointed out that the need for customer retention is demonstrated by the fact that the cost of attracting a new customer is estimated to be five times the cost of keeping a current customer happy.

One example of a firm that practices relationship marketing to retain customer loyalty is Saturn. Saturn has been able to retain 60 percent of their customers—meaning that 60 percent are repeat buyers. Melissa Herron (1996) explained that Saturn accomplishes relationship marketing by taking a different view of what it sells. Traditionally, car manufacturers have sold cars, but Saturn expanded its product to include the entire experience—the shopping experience, the buying experience, and the ownership experience. Even if its cars were no better than competitors', the company decided, the entire buying and consumption experience would be better.

This philosophy is made clear in the company's values and mission statement. Saturn's values include commitment to customer enthusiasm, commitment to excel, teamwork, trust and respect to the individual, and continuous improvement. Their mission statement also supports their relationship building philosophy:

> *"Earn the loyalty of Saturn owners and grow our family by developing and marketing U.S. manufactured vehicles that are world leaders in quality, cost and customer enthusiasm through the integration of people, technology and business systems."*

This relationship-oriented strategy is most obvious in the company's advertising and in its pricing philosophy. For example, most car ads highlight the car's features: it's sexy and it's fast or it's comfortable and it's safe. In Saturn ads however, the car is secondary. Greg Martin, a Saturn official, explained that most car companies zero in on the four wheels and the engine, while Saturn's ads tell you you're going to get a good car and you're going to get treated well. The company-customer relationship is enhanced through trust, respect, and quality products (Herron, 1996).

In summary, relationship marketing takes the marketing concept one step further by establishing long-term, trusting, win-win relations with customers in order to satisfy the customer, foster customer loyalty and encourage repeat buying.

CONCLUSION

This article has presented a historical overview of the evolution of marketing in the United States, from just after the Civil War until the present. In general, companies have determined that, in order to be successful, they must become less internally focused and more externally focused (on the customer). This trend in company thought has extended to the point where many firms now see themselves as long-term partners with their customers. As information technology becomes more advanced, marketers will be able to become more acutely aware of their customers' needs and more quickly able to provide goods and services to satisfy those needs.

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JAMES E. STODDARD

MARKETING MIX

The term *marketing mix* refers to the four major areas of decision making in the marketing process that are blended to obtain the results desired by the organization. The four elements of the marketing mix are sometimes referred to the four Ps of marketing. The marketing mix shapes the role of marketing within all types of organizations, both profit and nonprofit. Each element in the marketing mix—product, price, promotion, and place—consists of numerous subelements. Marketing managers make numerous decisions based on the various subelements of the marketing mix, all in an attempt to satisfy the needs and wants of consumers.

PRODUCT

The first element in the marketing mix is the product. A product is any combination of goods and services offered to satisfy the needs and wants of consumers. Thus, a product is anything tangible or intangible that can be offered for purchase or use by consumers. A tangible product is one that consumers can actually touch, such as a computer. An intangible product is a service that cannot be touched, such as computer repair, income tax preparation, or an office call. Other examples of products include places and ideas. For example, the state tourism department in New Hampshire might promote New Hampshire as a great place to visit and by doing so stimulate the economy. Cities also promote themselves as great places to live and work. For example, the slogan touted by the Chamber of Commerce in San Bernardino, California, is "It's a great day in San Bernardino." The idea of wearing seat belts has been promoted as a way of saving lives, as has the idea of recycling to help reduce the amount of garbage placed in landfills.

Typically, a product is divided into three basic levels. The first level is often called the core product, what the consumer actually buys in terms of benefits. For example, consumers don't just buy trucks. Rather, consumers buy the benefit that trucks offer, like being able to get around in deep snow in the winter. Next is the second level, or actual product, that is built around the core product. The actual product consists of the brand name, features, packaging, parts, and styling. These components provided the benefits to consumers that they seek at the first level. The final, or third, level of the product is the augmented component. The augmented component includes additional services and benefits that surround the first two levels of the product. Examples of augmented product components are technical assistance in operating the product and service agreements.

Products are classified by how long they can be used—durability—and their tangibility. Products that can be used repeatedly over a long period of time are called durable goods. Examples of durable goods include automobiles, furniture, and houses. By contrast, goods that are normally used or consumed quickly are called nondurable goods. Some examples of nondurable goods are food, soap, and soft drinks. In addition, services are activities and benefits that are also involved in the exchange process but are intangible because they cannot be held or touched. Examples of intangible services included eye exams and automobile repair.

Another way to categorize products is by their users. Products are classified as either consumer or industrial goods. Consumer goods are purchased by final consumers for their personal consumption. Final consumers are sometimes called end users. The shopping patterns of consumers are also used to classify products. Products sold to the final consumer are arranged as follows: convenience, shopping, specialty, and unsought goods. Convenience goods are products and services that consumers buy frequently and with little effort. Most convenience goods are easily obtainable and low-priced, items such as bread, candy, milk, and shampoo. Convenience goods can be further divided into staple, impulse, and emergency goods. Staple goods are products, such as bread and milk, that consumers buy on a consistent basis. Impulse goods like candy and magazines are products that require little planning or search effort because they are normally available in many places. Emergency goods are bought when consumers have a pressing need. An example of an emergency good would be a shovel during the first snowstorm of the winter.

Shopping goods are those products that consumers compare during the selection and purchase process. Typically, factors such as price, quality, style, and suitability are used as bases of comparison. With shopping goods, consumers usually take considerable time and effort in gathering information and making comparisons among products. Major appliances such as refrigerators and televisions are typical shopping goods. Shopping goods are further divided into uniform and nonuniform categories. Uniform shopping goods are those goods that are similar in quality but differ in price. Consumers will try to justify price differences by focusing on product features. Nonuniform goods are those goods that differ in both quality and price.

Specialty goods are products with distinctive characteristics or brand identification for which consumers expend exceptional buying effort. Specialty goods include specific brands and types of products. Typically, buyers do not compare specialty goods with other similar products because the products are unique. Unsought goods are those products or services that consumers are not readily aware of or do not normally consider buying. Life insurance policies and burial plots are examples of unsought goods. Often, unsought goods require considerable promotional efforts on the part of the seller in order to attract the interest of consumers.

Industrial goods are those products used in the production of other goods. Examples of industrial goods include accessory equipment, component parts, installations, operating supplies, raw materials, and services. Accessory equipment refers to movable items and small office equipment items that never become part of a final product. Office furniture and fax machines are examples of accessory equipment. Component parts are products that are turned into a component of the final product that does not require further processing. Component parts are frequently custom-made for the final product of which they will become a part. For example, a computer chip could be produced by one manufacturer for use in computers of other manufacturers. Installations are capital goods that are usually very expensive but have a long useful life. Trucks, power generators, and mainframe computers are examples of installations. Operating supplies are similar to accessory equipment in that they do not become part of the finished product. Operating supplies include items necessary to maintain and operate the overall firm, such as cleaners, file folders, paper, and pens. Raw materials are goods sold in their original form before being processed for use in other products. Crops, crude oil, iron ore, and logs are examples of raw materials in need of further processing before being used in products. The last category of industrial goods is services. Organizations sometimes require the use of services, just as individuals do. Examples of services sought by organizations include maintenance and repair and legal counsel.

PRICE

The second element in marketing mix is price. Price is simply the amount of money that consumers are willing to pay for a product or service. In earlier times, the price was determined through a barter process between sellers and purchasers. In modern times, pricing methods and strategies have taken a number of forms.

Pricing new products and pricing existing products require the use of different strategies. For example, when pricing a new product, businesses can use either market-penetration pricing or a price-skimming strategy. A market-penetration pricing strategy involves establishing a low product price to attract a large number of customers. By contrast, a price-skimming strategy is used when a high price is established in order to recover the cost of a new product development as quickly as possible. Manufacturers of computers, videocassette recorders, and other technical items with high development costs frequently use a price-skimming strategy.

Pricing objectives are established as a subset of an organization's overall objectives. As a component of the overall business objectives, pricing objectives usually take one of four forms: profitability, volume, meeting the competition, and prestige. Profitability pricing objectives mean that the firm focuses mainly on maximizing its profit. Under profitability objectives, a company increases its prices so that additional revenue equals the increase in product production costs. Using volume pricing objectives, a company aims to maximize sales volume within a given specific profit margin. The focus of volume pricing objectives is on increasing sales rather than on an immediate increase in profits. Meeting the price level of competitors is another pricing strategy. With a meeting-the-competition pricing strategy, the focus is less on price and more on nonprice competition items such as location and service. With prestige pricing, products are priced high and consumers purchase them as status symbols.

In addition to the four basic pricing strategies, there are five price-adjustment strategies: discount pricing and allowances, discriminatory pricing, geographical pricing, promotional pricing, and psychological pricing. Discount pricing and allowances include cash discounts, functional discounts, seasonal discounts, trade-in allowances, and promotional allowances. Discriminatory pricing occurs when companies sell products or services at two or more prices. These price differences may be based on variables such as age of the customer, location of sale, organization membership, time of day, or season. Geographical pricing is based on the location of the customers. Products may be priced differently in distinct regions of a target area because of demand differences. Promotional pricing happens when a company temporarily prices products below the list price or below cost. Products priced below cost are sometimes called loss leaders. The goal of promotional pricing is to increase short-term sales. Psychological pricing considers prices by looking at the psychological aspects of price. For example, consumers frequently perceive a relationship between product price and product quality.

PROMOTION

Promotion is the third element in the marketing mix. Promotion is a communication process that takes place between a business and its various publics. Publics are those individuals and organizations that have an interest in what the business produces and offers for sale. Thus, in order to be effective, businesses need to plan promotional activities with the communication process in mind. The elements of the communication process are: sender, encoding, message, media, decoding, receiver, feedback, and noise. The sender refers to the business that is sending a promotional message to a potential customer. Encoding involves putting a message or promotional activity into some form. Symbols are formed to represent the message. The sender transmits these symbols through some form of media. Media are methods the sender uses to transmit the message to the receiver. Decoding is the process by which the receiver translates the meaning of the symbols sent by the sender into a form that can be understood. The receiver is the intended recipient of the message. Feedback occurs when the receiver communicates back to the sender. Noise is anything that interferes with the communication process.

There are four basic promotion tools: advertising, sales promotion, public relations, and personal selling. Each promotion tool has its own unique characteristics and function. For instance, advertising is described as paid, nonpersonal communication by an organization using various media to reach its various publics. The purpose of advertising is to inform or persuade a targeted audience to purchase a product or service, visit a location, or adopt an idea. Advertising is also classified as to its intended purpose. The purpose of product advertising is to secure the purchase of the product by consumers. The purpose of institutional advertising is to promote the image or philosophy of a company. Advertising can be further divided into six subcategories: pioneering, competitive, comparative, advocacy, reminder, and cooperative advertising. Pioneering advertising aims to develop primary demand for the product or product category. Competitive advertising seeks to develop demand for a specific product or service. Comparative advertising seeks to contrast one product or service with another. Advocacy advertising is an organizational approach designed to support socially responsible activities, causes, or messages such as helping feed the homeless. Reminder advertising seeks to keep a product or company name in the mind of consumers by its repetitive nature. Cooperative advertising occurs when wholesalers and retailers work with product manufacturers to produce a single advertising campaign and share the costs. Advantages of advertising include the ability to reach a large group or audience at a relatively low cost per individual contacted. Further, advertising allows organizations to control the message, which means the message can be adapted to either a mass or a specific target audience. Disadvantages of advertising include difficulty in measuring results and the inability to close sales because there is no personal contact between the organization and consumers.

The second promotional tool is sales promotion. Sales promotions are short-term incentives used to encourage consumers to purchase a product or service. There are three basic categories of sales promotion: consumer, trade, and business. Consumer promotion tools include such items as free samples, coupons, rebates, price packs, premiums, patronage rewards, point-of-purchase coupons, contests, sweepstakes, and games. Trade-promotion tools include discounts and allowances directed at wholesalers and retailers. Business-promotion tools include conventions and trade shows. Sales promotion has several advantages over other promotional tools in that it can produce a more immediate consumer response, attract more attention and create product awareness, measure the results, and increase short-term sales.

Public relations is the third promotional tool. An organization builds positive public relations with various groups by obtaining favorable publicity, establishing a good corporate image, and handling or heading off unfavorable rumors, stories, and events. Organizations have at their disposal a variety of tools, such as press releases, product publicity, official communications, lobbying, and counseling to develop image. Public relations tools are effective in developing a positive attitude toward the organization and can enhance the credibility of a product. Public relations activities have the drawback that they may not provide an accurate measure of their influence on sales as they are not directly involved with specific marketing goals.

The last promotional tool is personal selling. Personal selling involves an interpersonal influence and information-exchange process. There are seven general steps in the personal selling process: prospecting and qualifying, pre-approach, approach, presentation and demonstration, handling objections, closing, and follow-up. Personal selling does provide a measurement of effectiveness because a more immediate response is received by the salesperson from the customer. Another advantage of personal selling is that salespeople can shape the information presented to fit the needs of the customer. Disadvantages are the high cost per contact and dependence on the ability of the salesperson.

For a promotion to be effective, organizations should blend all four promotion tools together in order to achieve the promotional mix. The promotional mix can be influenced by a number of factors, including the product itself, the product life-cycle stage, and budget. Within the promotional mix there are two promotional strategies: pull and push. Pull strategy occurs when the manufacturer tries to establish final-consumer demand and thus pull the product through the wholesalers and retailers. Advertising and sales promotion are most frequently used in a pulling strategy. Pushing strategy, in contrast, occurs when a seller tries to develop demand through incentives to wholesalers and retailers, who in turn place the product in front of consumers.

PLACE

The fourth element of the marketing mix is place. Place refers to having the right product, in the right location, at the right time to be purchased by consumers. This proper placement of products is done through middle people called the *channel of distribution.* The channel of distribution is comprised of interdependent manufacturers, wholesalers, and retailers. These groups are involved with making a product or service available for use or consumption. Each participant in the channel of distribution is concerned with three basic utilities: time, place, and possession. Time utility refers to having a product available at the time that will satisfy the needs of consumers. Place utility occurs when a firm provides satisfaction by locating products where they can be easily acquired by consumers. The last utility is possession utility, which means that wholesalers and retailers in the channel of distribution provide services to consumers with as few obstacles as possible.

Channels of distribution operate by one of two methods: conventional distribution or a vertical marketing system. In the conventional distribution channel, there can be one or more independent product manufacturers, wholesalers, and retailers in a channel. The vertical marketing system requires that producers, wholesalers, and retailers to work together to avoid channel conflicts.

How manufacturers store, handle, and move products to customers at the right time and at the right place is referred to as *physical distribution.* In considering physical distribution, manufacturers need to review issues such as distribution objectives, product transportation, and product warehousing. Choosing the mode of transportation requires an understanding of each possible method: rail, truck, water, pipeline, and air. Rail transportation is typically used to ship farm products, minerals, sand, chemicals, and automobiles. Truck transportation is most suitable for transporting clothing, food, books, computers, and paper goods. Water transportation is good for oil, grain, sand, gravel, metallic ores, coal, and other heavy items. Pipeline transportation is best when shipping products such as oil or chemicals. Air transport works best when moving technical instruments, perishable products, and important documents.

Another issue of concern to manufacturers is the level of product distribution. Normally manufacturers select from one of three levels of distribution: intensive, selective, or exclusive. Intensive distribution occurs when manufacturers distribute products through all wholesalers or retailers that want to offer their products. Selective distribution occurs when manufacturers distribute products through a limited, select number of wholesalers and retailers. Under exclusive distribution, only a single wholesaler or retailer is allowed to sell the product in a specific geographic area.

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ALLEN D. TRUELL

MARKETING RESEARCH

Accelerating product cycles, easy access to information on products and services, highly discerning consumers, and fierce competition among companies are all a reality in the world of business. Too many companies are chasing too few consumers. In his book "Kotler on Marketing: How to Creat, Win, and Dominate Markets," Philip Kotler, marketing guru and a professor at Northwestern University's Kellogg Graduate School of Management, discusses what a business has to do to be successful. He wrote, "The premium will go to those companies that invent new ways to create, communicate and deliver value to their target markets" (quoted in Mendenhall, 1999, p. 52).

Knowing, understanding, and responding to your target market is more important than ever. And this requires information—good information. Good information can lead to successful products and services. Good information is the result of market research.

WHAT IS MARKETING RESEARCH?

According to the Marketing Research Association (2000), marketing research is defined as follows:

"Marketing research is the function which links the consumer, customer, and public to the marketer through information—information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process.

"Marketing research specifies the information required to address these issues; designs the method of collecting information; manages and implements the data collection process; analyzes the results; and communicates the findings, recommendations and their implications."

Marketing research is a $1.3-billion-dollar-a-year industry. The industry is growing at over 10 percent a year, with profits running at a similar level (Lee, 1999). Marketing research provides, analyzes, and interprets information for manufacturers on how consumers view their products and services and on how they can better meet consumer needs. The ultimate goal is to please the consumer in order to get, or keep, the consumer's business.

HISTORY OF MARKETING RESEARCH

Pioneers. Marketing research as an organized business activity began between 1910 and 1920. The appointment of Charles Collidge Parlin as manager of the Commercial Research Division of the Advertising Department of the Curtis Publishing Company in 1911 is generally noted to be the beginning of marketing research. Parlin's success led several industrial firms and advertising media to establish research divisions. In 1915, the United States Rubber Company hired Dr. Paul H. Nystrom to manage a newly established Department of Commercial Research. In 1917, Swift and Company hired Dr. Louis D. H. Weld from Yale University to become manager of their Commercial Research Department.

In 1919, Professor C.S. Duncan of the University of Chicago published *Commercial Research: An Outline of Working Principles*, considered to be the first major book on commercial research. In 1921, Percival White's *Market Analysis* was published; the first research book to gain a large readership, it went through several editions. *Market Research and Analysis* by Lyndon O. Brown, published in 1937, became one of the

Phone surveyors are often used to collect marketing data.

most popular college textbooks of the period, reflecting the growing interest in marketing research on the college campus. After 1940, numerous research textbooks were published and the number of business schools offering research courses grew rapidly.

Following World War II, the growth of marketing research increased dramatically. By 1948, more than two hundred marketing research organizations had been created in the United States. An estimated $50 million was spent on marketing research activities in 1947. Over the next three decades this expenditure level increased more than tenfold (Kinnear, 1991).

Methodological Development. Major advances in marketing research methodology were made from 1910 to 1920. Questionnaires, or surveys, became a popular method of data collection. With the growth of survey research came improvements in questionnaire design and question construction. During the 1930s, sampling became a serious methodological issue. Modern approaches to probability sampling slowly gained acceptance in this period.

From 1950 through the early 1960s, methodological innovations occurred at a fairly steady pace. At this time, a major development occurred: the commercial availability of large-scale digital computers. The computer was responsible for rapidly increasing the pace of methodological innovation, especially in the area of quantitative marketing research. As the field of marketing research attracted increasing interest, two new journals began publication in the 1960s: the *Journal of Marketing Research* and the *Journal of Advertising Research* (Kinnear, 1991).

The many technological advances in computers in the 1990s had a major impact on many aspects of the marketing research profession. These innovations included checkout scanners in supermarkets, computer-assisted telephone interviewing, data analysis by computers, data collection on the Internet, and Web-based surveys.

TYPES OF MARKETING RESEARCH

Marketing research can be classified as exploratory research, conclusive research, and performance-monitoring research. The stage in the decision-making process for which the information is needed determines the type of research required.

Exploratory research is appropriate for the early stages of the decision-making process. This research is usually designed to provide a preliminary investigation of the situation with a minimum expenditure of cost and time. A variety of approaches to this research are used, including use of secondary data sources, observation, interviews with experts, and case histories.

Conclusive research provides information that helps the manager evaluate and select a course of action. This involves clearly defined research objectives and information needs. Some approaches to this research include surveys, experiments, observations, and simulation. Conclusive research can be subclassified into descriptive research and causal research.

Descriptive research, as its name suggests, is designed to describe something—for example, the characteristics of consumers of a certain product; the degree to which the use of a product varies with age, income, or sex; or the number of people who saw a specific TV commercial. A majority of marketing research studies are of this type (Boyd and Westface, 1992).

Causal research is designed to gather evidence regarding the cause-and-effect relationships that exist in the marketing system. For example, if a company reduces the price of a product and then unit sales of the product increase, causal research would show whether this effect was due to the price reduction or some other reason. Causal research must be designed in such a way that the evidence regarding causality is clear. The main sources of data for causal research are interrogating respondents through surveys and conducting experiments.

Performance-monitoring research provides information regarding the status of the marketing system; it signals the presence of potential problems or opportunities. This is an essential element in the control of a business's marketing programs. The data sources for performance-monitoring research include interrogation of respondents, secondary data, and observation.

THE MARKETING RESEARCH PROCESS

The marketing research process is comprised of a series of steps called the research process. To conduct a research project effectively, it is important to anticipate all the steps and recognize their interdependence.

Need for Information. The first step in the research process is establishing the need for marketing research information: The researcher must thoroughly understand why the information is needed. The manager is responsible for explaining the situation surrounding the request for information and establishing that the research information will assist in the decision-making process. Establishing the need for research information is a critical and difficult phase of the research process. Too often the importance of this initial step is overlooked, which results in research findings that are not decision-oriented.

Research Objectives. Once the need for research information has been clearly defined, the researcher must specify the objectives of the proposed research and develop a specific list of information needs. Research objectives answer the question "Why is this project being conducted?" The answer could be as broad as the determination of the amount of effort needed to increase the company's market share by 5 percent or as specific as the determination of the most preferred of five moisturizers by women in southern California. Only when the researcher knows the problem that management wants to solve can the research project be designed to provide the pertinent information.

The difficult part of establishing research objectives is the conflict that often exists between the value of information and the research budget. Since each piece of information has some cost associated with it, whether it is the cost of the account manager's travel expenses or the cost of having an outside agency perform a telephone

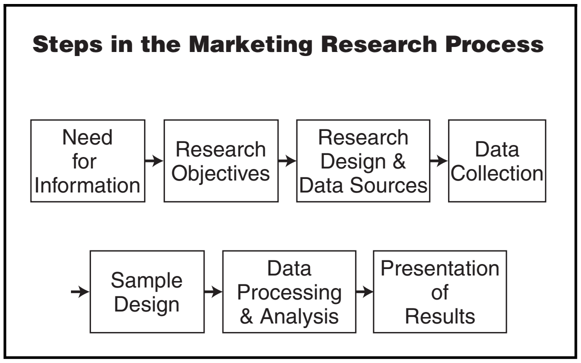
Steps in the Marketing Research Process
Need for Information
Research Objectives
Research Design & Data Sources
Data Collection
Sample Design
Data Processing & Analysis
Presentation of Results

Figure 1

survey, each piece must be evaluated in terms of its value with respect to the needed decision.

Research Design and Data Sources. The next step in the research process is to design the formal research project and identify the appropriate sources of data for the study. A research design is the framework that specifies the type of information to be collected, the sources of the data, and the data-collection procedures. Although there are many different ways to classify designs, one that gives a clear overview of the various procedures is based on three methods of generating primary data: experimentation, observation, and survey.

Experimentation involves establishing a controlled experiment or model that simulates the real-world marketing situation being investigated. In the observation method, the primary data result from observing the respondents doing something. The survey method involves collecting the primary data by questioning a certain number of people. These are the most widely used methods of obtaining primary data (Hisrich, 1990).

To determine the data sources for the research project, an assessment must first be made of the amount and type of data presently available. These data are called secondary data—data already gathered and available, having been accumulated previously for a different purpose. Although these data are assembled quickly and often at a low cost, sometimes they do not satisfy the research objectives.

There are two types of secondary data: internal (data originating within the firm) and external (published data originating outside the firm). Internal secondary data are all the data originating within the firm that were collected for some purpose other than the objective currently being addressed. Two of the most important types of internal data are sales and cost data.

After the internal secondary data have been examined, additional information can be obtained from published external secondary data. The main sources of external data are (1) the Internet, (2) the government, (3) trade, business, and professional associations, (4) the media, (5) trade journals, (6) universities and foundations, (7) corporate annual reports, and (8) commercial data services. Information obtained from any of these sources must be examined carefully to make sure that it fits the particular needs of the researcher.

1. The Internet can provide links to many sources of information, quickly and easily. Searching the Web or visiting a business library's Web site are ways to become familiar with the types of resources available. Two Web sites that are useful in evaluating potential research resources are the New York Public Library's Science, Industry, and Business Library at www.nypl/org/research/-sibl/index.html and the University of Michigan's Document Center at www.lib.umich.edu/libhome/Documents.center/stats.html.
2. The federal government is by far the largest source of marketing data. Although the data are available at a very low price, if any, once they are located, there is often a cost and time commitment in obtaining it. Some government publications are highly specialized, referring to specific studies of products. Other data are more general in nature. State and local governments also provide information. Data such as birth and death records and information on real estate sales and assessed values are public information and

can be obtained from the specific state or local agency.

3. Trade, business, and professional associations also have general data on the various activities and sales of their constituency. For example, the National Kitchen & Bath Association will have general information on kitchen and bath design professionals, research design strategies, and remodeling. Although such data will not be company-specific, they are useful in gaining an overall perspective on the industry. Address and membership information for all associations can be found in the *Encyclopedia of Associations*, updated annually.
4. Most magazines, newspapers, and radio and television stations have marketing data available on their audience. Also, media perform periodic market surveys of buying patterns and demographic information in their market area. For example, the Boston *Globe* does a demographic study of its readers in order to give advertisers a better understanding of the marketing potential of their area.
5. Trade journals also provide a wide variety of marketing and sales data on the areas they cover. For example, if market research were needed in the area of computers, then trade journals such as *Computer World*, *InformationWeek*, and *PC Magazine* should be checked for any pertinent information.
6. Universities and foundations perform a variety of research projects. In addition to special studies supported by grants from the government, universities publish general research findings of interest to the business community through their research bureaus and institutes.
7. Corporate annual and 10-K reports are also useful sources of information on specific companies or general industry trends. These reports may not provide great detail; however, a general picture of the nature and scope of the firms in an industry as well as their general direction can be constructed.
8. There are many firms offering marketing research and commercial data services. Some provide custom research; they design the research project specifically to meet the client's needs. This can be expensive. Others, such as Nielsen Media Research, offer standardized information, compiled regularly and made available to clients on a subscription basis.

After all the secondary data sources have been checked and the needed data have not been found, the third aspect of a research projected begins—the collection of data through primary research. Primary research can be best looked at in terms of three areas: data collection, sample design, and data processing and analysis.

Data Collection. If it has been determined that the required data are not currently available, then the next step is to collect new data. To develop the data-collection procedure, the researcher must establish an effective link between the information needs and the questions to be asked or the observations to be recorded. The process of collecting data is critical, since it typically involves a large proportion of the research budget. The most widely used methods of data collection are focus groups, surveys, or interviews.

Focus groups are often used to collect primary data. A focus group consists of a discussion, usually lasting one and a half to two hours, with eight to twelve individuals and a moderator who is intent on encouraging in-depth discussion of a topic or product. The discussion allows for flexibility and provides broad, in-depth knowledge that cannot be obtained through any other research method.

Surveys, also known as questionnaires, are the most common instrument for data collection. A survey consists of a set of questions presented to respondents for their answers. Surveys need to be carefully developed, tested, and debugged before they are used; they can be administered over the phone, through the mail, via e-mail, or on the Web. Web-based surveys are becoming very common and popular because of their lower cost, convenience, and the increased honesty in responses (Rasmusson, 1999). Web surveys don't replace the traditional techniques, but they can be an effective choice for companies big and small.

Primary research data is often obtained by interviews, either in person or over the telephone. For example, one might personally interview consumers to determine their opinion of a new line of low-fat foods or personally interview a few executives to determine their opinion of a nationally known advertising agency. An advantage of personal interviews is that the interviewer can adapt the question to the specific situation at hand. A limitation to this method is that the interviewer can introduce bias into the process by asking leading questions or by giving some indication of the preferred answer. A lot of time, supervision, and interviewer training are needed to implement personal interviews successfully.

Sample Design. When research is being conducted, it is important to determine the appropriate target population of the research—the group of people possessing characteristics relevant to the research problem from whom information will be obtained. Although this may appear to be easy, it is often one of the most difficult tasks in a marketing research project because of the wide variety of factors entering into the determination. For example, it might be important that only recent users of the product be surveyed. Or perhaps the purchasers of the product, not the users, should be the focus of the research.

Once the target population is determined, a decision is needed on how best to represent this population within the time and cost constraints of the research budget. Because there are many different methods used to draw this *sample*—the group of units composed of nonoverlapping elements that are representative of the population from which it is drawn—the best one needs to be chosen for the specific research project.

Data Processing and Analysis. After the data are collected, the processing begins, which includes the functions of editing and coding. Editing involves reviewing the data forms to ensure legibility, consistency, and completeness. Coding involves establishing categories for responses or groups of responses so that numerals can be used to represent the categories (Kinnear, 1991).

It is important that the data analysis be consistent with the requirements of the information needs identified when the research objectives were defined. Data analysis is usually performed with an appropriate software application. This data analysis, whether done by simple numeric counting or by complex computer-assisted analytical techniques, should provide meaningful information appropriate for managerial decisions.

Presentation of Results After the data have been collected and analyzed, the final aspect of the research project can be generated—the development of the appropriate conclusions and recommendations. This is the most important part of the project, but it does not always receive the proper attention. The research results are typically communicated to the manager through a written report and oral presentation. The research findings should be presented in a clear, simple format and be accompanied by appropriate support material. The best research methodology in the world will be useless to managers if they cannot understand the research report. Some preparation guidelines for the written and oral reports are:

- Consider the audience
- Be concise, yet complete
- Be objective, yet effective

The findings should address the information needs of the decision situation. The final measure of the value of the research project is whether or not the findings are successfully implemented in the company.

THE VALUE OF MARKETING RESEARCH

Marketing research has, in a way, pioneered the move toward the broader view of marketing.

Marketing research serves as a coordinating factor between marketing and the other functions of a business, such as engineering, manufacturing, accounting, and finance. This integration has the effect of enhancing the importance of marketing research to the corporation as a whole.

Marketing research will continue to play a key role in organizations in the twenty-first century. Technology will enable marketing research to take the lead in providing useful information for effective business decisions. The Internet's role in marketing research will continue to grow because it provides a quick, cost-effective way of collecting and disseminating data. Market researchers will continue their evolution from supplying "market and opinion research" to a more strategic position of supplying information, consulting, and exchanging information with consumers (Chadwick, 1998). Companies that take advantage of marketing research and view it as a valuable business component will be the companies that survive and thrive.

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CHRISTINE F. LATINO

MARKET SEGMENTATION

Market segmentation is one of two general approaches to marketing; the other is mass-marketing. In the mass-marketing approach, businesses look at the total market as though all of its parts were the same and market accordingly. In the market-segmentation approach, the total market is viewed as being made up of several smaller segments, each different from the other. This approach enables businesses to identify one or more appealing segments to which they can profitably target their products and marketing efforts.

The market-segmentation process involves multiple steps (Figure 1). The first is to define the market in terms of the product's end users and their needs. The second is to divide the market into groups on the basis of their characteristics and buying behaviors.

Possible bases for dividing a total market are different for consumer markets than for industrial markets. The most common elements used to separate consumer markets are demographic factors, psychographic characteristics, geographic location, and perceived product benefits.

Demographic segmentation involves dividing the market on the basis of statistical differences in personal characteristics, such as age, gender, race, income, life stage, occupation, and education level. Clothing manufacturers, for example, segment on the basis of age groups such as teenagers, young adults, and mature adults. Jewelers use gender to divide markets. Cosmetics and hair care companies may use race as a factor; home builders, life stage; professional periodicals, occupation; and so on.

Psychographic segmentation is based on traits, attitudes, interests, or lifestyles of potential customer groups. Companies marketing new products, for instance, seek to identify customer groups that are positively disposed to new ideas. Firms marketing environmentally friendly products would single out segments with environmental concerns. Some financial institutions attempt to isolate and tap into groups with a strong interest in supporting their college, favorite sports team, or professional organization through logoed credit cards. Similarly, marketers of low-fat or low-calorie products try to identify and match their products with portions of the market that are health- or weight-conscious.

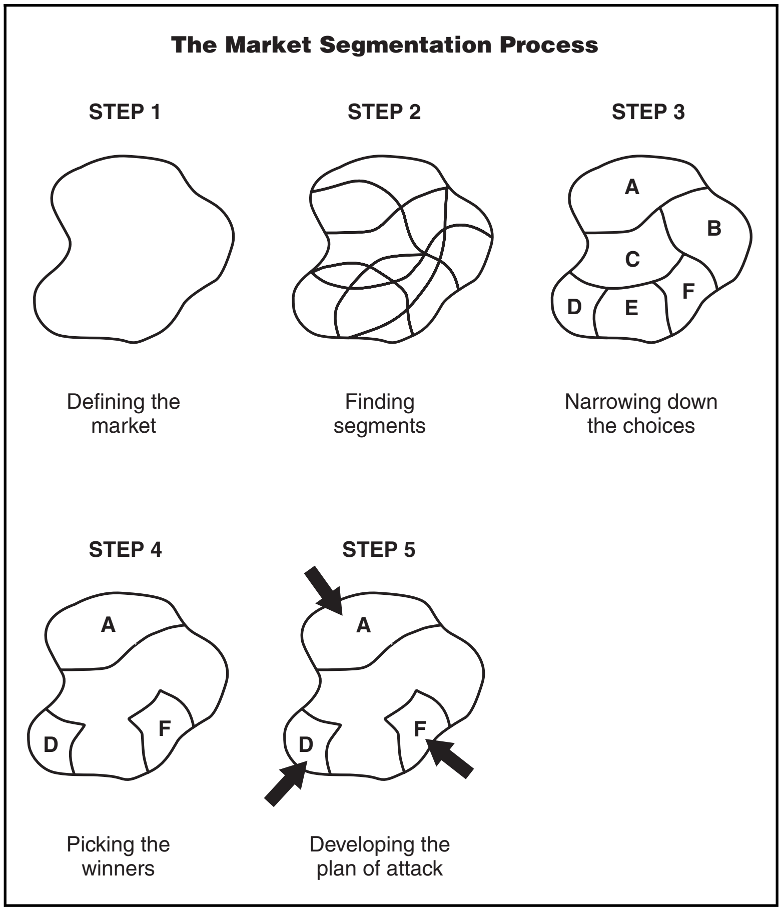
The Market Segmentation Process
STEP 1
STEP 2
STEP 3
A
B
C
D
E
F
Defining the market
Finding segments
Narrowing down the choices
STEP 4
STEP 5
A
D
F
A
D
F
Picking the winners
Developing the plan of attack

Figure 1

SOURCE: Croft, Michael J. (1994). *Market Segmentation: A Step-By-Step Guide to Profitable New Business*. London: Routledge.

Geographic segmentation entails dividing the market on the basis of where people live. Divisions may be in terms of neighborhoods, cities, counties, states, regions, or even countries. Considerations related to geographic grouping may include the makeup of the areas, that is, urban, suburban, or rural; size of the area; climate; or population. For example, manufacturers of snow-removal equipment focus on identifying potential user segments in areas of heavy snow accumulation. Because many retail chains are dependent on high-volume traffic, they search for, and will only locate in, areas with a certain number of people per square mile.

Product-benefit segmentation is based on the perceived value or advantage consumers receive from a good or service over alternatives. Thus, markets can be partitioned in terms of the quality, performance, image, service, special features, or other benefits prospective consumers seek. A wide spectrum of businesses—from camera to shampoo to athletic footwear to automobile marketers—rely on this type of segmentation to match up with customers. Many companies even market similar products of different grades or different accompanying services to different groups on the basis of product-benefit preference.

Factors used to segment industrial markets are grouped along different lines than those used for consumer markets. Some are very different; some are similar. Industrial markets are often divided on the basis of *organizational* variables, such as type of business, company size, geographic location, or technological base. In other instances, they are segmented along *operational* lines such as products made or sold, related processes used, volume used, or end-user applications. In still other instances, differences in *purchase practices* provide the segmentation base. These differences include centralized versus decentralized purchasing; policy regarding number of vendors; buyer-seller relationships; and similarity of quality, service, or availability needs.

Although demographic, geographic, and organizational differences enable marketers to narrow their opportunities, they rarely provide enough specific information to make a decision on dividing the market. Psychographic data, operational lines, and, in particular, perceived consumer benefits and preferred business practices are better at pinpointing buyer groupings—but they must be considered against the broader background. Thus, the key is to gather information on and consider *all* pertinent segmentation bases before making a decision.

Once potential market segments are identified, the third step in the process is to reduce the pool to those that are (1) large enough to be worth pursuing, (2) potentially profitable, (3) reachable, and (4) likely to be responsive. The fourth step is to zero in on one or more segments that are the best targets for the company's product(s) or capacity to expand. After the selection is made, the business can then design a separate marketing mix for each market segment to be targeted.

Adopting a market-segmentation approach can benefit a company in several specific areas. First, it can give customer-driven direction to the management of current products. Second, it can result in more efficient use of marketing resources. Third, it can help identify new opportunities for growth and expansion. At the same time, it can bring a company the broad benefit of a competitive advantage.

Adopting the market-segmentation approach can also be accompanied by some drawbacks. Particularly when multiple segments are targeted, both production and marketing costs can be more expensive than mass marketing. Different product models, for example, are required for each segment. Separate inventories must be maintained for each version. And different promotion may be required for each market. In addition, administrative expenses go up with the planning, implementation, and control of multiple marketing programs.

During the late 1960s, market segmentation moved ahead of mass marketing as the predominant marketing approach. In the following decades, societal changes and wider economic opportunity continually expanded the number of groups with specialized product needs and buying power. In response, businesses increasingly turned to the segmentation approach to capture and/or hold market share.

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EARL C. MEYER
PATRICK M. GRAHAM

MARKET SHARE

(SEE: *Marketing Research*)

MARKUPS

(SEE: *Pricing*)

MASLOW'S HEIRARCHY OF NEEDS

(SEE: *Motivation*)

MASS MARKETING

Mass marketing is a marketing approach in which the marketer addresses all segments of the market as though they are the same. The approach results in a single marketing plan with the same mix of product, price, promotion, and place strategies for the entire market.

The appeal of mass marketing is in the potential for higher total profits. Companies that employ the system expect the larger profit to result from (1) expanded volume through lower prices and (2) reduced costs through economies of scale made possible by the increased volume. In order for the system to work, however, certain conditions must exist. One is that the product must have broad appeal and a few features that distinguish it from competing products. Another is that it must lend itself to mass production. In addition, the opportunity must exist, and the marketer must have the ability to communicate and distribute to the aggregate market.

THE EVOLUTION INTO MASS MARKETING

Mass marketing first emerged as a workable strategy in the 1880s. Prior to that time, local markets in the United States were geographically isolated, few products had brand recognition beyond their local area, and continuous process technology had not yet come into its own. Profits in the fragmented markets were based on a low volume/high price strategy.

Between 1880 and 1890, several things occurred that eliminated the barriers and enhanced the appeal of mass marketing. Both the railroad and telegraph systems were completed, thus providing the potential for nationwide distribution and communication. Mass-production techniques and equipment were refined and adapted to a variety of products. Additionally, the population was growing rapidly, the country was recovering from the Civil War, and the largest depression in U.S. history until that time was ending.

These favorable circumstances by themselves did not create mass marketing. Entrepreneurial vision, drive, organization, and resources had to be added to implement the strategy. From 1880 to 1920, early innovators in many different industries stepped forward to seize the opportunity. Although the total number was relatively small—one or a few per industry—the impact on the U.S. economy was enormous. Many of these pioneering marketers built national reputations for their brands and companies that continue today.

Two of the most widely recognized examples are Ford and Coca-Cola. Henry Ford applied the concept in the automobile industry. His Model T was conceived and marketed as a "universal" car—one that would meet the needs of all buyers. By adopting mass-production techniques and eliminating optional features, he was able to reduce costs and sell his product at an affordable price. The combination catapulted the Model T to the top of the market. Asa Candler was equally successful at using mass marketing in the soft-drink industry. Like Ford, he also viewed his product as being the only one that consumers needed. His initial mass-marketing efforts focused on an extensive national advertising campaign. As product recognition grew, he established a network of bottling operations throughout the county to facilitate sales and distribution. No product in history has matched Coca-Cola's total sales.

Other mass marketers of this era achieved success by focusing on one aspect of the approach. Manufacturers such as Quaker Oats, Proctor and Gamble, and Eastman Kodak used refined mass-production techniques to establish consistent product quality. Still other manufacturers, such as Singer Sewing Machine, developed integrated distribution systems to ensure reliable delivery to the market. In general merchandise retailing, Sears and Montgomery Ward developed a mass-marketing niche through mail order. Grocery retailer A&P, on the other hand, established its mass market through private branding and systematic operation of multiple stores.

Mass marketers continued their domination in major industries well into the 1960s. Many of them maintained essentially the same mix, while others expanded their use of the strategy. Sears and Montgomery Ward, for example, added store retailing in the 1920s. In the 1930s, supermarkets appeared with a different emphasis than previous grocery retailers—national brands. Over the next several decades, large discount stores came into prominence with a format similar to the supermarkets.

THE EVOLUTION FROM MASS MARKETING

The successes of mass marketers led to the appearance of an alternate approach to marketing. Potential competitors wanting a share of the large market had two options. One was to replicate the organization, promotion, and distribution systems of the company that had created the mass market. The other was to go after a part of the market that had unique needs by developing products specifically for them. For nearly all of the challengers, building an operation to parallel that of an entrenched industry giant was not profitable or realistic. As a result, most of them gravitated to the more attractive market-segmentation approach. (Figure 1 shows the different demand curves for mass marketing and market segmentation.)

General Motors used market segmentation as early as the 1920s when it produced different models for different groups of customers to compete with Ford. Pepsi made a series of attempts, beginning in the 1930s, to crack into Coca-Cola's market share through changes in product and targeted promotion strategy. In the 1940s, television provided a powerful tool for both new and old companies to reach segmented markets. By the 1960s, market segmentation had surpassed mass marketing as the primary approach.

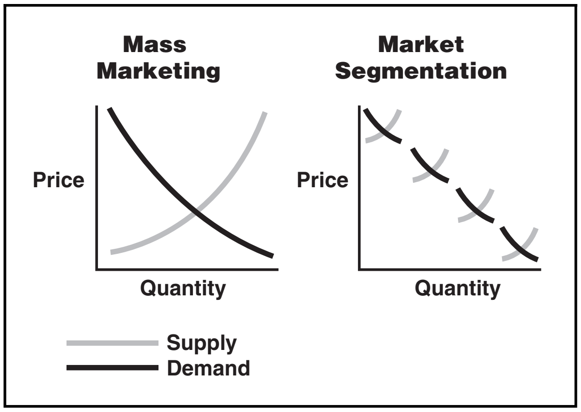

Figure 1

MASS MARKETING NOW AND IN THE FUTURE

In spite of the shift to market segmentation, mass marketing continues to be used in many situations and has potential for others. Products with broad appeal and few distinguishing characteristics—such as household cleaners, potato chips, and pain relievers—lend themselves to mass marketing just as they always have. At the same time, businesses that use mass marketing for their goods and services continue to look for ways to enlarge their markets by designing different appeals for noncustomers. Chewing gum, for example, is presented as an alternative to smoking. Utilities and credit cards offer special rates to entice potential high-volume customers. And discount retailers, such as Wal-Mart, match their mix of mass-marketed products to local customer bases.

Any current or future product that has mass-marketable attributes will likely be marketed by some form of the approach. In addition, the Internet provides a new medium for mass-marketing initiatives, and newly opened international markets offer a possible arena for mass-marketing opportunities.

(SEE ALSO: *Marketing*; *Marketing mix*; *Market segmentation*; *Strategic management*)

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EARL C. MEYER
LORI A. DAILEY

MEETING MANAGEMENT

Meetings have been considered very important from time immemorial. In fact, it could be said that virtually all of the great events in history resulted from meetings. Meetings undoubtedly started when the first cave dwellers met to make crude hunting plans. Today, meetings are essential means for achieving the communication necessary for the operation of virtually all organizations, large and small.

Just exactly what is a meeting? A meeting is a number of people assembled together, usually at a prestated date and time, to discuss a topic for the purpose of presenting information, swaying opinion, formulating a decision, practicing a skill, and/or developing a plan of action. Those at the meeting may belong to the same group, to different groups, or perhaps not to any group at all. A meeting might be called by an individual or by an organization. Usually the people meeting convene together physically within a designated area. Sometimes, however, meetings are held by people thousands of miles apart via telephone conference calls or video conferencing.

MAJOR TYPES OF MEETINGS

Many kinds of meetings are held in business. Probably the most common are staff meetings, project team meetings, process and procedure meetings, and quarterly meetings. In most large companies, hundreds of these meetings may occur weekly. Employees of all levels, including many below top-management level, attend them.

Staff meetings. Most supervisors and managers hold weekly or biweekly staff meetings with their "direct reports." In these meetings, they communicate higher-level decisions that have been made, discuss progress of the team toward departmental or company goals, and answer any staff members' questions.

Project team meetings. In most large companies, there are often project teams developed and facilitated by project managers. They are often comprised of people from different departments whose purpose is to design, develop, and/or implement a new product, process, or system. Project team members are assigned certain tasks to complete within stipulated time frames. Many of these people serve as part-time project resources in addition to performing their "regular" jobs.

Process and procedure meetings. These meetings are usually called to communicate new processes and/or procedures to a group of people who are affected. The communication includes an overview of the new process or procedure, the effect on that particular group of people, and steps to follow. A presentation-style format is used, with the presenter serving as the facilitator. At the end, a question-and-answer period usually follows.

Quarterly meetings. Quarterly earnings are announced at these meetings, along with detailed information on the financial status of the entire company and progress made toward strategic and departmental goals. Strategic direction changes are also communicated. A team of high-level executives ordinarily preside, using a presentation-style format.

METHODS OF ACHIEVING EFFECTIVE MEETINGS

In order for meetings to be successful, careful attention must be paid to a myriad of details. Two kinds of details are the most important: (1)

thorough planning of premeeting activities and (2) skillful leadership during the meeting itself.

Premeeting planning. These steps should be taken before the meeting starts:

1. It should be determined whether the meeting really needs to be held or whether the objectives could be achieved through phone calls or written communication.
2. An agenda should be prepared that includes the objective and the desired outcome of the meeting. Date, location, time of meeting, and a list of attendees should be included. A typical agenda includes the following: (a) call the meeting to order; (b) read the minutes of the previous meeting for approval, then correct errors and omissions; (c) hear reports of officers and committees; (d) discuss unfinished business; (e) take up new business; (f) adjourn. Announcements and other business not requiring a vote may come at the beginning or end of the meeting. If possible, the estimated time for each agenda item should be listed.
3. The agenda should be distributed to the participants, providing ample time for them to review the agenda/prework prior to the meeting. Applicable prework should be attached to the agenda. Their roles should be clear to participants: input providers, decision makers, or both. Persons who will be presenting reports should be contacted to ensure that they will be ready.
4. Who will facilitate (preside over) the meeting should be determined. This could be anyone in the company, not necessarily the highest-level attendee. The roles of facilitator and of note-taker may even be rotated. The name and position of this person should be announced before the meeting starts.
5. Attendance should be limited to those with subject-matter knowledge who will make valuable contributions and have decision-making authority.
6. The availability of the necessary materials/ equipment to run the meeting effectively should be ensured, such as:

   —extra copies of agenda and prework

   —overhead projector and/or LCD panel/ projector

   —easel/flip-chart pads

   —markers, extra pencils

   —name tags

   —extension cords

   —transparencies
7. Light refreshments should be available for people as they arrive; this creates a good feeling and may contribute to the success of the meeting.

Conducting meetings. Once the meeting is underway, following these guidelines will enhance its effectiveness:

1. The facilitator should start the meeting on time. If a gavel is used, it should be rapped once to declare order at the beginning and as necessary throughout the meeting. The facilitator should welcome those present and, if appropriate, have them introduce themselves. After some informal remarks, the facilitator should restate the meeting objectives, establish the ground rules of the meeting, and ask for any additions to the agenda.
2. A quorum (usually a majority of the members) is ordinarily required to conduct business. If the existence of a quorum is questioned, it must be determine that one exists for the meeting to continue.
3. The role of the facilitator is to keep the meeting on track, follow the agenda and time schedule, identify and assign tasks, and listen and ask questions. If the discussion drifts away from the agenda, the facilitator should diplomatically but

firmly declare the errant remarks "out of order" and return discussion to the agenda.

4. Any member recognized by the facilitator may make a motion. Following a second, the group discusses the motion. When discussion ends, the motion is voted on. A majority vote is ordinarily required for a motion to pass. A successful vote approves "immediate action" or "tables" the motion (that is, refers one motion to a committee or postpones discussion until the next meeting).
5. The facilitator must know the degree of formality expected. If informality has prevailed in the past, it should be continued. Informality often permits decision by consensus rather than formal vote. However, if formality prevails, parliamentary procedure must apply. The worldwide reference to this is the publication *Robert's Rules of Order*.
6. Good meeting facilitators try to get as many people as possible to participate in the discussions. It is difficult but necessary to discourage someone who monopolizes the discussion.
7. Special skill is required to manage a meeting if a heated debate breaks out. In such instances, the facilitator must forcefully limit the number and time allotted to those on each side of the issue. Above all, interruptions should not be permitted.
8. There are few things worse than a boring meeting. Good facilitators often find that occasional witty remarks take away humdrum feelings. Another good practice is to laugh heartily at genuinely funny comments.
9. During the meeting, the facilitator must see to that there is agreement on any next steps or assignments and their target completion dates.
10. At the end of the meeting, the facilitator thanks attendees and, if earned, recognizes their good participation. It is often appropriate to get consensus on the date, time, and place of the next meeting.

MEETINGS OF CORPORATION BOARDS OF DIRECTORS

At the top level of corporations are the meetings of the board of directors. Directors generally have authority over all corporate matters. The articles of incorporation, as amended, determine the number of directors.

Boards meet at regularly scheduled times, including during and immediately after shareholder meetings. If special board meetings are called, notice, in most cases, must be given at least ten but not more than sixty days in advance.

Corporation presidents generally preside at board meetings. If the president is unable to do so, the vice president ordinarily presides. Most large corporations use written meeting agendas.

Quorum requirements ordinarily require a majority of the directors to be in attendance. If at least a quorum attends, whatever decisions are made by those present constitute an action by the board. Bylaws seldom permit voting by proxy.

Corporation bylaws ordinarily presume that directors approve of any act passed by the board even if they voted against it unless they file a dissenting statement at or immediately after the meeting.

MEETINGS OF CORPORATE SHAREHOLDERS

State statutes and corporation bylaws require annual shareholder meetings. In addition to topics requested by shareholders, three major agenda items are usually covered:

1. Election of board of directors
2. Financial and competitive "state of the corporation"
3. Plans for the future

Special shareholder meetings can be called if a major corporation change is pending, such as a new line of products or a hostile takeover bid by another corporation. Bylaws usually stipulate that notice of a special meeting must be given at least ten but not more than sixty days in advance.

Every item on the agenda must be checked meticulously for any inaccuracies. The Federal Trade Commission, an independent U.S. governmental agency, has the authority to issue cease-and-desist orders against companies that engage in any misleading practices in any shareholder meetings or publications sent to shareholders.

Unlike at meetings of board of directors, proxies can vote at shareholder meetings. A quorum generally consists of shareholders holding a majority of the voting stock (usually common stock).

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BRENDA REINSBOROUGH

MERCHANDISE ASSORTMENTS

(SEE: *Product Mix*)

MICROECONOMICS

(SEE: *Microeconomics/Macroeconomics*)

MISSION STATEMENT

(SEE: *Strategic Management*)

MIXED ECONOMY

(SEE: *Economy Systems*)

MONETARY EXCHANGE

(SEE: *Currency Exchange*)

MONETARY POLICY

The central agency that conducts monetary policy in the United States is the Federal Reserve System (the Fed). It was founded by Congress in 1913 under the Federal Reserve Act. The Fed is a highly independent agency that is insulated from day-to-day political pressures, accountable only to the Congress. It is a federal system, consisting of the Board of Governors, twelve regional Federal Reserve Banks (FRBs) and their twenty-five branches, the Federal Open Market Committee (FOMC), the Federal Advisory Council and other advisory and working committees, and more than 4,000 member banks, mostly national banks. By law, all federally chartered banks, i.e., national banks, are automatic members of the system. State-chartered banks may elect to become members.

The seven-member Board of Governors, headquartered in Washington, D.C., is the central agency of the Fed, overseeing the entire operation of U.S. monetary policy. The FRBs are the operating arms of the system and are located in twelve major cities around the nation. The twelve-member FOMC is the most important policy-making entity of the system. The voting members of the committee are the seven members of the board, the president of the FRB of New York, and four of the other eleven FRB presidents, serving one year on a rotating basis. The other seven nonvoting FRB presidents still attend the meetings and participate fully in policy deliberations.

MONETARY POLICY AND THE ECONOMY

Being one of the most influential government policies, monetary policy aims at affecting the economy through the Fed's management of money and interest rates. As generally accepted concepts, the narrowest definition of money is M1, which includes currency, checking account deposits, and traveler's checks. Time deposits, savings deposits, money market deposits, and other financial assets can be added to M1 to define other monetary measures such as M2 and M3. Interest rates are simply the costs of borrowing. The Fed conducts monetary policy through reserves, which are the portion of the deposits that banks and other depository institutions are required to hold either as cash in their vaults, called vault cash, or as deposits with their home FRBs. Excess reserves are the reserves in excess of the amount required. These additional funds can be transacted in the reserves market (the federal funds market) to allow overnight borrowing between depository institutions to meet short-term needs in reserves. The rate at which such private borrowings are charged is the federal funds rate.

Monetary policy is closely linked with the reserves market. With its policy tools, the Fed can control the reserves available in the market, affect the federal funds rate, and subsequently trigger a chain of reactions that influence other short-term interests rates, foreign-exchange rates, long-term interest rates, and the amount of money and credit in the economy. These changes will then bring about adjustments in consumption, affect saving and investment decisions, and eventually influence employment, output, and prices.

GOALS OF MONETARY POLICY

The long-term goals of monetary policy are to promote full employment, stable prices, and moderate long-term interest rates. Most economists think price stability should be the primary objective, since a stable level of prices is key to sustained output and employment, as well as to maintaining moderate long-term interest rates. Relatively speaking, it is easier for central banks to control inflation (i.e., the continual rise in the price level) than to influence employment directly, because the latter is affected by such real factors as technology and consumer tastes. Moreover, historical evidence indicates a strong positive correlation between inflation and the amount of money.

While the financial markets react quickly to changes in monetary policy, it generally takes months or even years for such policy to affect employment and growth, and thus to reach the Fed's long-term goals. The Fed, therefore, needs to be forward-looking and to make timely policy adjustments based on forecasted as well as actual data on such variables as wages and prices, inflation, unemployment, output growth, foreign trade, interest rates, exchange rates, money and credit, conditions in the markets for bonds and stocks, and so on.

IMPLEMENTATION OF MONETARY POLICY

Since the early 1980s, the Fed has been relying on the overnight federal funds rate as the guide to its position in monetary policy. The Fed has at its disposal three major monetary policy tools:

Reserve Requirements Under the Monetary Control Act of 1980, all depository institutions, including commercial banks, savings and loans, and others, are subject to the same reserve requirements, regardless of their Fed member status. As of March 1999, the basic structure of reserve requirements is 3 percent for all checkable deposits up to $46.5 million and 10 percent for the amount above $46.5 million. No reserves are required for time deposits (data from Federal Reserve Bank of Minneapolis, 1999).

Reserve requirement affects the so-called multiple money creation. Suppose, for example, the reserve requirement ratio is 10 percent. A bank that receives a $100 deposit (bank 1) can lend out $90. Bank 1 can then issue a $90 check to a borrower, who deposits it in bank 2, which can then lend out $81. As it continues, the process will eventually involve a total of $1,000 ($100 + $90 + $81 + $72.9 + . . . = $1,000) in deposits. The initial deposit of $100 is thus multiplied 10 times. With a lower (higher) ratio, the multiple involved is larger (smaller), and more (less) reserves can be created.

Reserve requirements are not used as often as the other policy tools (discussed below). Since funds grow in multiples, it is difficult to administer small adjustments in reserves with this tool. Also, banks always have the option of entering the federal funds market for reserves, further limiting the role of reserve requirements. As of March 1999, the last change in the reserve requirements was in April 1992, when the upper ratio was reduced from 12 percent to 10 percent.

However, the amount of deposits against which the 3 percent requirement applies does change relatively more often.

The Discount Rate Banks may acquire loans through the "discount window" at their home FRB. The most important credit available through the window is the adjustment credit, which helps depository institutions meet their short-term needs against, for example, unexpected large withdrawals of deposits. The interest rate charged on such loans is the basic discount rate and is the focus of discount policy. A lower rate encourages more borrowing. Through money creation, bank deposits increase and reserves increase. A rate hike works in the opposite direction. However, since it is more efficient to adjust reserves through open-market operations (discussed below), the amount of discount window lending has been unimportant, accounting for only a small fraction of total reserves. Perhaps a more meaningful function served by the discount rate is to signal the Fed's stance on monetary policy, similar to the role of the federal funds rate.

By law, each FRB sets its discount rate every two weeks, subject to the approval of the Board of Governors. However, the gradual nationalization of the credit market over the years has resulted in a uniform discount rate. Its adjustments have been dictated by the cyclical conditions in the economy, and the frequency of adjustments has varied. In the 1990s, for example, the Fed cut the rate seven times—from 7 percent to 3 percent—during the recession from December 1990 to July 1992. Later, from May 1994 to February 1995, the rate was raised four times—from 3 percent to 5.25 percent—to counter possible economic overheating and inflation. In January 1996, the rate was lowered to 5 percent and it stayed there for the next thirty-two months, during which the U.S. economy experienced a solid and consistent growth with only minor inflation. From October to November 1998, the Fed cut the rate twice, first to 4.75 percent and then to 4.5 percent, anticipating the threat from the global financial crisis that had began in Asia in mid-1997 (data from "United States Monetary Policy," 1999).

Open-Market Operations The most important and flexible tool of monetary policy is open-market operations (i.e., trading U.S. government securities in the open market). In 1997, the Fed made $3.62 trillion of purchases and $3.58 trillion of sales of Treasury securities (mostly short-term Treasury bills). As of September 1998, the Fed held $458.13 billion of Treasury securities, roughly 8.25 percent of the total Federal debt outstanding (data from Fisher et al., 1998; *Treasury Bulletin*, 1998).

The FOMC directs open-market operations (and also advises about reserve requirements and discount-rate policies). The day-to-day operations are determined and executed by the Domestic Trading Desk (the Desk) at the FRB of New York. Since 1980, the FOMC has met regularly eight times a year in Washington, D.C. At each of these meetings, it votes on an intermeeting target federal funds rate, based on the current and prospective conditions of the economy. Until the next meeting, the Desk will manage reserve conditions through open-market operations to maintain the federal funds rate around the given target level. When buying securities from a bank, the Fed makes the payment by increasing the bank's reserves at the Fed. More reserves will then be available in the federal funds market and the federal funds rate falls. By selling securities to a bank, the Fed receives payment in reserves from the bank. Supply of reserves falls and the funds rate rises.

The Fed has two basic approaches in running open-market operations. When a shortage or surplus in reserves is likely to persist, the Fed may undertake outright purchases or sales, creating a long-term impact on the supply of reserves. However, many reserve movements are temporary. The Fed can then take a defensive position and engage in transactions that only impose temporary effects on the level of reserves. A repurchase agreement (a repo) allows the Fed to purchase securities with the agreement that the seller will buy back them within a short time period, sometimes overnight and mostly within seven days. The repo creates a temporary increase in reserves, which vanishes when the term expires. If the Fed wishes to drain reserves temporarily from the banking system, it can adopt a matched sale-purchase transaction (a reverse repo), under which the buyer agrees to sell the securities back to the Fed, usually in less than seven days.

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EDWARD WEI-TE HSIEH

MONEY

In the modern world we take money for granted. However, pause for a moment and imagine what life would be like without money. Suppose that you want to consume a particular good or service, such as a pair of shoes. If money didn't exist, you would need to barter with the cobbler for the pair of shoes that you want. *Barter* is the process of directly exchanging one good or service for another. In order to purchase the pair of shoes, you would need to have something to trade for the shoes. If you specialized in growing peaches, you would need to bring enough bushels of peaches to the cobbler's shop to purchase the pair of shoes. If the cobbler wanted your peaches and you wanted his shoes, then a *double coincidence of wants* would exist and trade could take place.

But what if the cobbler didn't want your peaches? In that case you would have to find out what he did want, for example, beef. Then you would have to trade your peaches for beef and the beef for shoes. But what if the person selling beef had no desire for peaches, but instead wants a computer? Then you would have to trade your peaches for a computer—and it would take a lot of peaches to buy a computer. Then you would have to trade your computer for beef and the beef for shoes. But what if . . . ? At some point it would become easier to make the shoes yourself or to just do without.

THE EVOLUTION OF MONEY

Money evolved as a way of avoiding the complexities and difficulties of barter. Money is any asset that is recognized by an economic community as having value. Historically, such assets have included, among other things, shells, stone disks (which can be somewhat difficult to carry around), gold, and bank notes.

The modern monetary system has its roots in the gold of medieval Europe. In the Middle Ages, gold and gold coins were the common currency. However, the wealthy found that carrying large quantities of gold around was difficult and made them the target of thieves. To avoid carrying gold coins, people began depositing them for safekeeping with goldsmiths, who often had heavily guarded vaults in which to store their valuable inventories of gold. The goldsmiths charged a fee for their services and issued receipts, or gold notes, in the amount of the deposits. Exchanging these receipts was much simpler and safer than carrying around gold coins. In addition, the depositors could retrieve their gold on demand.

Goldsmiths during this time became aware that few people actually wanted their gold coins back when the gold notes were so easy to use for exchange. They therefore began lending some of the gold on deposit to borrowers who paid a fee, called interest. These goldsmiths were the precursors to our modern fractional reserve banking system.

FUNCTIONS OF MONEY

Regardless of what asset is recognized by an economic community as money, in general it serves three functions:

- Money is a medium of exchange.
- Money is a measure of value.
- Money is a store of value.

Money as a medium of exchange. Used as a medium of exchange, money means that parties to a transaction no longer need to barter one good for another. Because money is accepted as a medium of exchange, you can sell your peaches for money and purchase the desired shoes with the proceeds of the sale. You no longer need to trade peaches—a lot of them—for a computer and then the computer for beef and then the beef for the shoes. As a medium of exchange, money tends to encourage specialization and division of labor, promoting economic efficiency.

Money is a measure of value. As a measure of value, money makes transactions significantly simpler. Instead of markets determining the price of peaches relative to computers and to beef and to shoes, as well as the price of computers relative to beef and to shoes, as well as the price of beef relative to shoes (i.e., a total of six prices for only four goods), the markets only need to determine the price of each of the four goods in terms of money. If we were to add a fifth good to our simple economy, then we would add four more prices to the number of good-for-good prices that the markets must determine. As the number of goods in our economy grew, the number of good-for-good prices would grow rapidly. In an economy with ten goods, there would be forty-five good-for-good prices but only ten money prices. In an economy with twenty goods there would be one hundred and ninety good-for-good prices but only twenty money prices. Imagine all of the good-for-good prices in a more realistic economy with thousands of goods and services available.

Using money as a measure of value reduces the number of prices determined in markets and vastly reduces the cost of collecting price information for market participants. Instead of focusing on such information, market participants can focus their effort on producing the good or service in which they specialize.

Money as a store of value. Money can also serve as a store of value, since it can quickly be exchanged for desired goods and services. Many assets can be used as a store of value, including stocks, bonds, and real estate. However, there are transaction costs associated with converting these assets into money in order to purchase a desired good or service. These transaction costs could include monetary fees as well as time delays involved in the liquidation process.

In contrast, money is a poor store of value during periods of inflation, while the value of real estate tends to appreciate during such periods. Thus, the benefits of holding money must by balanced against the risks of holding money.

SUMMARY

Money simplifies the exchange of goods and services and facilitates specialization and division of labor. It does this by serving as a medium of exchange, as a measure of value, and as a store of value.

DENISE WOODBURY

MONEY SUPPLY

Money is a collection of liquid assets that is generally accepted as a medium of exchange and for repayment of debt. In that role, it serves to economize on the use of scarce resources devoted to exchange, expands resources for production, facilitates trade, promotes specialization, and contributes to a society's welfare (Thornton, 2000). This theoretical definition serves two purposes: It encompasses new forms of money that may arise as a result of financial innovations related to technological change and institutional developments. It also distinguishes money from other assets by emphasizing its general acceptability as a medium of exchange. While all assets serve as a store of wealth, only a few are accepted as a means of payment for goods and services.

While this definition provides a clear picture of what money is, it does not specify exactly what assets should be included in its measurement. There are several liquid assets, such as coins, paper currency, checkable-type deposits, and traveler's checks, which clearly act as a medium of exchange and definitely belong in its measurement. However, several other assets may also serve as a medium of exchange but are not as liquid as currency and checkable-type deposits. For example, money market deposit accounts have check-writing features subject to certain restrictions, and savings accounts can be converted into a medium of exchange with a negligible cost. To what extent such assets should be included in money's measurement is not clear.

As an alternative, economists have proposed defining and measuring money using an empirical approach. This approach emphasizes the role of money as an intermediate target for monetary policy. As Mishkin (1997) points out, an effective intermediate target should have three features: It must be measurable, be controllable by the central bank, and have a predictable and stable relation with ultimate goals. Thus, an asset should be included in the measurement of money if it satisfies the above requirements. Evidence is mixed on which measures of money have a high predictive power. A measure that predicts well in one period might not perform well at other times, and a measure that predicts one goal might not be a good predictor of others.

The Federal Reserve System (the Fed) has incorporated both the theoretical approach and the empirical approach in constructing its measures of the money supply for the United States. The results are four measures of monetary aggregates—M1, M2, M3, and L—that are constructed using simple summations of some liquid assets. M1 is the narrowest measure, corresponding closely to the theoretical definition of money. It consists of six liquid assets—coins, dollar bills, traveler's checks, demand deposits, other checkable deposits, and NOW accounts held at commercial banks and at thrift institutions. These assets are clearly money because they are used directly as a medium of exchange. The M2 aggregate adds to M1 two groups of assets: (1) other assets that have check-writing features, such as money market deposit accounts and money market mutual funds shares, and (2) other extremely liquid assets, such as savings deposits, small-denomination time deposits, overnight repurchase agreements, and overnight Eurodollars. Similarly, the M3 aggregate adds to M2 somewhat less liquid assets, such as large-denomination time deposits, institutional money market funds, term repurchase agreements, and term Eurodollars. Finally, L is a broad measure of highly liquid assets. It consists of M3 plus several highly liquid securities, such as savings bonds, short-term Treasury securities, bankers' acceptances, and commercial paper.

A potential problem with the simple summation procedure, which underlies the construction of the monetary aggregates, is the assumption that all individual components are perfect substitutes. As Barnett, Fisher, and Serletis (1992) point out, this procedure is useful for constructing accounting measures of monetary wealth but does not provide reliable measures of monetary services. As a solution, Friedman and Schwartz (1970) have proposed weighting individual components by their degree of "moneyness," with the weights varying from zero to unity. Another more rigorous solution proposed by Barnett and colleagues (1992) is based on the application of aggregation and index number theory. Evidence along this line of research (Chrystal and McDonald, 1994) suggests that these measures of monetary aggregate are superior to the traditional measures in their predictive contents.

Knowledge of the money-supply process and information about its behavior are important for two interrelated reasons. First, changes in money growth may have significant effects on the economy's performance. Its short-run variations may affect employment, output, and other real economic variables, while its long-run trend determines the course of inflation and other nominal variables. Second, money supply serves as an important intermediate target for the conduct of monetary policy. As a result, changes in money growth may be instrumental in attaining economic growth, price stability, and other economic goals.

Three groups of economic agents play an important role in the process of money-supply determination. The first and most important is the Fed, which sets the supply of the monetary base and imposes certain constraints on the set of admissible assets held by banks and on the banks' supply of their liabilities. Next is the public, which determines the optimum amounts of currency holdings, the supply of financial claims to banks, and the allocation of the claims between transaction and nontransaction accounts. The last is banks, which absorb the financial claims offered by the public, set the supply conditions for their liabilities, and allocate their assets between earning assets and reserves subject to the constraints imposed by the Fed. The interactions among the three groups are shaped by market conditions and jointly determine the stock of money, bank credit, and interest rates (Brunner, 1989).

The level of money stock is the product of two components: the monetary multiplier and the monetary base. The monetary base is the quantity of government-produced money. It consists of currency held by the public and total reserves held by banks. Currency is the total of coins and dollar bills of all denominations. Reserves are the sum of banks' vault cash and their reserve deposits at the Fed. They are the non-interest-bearing components of bank assets, consisting of required reserves on deposit liabilities established by the Fed and additional reserves that banks deem necessary for liquidity purposes.

The Fed exercises its tight control over the monetary base through open-market operations and extension of discount loans. Open-market operations, which are the Fed's authority to trade in government securities, are the most important instrument of monetary policy and the primary source of changes in the monetary base. An open-market purchase expands the monetary base, whereas an open-market sale works in the opposite direction. The Fed's control of the discount loans results from its authority to set the discount rate and limit the level of discount loans through its administration of the discount window.

The money multiplier reflects the joint behavior of the public, banks, and the Fed. The public's decisions about their desired holdings of currency and nontransaction deposits relative to transaction deposits are one set of factors that influence the multiplier. Banks liquidity concerns, and thus their desire to hold excess reserves relative to their deposit liabilities, are another set of factors. The Fed's authority to change the required reserve ratios on bank deposits constitutes the third set of factors. Given the rather infrequent changes in the reserve-requirement ratios, the multiplier primarily reflects the behavior of the public and private banks as well as market and institutional conditions.

For example, a decision by the public to increase its currency holdings relative to transaction deposits results in a switch from a component of money supply that undergoes multiple expansion to one that does not. Thus, the size of the multiplier declines. Similarly, a decision by banks to increase their holdings of excess reserves relative to transaction deposits reduces bank loans, causing a decline in deposits, the multiplier, and the money supply. Finally, a decision by the Fed to raise the reserve-requirement ratio on bank deposits results in a reserve deficiency in the banking system, forcing banks to reduce their loans, deposit liabilities, the money supply, and the multiplier.

Over the 1980-1999 period, the M1 and M2 aggregates grew at average annual rates of 5.5 and 5.7 percent, respectively. However, the growth rates were not stable. They varied between the low of −3.5 percent and the high of 16.9 percent for M1, and between the low of 0.4 percent and the high of 11.4 percent for M2. What factors contributed to the long-run growth and short-run fluctuations in the money supply? During the same time period, the monetary base grew at an average annual rate of 7.5 percent, due primarily to open market operations. Thus changes in the monetary base and open-market operations are the primary source of long-run movements in the money supply. For shorter time periods, however, changes in the money multiplier may also have contributed to the fluctuations in the money supply.

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HASSAN MOHAMMADI

MONOPOLY

A monopoly is a market condition in which a single seller controls the entire output of a particular good or service. A firm is a monopoly if it is the sole seller of its product and if its product has no close substitutes. Close substitutes are those goods that could closely take the place of a particular good; for example, a Pepsi soft drink would be a close substitute for a Coke drink, but a juice drink would not. The fundamental cause of monopoly is barriers to entry; these are technological or economic conditions of a market that raise the cost for firms wanting to enter the market above the cost for firms already in the market or otherwise make new entry difficult. If the barriers to entry prevent others firms from entering the market, there is no competition and the monopoly remains the only seller in its market. The seller is then able to set the price and output of a particular good or service.

A monopoly, in its pure form, is actually quite rare. The majority of large firms operate in a market structure of oligopoly, which means that a few sellers divide the bulk of the market. People often have the impression that the goals of a monopolist are somehow evil and grasping while those of a competitor are wholesome and altruistic. The truth is that the same motives drive the monopolistic firm and the competitive firm: Both strive to maximize profits. A basic proposition in economics is that monopoly control over a good will result in too little of the good being produced at too high a price. Economists have often advocated antitrust policy, public enterprise, or regulation to control the abuse of monopoly power.

BARRIERS TO ENTRY

For a monopoly to persist in the long run, barriers to entry must exist. Although such barriers can take various forms, they have three main sources:

1. A key resource is owned by a single firm.
2. The government gives a single firm the exclusive right to produce a specific good.
3. The cost of production makes a single producer more efficient than a large number of producers.

Monopoly Resources. The first and simplest way for a monopoly to come about is for a single firm to own a key resource. For example, if a small town had many working wells owned by different firms, no firm would have a monopoly on water. If, however, there were only one working well in town, the firm owning that well would be considered a monopoly. Although exclusive ownership of a key resource is one way for a monopoly to arise, monopolies rarely come about for this reason.

Government-Created Monopolies. In many cases, monopolies have arisen because the government has given a firm the exclusive right to sell a particular good or service. For example, when a pharmaceutical company discovers a new drug, it can apply to the government for a patent. If the patent is granted, the firm has the exclusive right to produce and sell the drug for a set number of years. The effects of such a government created monopoly are easy to see. In the case of the pharmaceutical company, the firm is able to charge higher prices for its patented product and, in turn, earn higher profits. With these higher profits, the firm is able to complete further research in its quest for new and better drugs. The government can create a monopoly when, in doing so, it is in the interest of the public good.

Natural Monopolies. A natural monopoly occurs when a single firm can supply a good or service to an entire market at a lesser cost than could two or more firms. An example of a natural monopoly is the distribution of water in a community. To provide water to residents, a firm must first put into place a network of pipes throughout the community. If two or more firms were to compete in providing the water distribution, each would have to pay the fixed cost of building a network. In this case, the average total cost of water is lowest when one firm serves the entire market.

MONOPOLY VERSUS COMPETITION

The major difference between a monopoly and a competitive firm is the monopoly's ability to influence the price of its output. Because a competitive firm is small relative to the market, the price of its product is determined by market conditions. On the other hand, because a monopoly is the sole producer in its market, it can often alter the price of its product by adjusting the quantity it supplies to the market.

An example of a company that garnered monopoly power is the case of Microsoft. In 2000, in an antitrust lawsuit brought against Microsoft, a U.S. federal court judge ruled against the company. Microsoft, a computer company, had established first MS-DOS and later Windows as the dominating operating system for personal computers. Once it had achieved a position of strength in the market, would-be competitors faced insurmountable hurdles. Software developers face large costs for every additional operating system to which they adapt their applications. Because Microsoft had the dominant operating system, any rival personal computer operating system would have only a handful of applications, compared to tens of thousands of applications for Microsoft's Windows system. This applications barrier to entry gave Microsoft enduring monopoly power.

The judge's ruling in the case made it clear that, besides being illegal, Microsoft's monopoly was not in the public interest and legal measures would be put into place in order to break the monopoly that Microsoft had created.

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MICHAEL W. SPAHR

MORALE

(SEE: *Motivation*)

MORTGAGES

(SEE: *Personal Financial Planning*)

MOTIVATION

A simple definition of *motivation* is the ability to change behavior. It is a drive that compels one to act because human behavior is directed toward some goal. Motivation is intrinsic (internal); it comes from within based on personal interests, desires, and need for fulfillment. However, extrinsic (external) factors such as rewards, praise, and promotions also influence motivation. As defined by Daft (1997), motivation refers to ‘‘the forces either within or external to a person that arouse enthusiasm and persistence to pursue a certain course of action’’ (p. 526).

People who are committed to achieving organizational objectives generally outperform those who are not committed. Those who are intrinsically rewarded by accomplishments in the workplace are satisfied with their jobs and are individuals with high self-esteem. Therefore, an important part of management is to help make work more satisfying and rewarding for employees and to keep employee motivation consistent with organizational objectives. With the diversity of contemporary workplaces, this is a complex task. Many factors, including the influences of different cultures, affect what people value and what is rewarding to them.

From a manager’s perspective, it is important to understand what prompts people, what influences them, and why they persist in particular actions. Quick (1985) presented these four underlying principles that are important to understanding motivation:

1. People have reasons for everything they do.
2. Whatever people choose as a goal is something they believe is good for them.
3. The goal people choose must be seen as attainable.
4. The conditions under which the work is done can affect its value to the employee and his or her perceptions of attainability or success.

When management was first studied in a scientific way at the turn of the twentieth century, Frederick Winslow Taylor worked to improve productivity in labor situations so important in those days of the developing Industrial Revolution. Taylor developed efficiency measures and incentive systems. When workers were paid more for meeting a standard higher than their normal production, productivity increased dramatically. Therefore, workers seemed to be economically motivated. At this time in history, social issues involved in human behavior were not yet considered. A more humanistic approach soon developed that has been influencing management ever since.

During the late 1920s and early 1930s, Elton Mayo and other researchers from Harvard University conducted studies at a Western Electric plant in Hawthorne, Illinois, to measure productivity. They studied the effects of fatigue, layout, heating, and lighting on productivity. As might be expected when studying lighting, employee productivity levels increased as the illumination level was increased; however, the same effect was noted when the illumination level was decreased. The researchers concluded that the attention paid to the employees was more of a contributing factor to their productivity level than the environmental conditions. The fact that paying attention to workers could improve their behavior was called the *Hawthorne effect.* As a result of this research, it was evident that employees should be treated in a humane way. These findings started the human relations movement—a change in management thinking and practice that viewed increased worker productivity as grounded in satisfaction of employees’ basic needs. [Many years later, it was discovered that the workers in the Hawthorne experimental group had received an increase in income; therefore, money was probably a motivating factor, although it was not recognized as such at the time. (Daft, 1997)].

Motivation theories have continued to evolve and have their roots in behavioral psychology. They provide a way to examine and understand human behavior in a variety of situations. A simple model of motivation is shown in Figure 1.

Ongoing changes in the workplace require that managers give continuous attention to those factors that influence worker behavior and align them with organizational goals. No one theory is appropriate for all people and for all situations. Each individual has his or her own values and

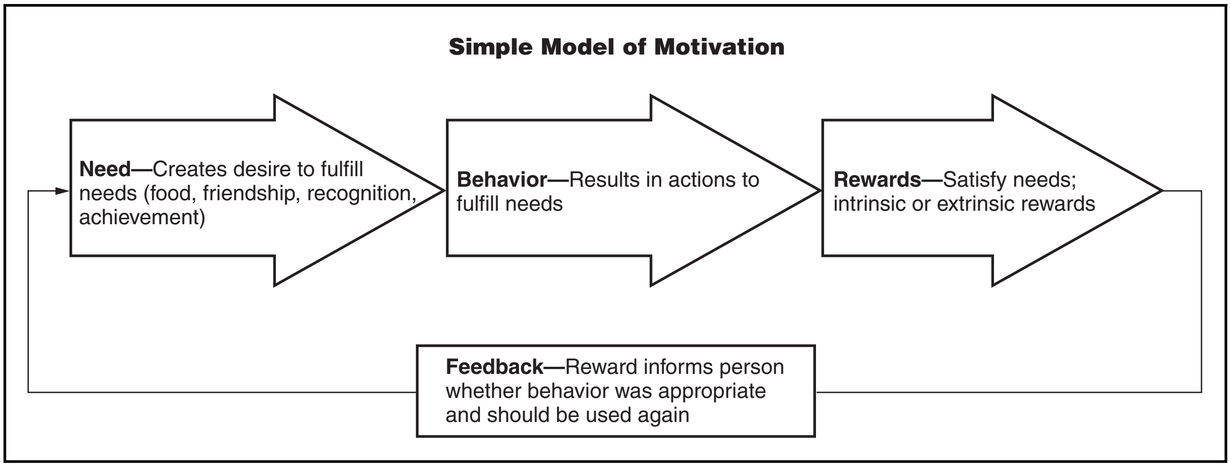
Simple Model of Motivation
Need—Creates desire to fulfill needs (food, friendship, recognition, achievement)
Behavior—Results in actions to fulfill needs
Rewards—Satisfy needs; intrinsic or extrinsic rewards
Feedback—Reward informs person whether behavior was appropriate and should be used again

Figure 1

differing abilities. In business settings, managers apply motivation theories to influence employees, improve morale, and implement incentive and compensation plans.

The following discussion of motivation theories is grouped according to need, process, and reinforcement theories.

NEED THEORIES

Need theories are based on some of the earliest research in the field of human relations. The premise behind need theories is that if managers can understand the needs that motivate people, then reward systems can be implemented that fulfill those needs and reinforce the appropriate behavior.

Hierarchy of Needs Abraham Maslow, a professor at Brandeis University and a practicing psychologist, developed the *hierarchy of needs* theory. He identified a set of needs that he prioritized into a hierarchy based on two conclusions (Daft, 1997; McCoy, 1992; Quick, 1985):

1. Human needs are either of an attraction/desire nature or of an avoidance nature.
2. Because humans are "wanting" beings, when one desire is satisfied, another desire will take its place.

The five levels of needs are the following (see Table 1):

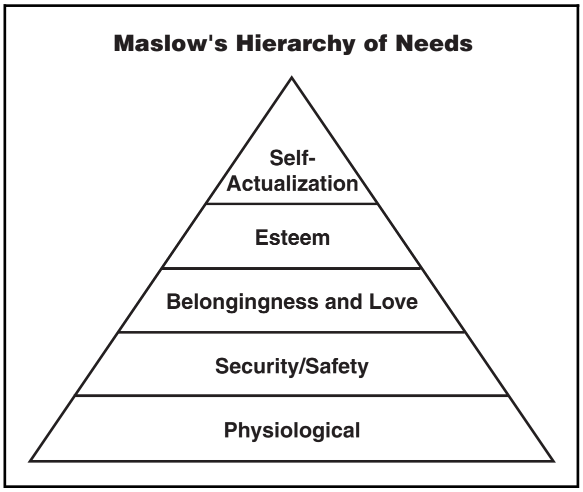
Maslow's Hierarchy of Needs
Self-Actualization
Esteem
Belongingness and Love
Security/Safety
Physiological

Table 1

- *Physiological*: These are basic physical comfort or bodily needs: food, sex, drink, and sleep. In the workplace, these needs translate into a safe, ergonomically designed work environment with an appropriate base salary compensation.
- *Security/safety*: People want to feel safe, secure, and free from fear. They need stability, structure, and order. In the workplace, job security and fringe benefits, along with an environment free of violence, fills these needs.

- *Belongingness and love*: This is a need for friends, family, and intimacy—for social acceptance and affection from one's peers. In the workplace, this need is satisfied by participation in work groups with good relationships among co-workers and between workers and managers.
- *Esteem*: People want the esteem of others and they want to be regarded as useful, competent, and important. People also desire self-esteem and need a good self image. In the workplace, increased responsibility, high status, and recognition for contributions satisfy these needs.
- *Self-actualization*: This highest motivation level involves people striving to actualize their full potential, to become more of what they are capable of being. They seek to attain self-fulfillment. In the workplace, people satisfy this need by being creative, receiving training, or accepting challenging assignments.

Focusing on the needs of retraining for growth and challenge as well as rewards and recognition is important to the quality of work life. Managers can affect the physical, social, and psychological environment in the workplace, and they have a responsibility to help employees fulfill their needs.

ERG Theory In his work, Clayton Alderfer expanded on Maslow's hierarchical theory. He proposed three need categories and suggested that movement between the need levels is not necessarily straightforward. Failure to meet a higher-order need could cause an individual to regress to a lower-order need. These *ERG theory* categories are:

- *Existence needs*: Needs for physical well-being
- *Relatedness needs*: Needs for satisfactory relationships with others
- *Growth needs*: The development of human potential and the desire for personal growth and increased competence (Daft, 1997)

Motivation-Hygiene Theory Frederick Herzberg, a professor of psychology at Case Western Reserve University, studied the attitudes of workers toward their jobs. Herzberg proposed that an individual will be moved to action based on the desire to avoid deprivation. However, this motivation does not provide positive satisfaction because it does not provide a sense of growth. Herzberg's research found that positive job attitudes were associated with a feeling of psychological growth. He thought that people work for two reasons: for financial reasons to avoid physical deprivation, and for achievement because of the happiness and meaning it provides. Herzberg also identified the concept of job enrichment, whereby the responsibilities of a job are changed to provide greater growth and challenge (McCoy, 1992; Quick, 1985 p. 10-12)] 1985. His *motivation-hygiene* theory includes two types of factors:

1. *Motivation* is based on the positive satisfaction that psychological growth provides. The presence of factors such as responsibility, achievement, recognition, and possibility for growth or advancement will motivate and satisfy people. The absence of these factors will not necessarily demotivate or cause dissatisfaction.
2. *Hygiene* is based on an individual's desire to avoid deprivation and the resulting physical and emotional discomfort. Hygiene factors include willingness to supervise; positive working conditions; interpersonal relations with peers, subordinates, and superiors; status; job security; and salary. These factors do not motivate, nor will their presence cause job satisfaction. Their absense, however, will cause dissatisfaction.

Although salary is considered a hygiene factor, it plays an indirect part in motivation as a measure of growth and advancement or as a symbol of recognition of achievement.

Theory X and Theory Y Douglas McGregor, a professor at the Massachusetts Institute of Technology and a social psychologist, was greatly influenced by the work of Maslow. McGregor recognized that people have needs and that those needs are satisfied at work. He described two sets of assumptions about people that he labeled *Theory X* and *Theory Y* (Bruce and Pepitone, 1999; Quick, 1985):

- The assumptions of *Theory X* are that most people will avoid work because they don't like it and must be threatened or persuaded to put forth adequate effort. People have little ambition and don't want responsibility. They want to be directed and are most interested in job security.
- The assumptions of *Theory Y* are that work is very natural to people and that most people are self-directed to achieve objectives to which they are committed. People are ambitious and creative. They desire responsibility and derive a sense of satisfaction from the work itself.

These assumptions were, at one time, applied to management styles, with autocratic managers labeled as adhering to Theory X and democratic managers to Theory Y. Unfortunately, this fostered a tendency to see people as members of a group rather than as individuals. The important contribution of McGregor's theory was to recognize these two perspectives and to recognize that people can achieve personal objectives through helping organizations achieve their objectives. Their work can be a motivator.

Acquired Needs Theory David McClelland developed the *acquired needs theory* because he felt that different needs are acquired throughout an individual's lifetime. He proposed three needs:

1. *Need for achievement*: The desire to accomplish something difficult, attain a high standard of success, master complex tasks, and surpass others
2. *Need for affiliation*: The desire to form close personal relationships, avoid conflict, and establish warm friendships
3. *Need for power*: The desire to influence or control others, be responsible for others, and have authority over others.

McClelland found through his research that early life experiences determine whether people acquire these needs. The need to achieve as an adult is influenced by the reinforcement of behavior received as a child when a child is encouraged to do things independently. If a child is reinforced for warm, human relationships, then the need for affiliation as an adult develops. If a child gains satisfaction from controlling others, then the need for power will be evident as an adult (Daft, 1997).

PROCESS THEORIES

Process theories help to explain how individuals select particular behaviors and how individuals determine if these behaviors meet their needs. Because these theories involve rational selection, concepts of cognition are employed. Cognition, according to Petri (1996), "is generally used to describe those intellectual or perceptual processes occurring within us when we analyze and interpret both the world around us and our own thoughts and actions (p. 236).

Expectancy Theory Victor Vroom developed the *expectancy theory*, which suggests that individuals' expectations about their ability to accomplish something will affect their success in accomplishing it. Therefore, this theory is based on cognition—on thought processes that individuals use.

The expectancy theory is based on an individual's effort and performance, as well as the desirability of outcomes associated with high performance. The value of or preference for a particular outcome is called valence. To determine valence, people will ask themselves whether or not they can accomplish a goal, how important is the goal to them (in the immediate as well as the long term), and what course of action will provide the greatest reward. An individual's expectation of actually achieving the outcome is crucial to success, and many factors influence this (Daft, 1997; Quick, 1985).

The expectancy theory can be applied through incentive systems that identify desired outcomes and give all workers the same opportunities to achieve rewards, such as stock ownership or other recognition for achievement.

Equity Theory The *equity theory* focuses on individuals' perceptions of how fairly they are treated in comparison to others. It was developed by J. Stacy Adams, who found that equity exists when people consider their compensation equal to the compensation of others who perform similar work. People judge equity by comparing inputs (such as education, experience, effort, and ability) to outputs (such as pay, recognition, benefits, and promotion).

When the ratio is out of balance, inequity occurs. And inequitable pay can create an impossible situation when implementing salary and incentive systems. According to Daft (1997), Individuals will work to reduce perceived inequity by doing the following:

- *Change inputs*: Examples include increasing or reducing effort.
- *Change outcomes*: Examples include requesting a salary increase or improved working conditions.
- *Distort perceptions*: This occurs when individuals cannot change their inputs or outcomes; one example is artificially increasing the importance of awards.
- *Leave the job*: Individuals might do this rather than experience what they perceive to be continued inequity.

When administering compensation and incentive programs, managers must be careful to assure that the rewards are equitable; if programs are not perceived as equitable, then they will not contribute to employee motivation.

REINFORCEMENT THEORIES

Theories of reinforcement are based not on need but on the relationship between behavior and its consequences. In the workplace, these theories can be applied to change or modify on-the-job behavior through rewards and punishments.

B. F. Skinner, a professor at Harvard, was a highly controversial behavioral psychologist known for his work in operant conditioning and behavior modification. His *reinforcement theories* take into consideration both motivation and the environment, focusing on stimulus and response relationships. Through his research, Skinner noted that a stimulus will initiate behavior; thus, the stimulus is an antecedent to behavior. The behavior will generate a result; therefore, results are consequences of behavior.

According to McCoy (1992), "The quality of the results will be directly related to the quality and timeliness of the antecedent. The more specific the antecedent is and the closer in time it is to the behavior, the greater will be its effect on the behavior. . . . The consequences provide feedback to the individual" (p. 34).

If the results are considered positive, then the behavior is positively reinforced. When the behavior is positively reinforced, the individual is more likely to repeat the behavior. People tend to have an intrinsic (internal) need for positive reinforcement. And when a behavior is ignored, the behavior tends to go away or become extinct. The four types of reinforcement are the following (Daft, 1997):

- *Positive reinforcement*: The application of a pleasant and rewarding consequence following a desired behavior, such as giving praise.
- *Negative reinforcement*: The removal of an unpleasant consequence following a desired behavior, such as a manager no longer reminding a worker about a weekly deadline when the worker meets the deadline. This reinforcement is also called avoidance.
- *Punishment*: The application of an unpleasant outcome when an undesirable behavior occurs to reduce the likelihood of that behavior happening again. This form of reinforcement does not indicate a correct behavior, so its use in business is not usually appropriate.
- *Extinction*: The withdrawal of a positive reward. If the behavior is no longer positively reinforced, then it is less likely to occur in the future and it will gradually disappear.

Continuous reinforcement can be effective in the early stages of behavior modification, but partial reinforcement is more commonly used. Reinforcement is most powerful when it is administered immediately.

The appropriateness of a reward depends on the situation. But for managers to apply rewards appropriate for work performance, it is necessary to understand what constitutes a reward. And no single reward will be perceived as positive by all employees. Rewards, however, are important in behavior-based incentive plans because they reward employee behavior that is desirable for the company. According to McCoy (1992), both incentives and recognition provide a reward; however, incentives drive performance while recognition is an after-the-fact display of appreciation for a contribution.

Financial rewards are certainly important in compensation programs. Social recognition provides employees with a sense of self-worth by acknowledging the contributions they have made. This recognition could be given in the form of a ceremony that helps to validate and is an important compensation—and one that probably costs a company very little in relationship to the benefit to employees (McCoy, 1992).

SUMMARY

The application of motivation theories can help managers to create work situations and employee recognition systems that help workers fulfill their needs. As Maslow wrote, "man has a higher nature . . . and . . . this higher nature includes the needs for meaningful work, for responsibility, for creativeness, for being fair and just, for doing what is worthwhile and for preferring to do it well" (pp. 244-245).

Some aspects of all jobs may be routine or mundane, but other aspects can be developed to promote job satisfaction and increased productivity. The sharing of responsibility can provide opportunities for growth, renewal, and achievement. This empowerment of workers can heighten employee motivation and improve morale. Both long-term and short-term incentive programs are needed for the employee commitment and effectiveness necessary to achieve organizational objectives. And in all instances, workers must be treated fairly and equitably.

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PAT R. GRAVES

MOTIVATION-HYGIENE THEORY

(SEE: *Motivation*)

MULTIMEDIA SYSTEMS

A computer system can be defined as equipment (hardware), processes (software), and people organized to perform a function (Shelly, et al., 1998). Using this definition, a business multimedia system can be defined as hardware, software, and people organized to perform the functions of communication. Businesses use multimedia primarily for communication through presentations and for storage and retrieval of original documents and media files. For years, businesses have used multimedia systems that create, edit, produce, and distribute documents, movies, sound, and videotapes. Multimedia systems are also used to prepare presentations for marketing, employee training, public relations, and any other area in which mass communication is needed. Many companies commit resources (specialized personnel, photography and television studios, and other equipment) to mass-produce these forms of communication.

Traditional multimedia systems use specialized equipment that records sounds and graphics in an analog format such as cassette tapes, records, or videocassette tapes. Analog equipment relies on waves to record information such as sounds or video. These analog systems are similar to a traditional temperature gauge or a speedometer in an automobile, which use indicators that point to temperatures or speeds. Specialized analog equipment may include sound tape recorders, video cameras, videotape editing equipment, playback equipment, and projection systems.

COMPUTER-BASED MULTIMEDIA

Technology has changed the hardware used to develop multimedia from the traditional analog equipment to computer-based or digital multimedia systems. Digital systems sample analog waves and convert them into a series of numbers, 0s and 1s (digital), for processing by a computer. Microcomputer-based multimedia systems (Sharda, 1999) provide hardware and software that allow a person to use a computer to combine text, still graphics or pictures, sound, video (motion graphics), and links to Web sites and other software into a presentation. Multimedia presentations should allow users to interact with, navigate, and respond to the presentation (Hofstetter, 1997).

Multimedia applications in business are used in a variety of ways. Companies use multimedia computers in the following applications:

- Accounting and records management
- Compact disks (CDs) for product catalogues and individualized presentations
- Employee interactive training materials
- Internet web pages
- New product development using computer assisted design (CAD) software
- Sales and other types of group presentations
- Self-running presentations for trade show booth or kiosk applications

"Multimedia hierarchy" is a term used to reflect how much computing power is needed to process information. Multimedia systems have different levels of components that handle tasks ranging in difficulty from simple text processing to complex digital motion video. As more powerful computers are developed, more applications can be used by businesses.

TEXT PROCESSING

Text is the first and simplest level in the multimedia hierarchy. Traditionally, text has been keyboarded into the computer. Optical character recognition (OCR) scanners allow text to be scanned into the computer from printed documents using page scanners, or from universal product code (UPC) bar codes on products using wand, or hand-held, scanners. Magnetic ink character recognition (MICR) scanners have been used for processing checks since the 1950s, using the magnetic ink at the bottom of checks. Text may also be put into the computer using sound equipment.

SOUND PROCESSING

Sound in business multimedia applications enables a user to describe products, give instructions, enhance a presentation, or provide cues for some action by the viewer. Hardware for capturing and processing sounds includes a card attached to the main "motherboard" of the computer system. A sound card contains connections for input and output devices. Usually software is included with the card that allows the user to control volume and devices and to create and edit sound files.

Sound cards capture analog audio signals from microphones, music CDs, musical instrument digital interface (MIDI) devices—electronic keyboards similar to piano keyboards—and other sound sources through a line-in jack on the card. Computer users can plug in record turntables, cassette tape players, or any other device from an audio-out jack on those devices and record sounds. Sound cards also have output jacks for speakers, or the audio-out can be plugged into other sound-recording devices. The card contains two computer chips called the analog-to-digital (AD) and digital-to-analog (DA) chips. These chips convert sound waves to digits and digits to sound waves.

Sound-application software is used to mix different sound sources. Users can add effects, such as fade in and fade out or an echo effect, to the digital sound track. Several competing stan-

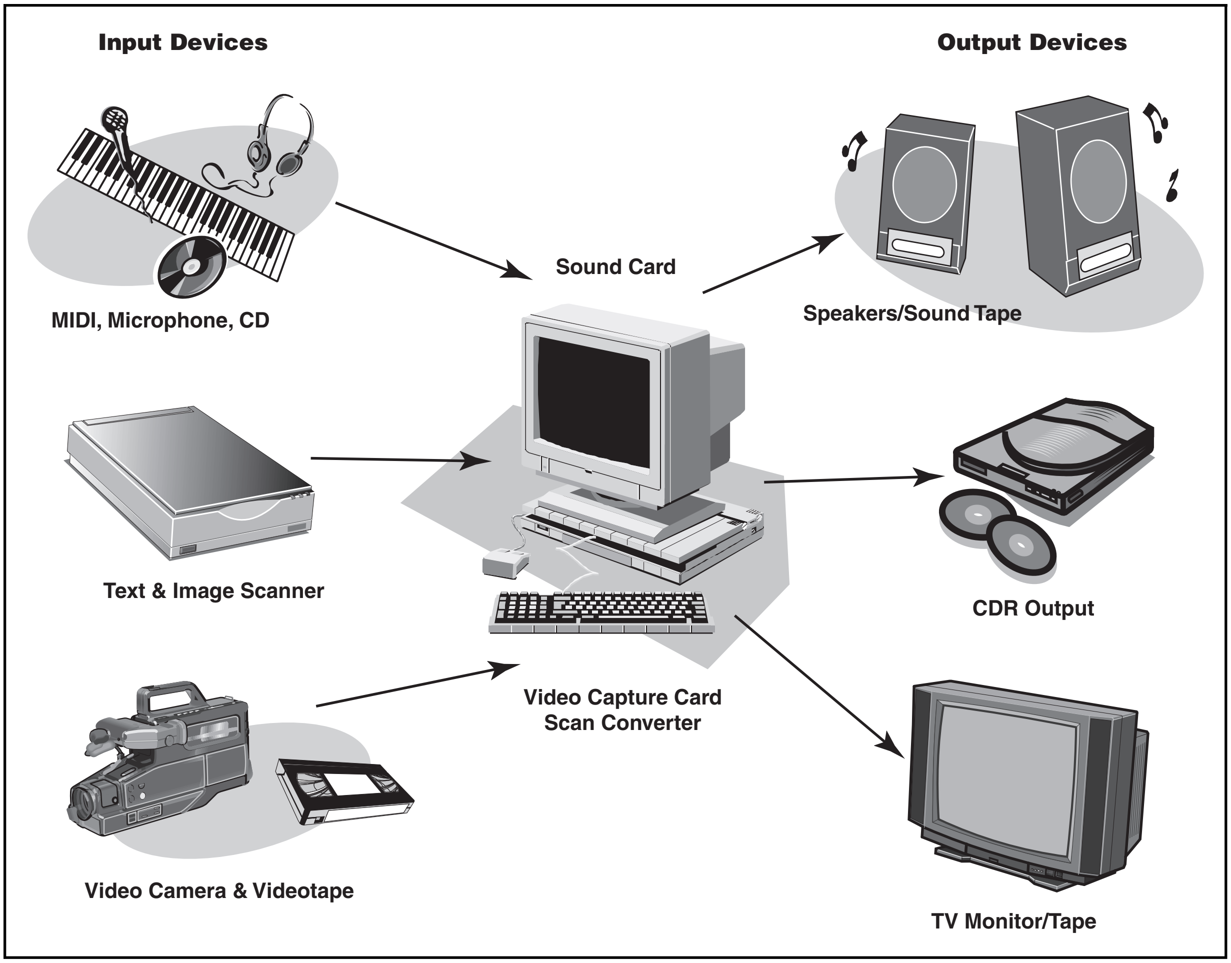
Input Devices
Output Devices
MIDI, Microphone, CD
Sound Card
Speakers/Sound Tape
Text & Image Scanner
CDR Output
Video Capture Card
Scan Converter
Video Camera & Videotape
TV Monitor/Tape

Figure 1

dards exist for computer sound files. These standards depend on the manufacturer of the hardware or developers of the software. The more users of a given standard there are, the more portable the file is to other users and to Internet applications. MIDI files and wave files found on the Internet are common examples.

Voice-pattern-recognition software allows the user to speak through a microphone directly to a word-processing software package. The analog voice of the user is converted to a digital sound file through a sound card on the computer, and the user's voice pattern is converted into text. Whether the text is entered by keyboard, scanner, or voice-recognition hardware and software, the text can be used for presentations, Web pages, or other media forms to talk with the audience.

STILL-IMAGE PROCESSING

Various specialized forms of multimedia include image-processing systems designed specifically for handling business forms, images, graphics, or pictures. An example may be found in banking systems that use computer output microform (COM) devices to store images of checks and place several images on the customer's bank statement rather than returning the canceled checks. Company reports are often recorded as very small images on microfilm (rolls) or microfiche (cards) rather than paper to save storage space. Accountants and records managers may use multimedia for saving and archiving images in less physical space. Insurance companies may use imaging systems to scan claim forms, scan and store pictures of damages to customers' property, and provide immediate access to this information from a computer during the processing of a claim.

Draw-and-paint computer programs are used to generate graphics and tables for multimedia applications. These programs allow users to draw objects, fill them with colors, add text, and create special effects. The user-made images are saved in files and then incorporated into a multimedia presentation.

Besides text scanning, scanners can also be used in image processing to capture pictures for printed publications, Internet Web sites, and electronic presentations. A scanner can digitize a picture by converting dark and light areas of a graphic to dots, or pixels. A file is then saved in computer format for future use. Photographic-enhancement software lets users add special effects and edit photos or images. Digital cameras are now available that store pictures in digital format on a disk instead of photographic film. Since these pictures are already in digital format, no scanning is needed and the pictures are computer-ready.

Single images can be ''captured'' with a video capture board from videotape, from a video camera, or directly from broadcast television. Videotapes record moving pictures by using thirty still pictures, or frames, for every second of motion. Broadcasts and videotapes use a standard developed in the 1950s in the United States called the NTSC (National Television Standards Committee) broadcast standard. NTSC specifications are thirty frames per second, with each frame a matrix of dots, or pixels, that is 640 pixels wide by 480 pixels high. This standard is different in other parts of the world. Other countries use twenty-five frames per second and have different image sizes. High-definition television, which is currently being introduced, will change the standards so that pictures will have better quality by increasing the number of pixels, which increases the resolution. Inexpensive video capture cards allow the user to capture one of these frames and use it as a still picture in multimedia applications.

FULL-MOTION VIDEO PROCESSING

More expensive boards allow for ''full-motion'' capture by saving all the frames and sound. Because these files can get very large (640 × 480 pixels per frame times 30 frames per second), several methods have been developed for compressing motion video files. Video is compressed to save it as a smaller file and is decompressed during playback. Several CODECS (COmpress/DECompress) systems use hardware, including computer chips, such as Intel's Indeo, and software, such as MPEG (motion picture experts group). Since video files are large, they are usually brief recordings or clips from video. The clips are used in business presentations, on Web pages, as product descriptions, or as other media bytes to emphasize an important point in a brief amount of time.

SUMMARY

When connecting multimedia equipment to a computer system to develop multimedia applications, each device has computer software that allows the user to manipulate the media files. Beyond the software that manipulates individual elements of a media project, programs are also available that bring the various elements together into a presentation. These programs include presentation graphics programs and multimedia authoring programs such as Macromedia Director, Microsoft PowerPoint, Corel Presentations, and Astound.

Multimedia involves several ''hierarchies'' or levels of media types. The more difficult items for computers to handle include advanced sound applications and the processing of full-motion video. As technology increases, most computers will become multimedia machines and companies will use their power in every functional area of business.

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GEORGE A. MUNDRAKE

MUTUAL FUNDS

Mutual funds belong to a group of financial intermediaries known as investment companies, which are in the business of collecting funds from investors and pooling them for the purpose of building a portfolio of securities according to stated objectives. They are also known as open-end investment companies. Other members of the group are closed-end investment companies (also known as closed-end funds) and unit investment trusts. In the United States, investment companies are regulated by the Securities and Exchange Commission under the Investment Company Act of 1940.

Mutual funds are generally organized as corporations or trusts, and, as such, they have a board of directors or trustees elected by the shareholders. Almost all aspects of their operations are externally managed. They engage a management company to manage the investment for a fee, generally based on a percentage of the fund's average net assets during the year. The management company may be an affiliated organization or an independent contractor. They sell their shares to investors either directly or through other firms such as broker-dealers, financial planners, employees of insurance companies, and banks. Even the day-to-day administration of a fund is carried out by an outsider, which may be the management company or an unaffiliated third party.

The management company is responsible for selecting an investment portfolio that is consistent with the objectives of the fund as stated in its prospectus and managing the portfolio in the best interest of the shareholders. The directors of the fund are responsibile for overall governance of the fund; they are expected to establish procedures and review the performance of the management company and others who perform services for the fund.

Mutual funds are known as open-end investment companies because they are required to issue shares and redeem (buy back) outstanding shares upon demand. Closed-end funds, on the other other hand, issue a certain number of shares but do not stand ready to buy back their own shares from investors. Their shares are traded on an exchange or in the over-the-counter market. They cannot increase or decrease their outstanding shares easily. A feature common of both mutual funds and closed-end funds is that they are managed investment companies, because they can change the composition of their portfolios by adding and deleting securities and altering the amount invested in each security. Unit investment trusts are not managed investment companies like the mutual funds because their portfolio consists of a fixed set of securities for life. They stand ready, however, to buy back their shares.

TYPES OF MUTUAL FUNDS

There are four basic types of mutual funds: money market, stock (also called equity), bond, and hybrid. This classification is based on the type and the maturity of the securities selected for investment. Money market funds invest in securities that mature in one year or less, such as Treasury bills, commercial paper, and certificates of deposits. They are often referred to as short-term funds. Stock, bond, and hybrid funds invest in long-term securities; as such, they are known as long-term funds. Hybrid funds invest in a combination of stocks, bonds, and other securities. According to the Investment Company Institute (ICI), the national association of the U.S. investment company industry, there were 7,791 (6,746 long-term and 1,045 short-term) mutual funds in the United States and 35,979 outside the country at the end of 1999. The total investment by U.S mutual funds amounted to $6.8 trillion (stock = $4.04 trillion, bond = $808 billion, hybrid = $383 billion, money market = $1.61 trillion) and by non-U.S. funds to $3.5 trillion at the end of 1999. The total assets of U.S. mutual funds are less than the total assets of U.S. depository institutions, which stood at $7.5 trillion at the end of 1999.

Mutual funds also differ in terms of their investment objectives, as outlined in their prospectuses. The ICI classifies mutual funds into thirty-three investment objective categories. The main investment objectives within the stock funds include capital appreciation, total return, and world equity. Within each of these objectives, there are subcategories. There are two groups of bond funds: taxable bond funds and tax-free bond funds. Main categories in taxable bond funds are corporate bond funds, high-yield funds, world bond funds, government bond funds, and strategic income funds. The main tax-free bond fund categories are state municipal bond funds and national municipal bond funds. Among money market funds, there are also taxable money market funds and tax-exempt money market funds. As in the case of stock funds, many subcategories exist within each main category of bond and money market funds. In addition to these, there are specialty or sector funds, which invest in a particular segment of the securities market. Examples include biotechnology funds, small-company growth funds, technology funds, index funds, and social criteria funds.

MUTUAL FUND SHARE PRICING

By law, mutual funds are required to determine the price of their shares each business day. They release their prices the same day for publication in the next day's newspapers. Daily prices of mutual fund shares can also be obtained directly from the fund's offices or Web sites of commercial venders of financial information.

The share price represents the net asset value (NAV) per share, which is the current market value of a fund's assets net of its liabilities. The liabilities include securities purchased, but not yet paid for, accrued fees, dividends payable, and other accrued expenses. The NAV per share is obtained by dividing the NAV by the number of shares of the fund outstanding at the end of the day. A buyer of mutual fund shares pays the NAV per share plus any applicable sales load (also known as a front-end load). Sometimes, the sales load is collected when shares are redeemed; such a sales load is known as a back-end load. Funds that have a sales load are known as *load funds*; they use a sales organization to sell their shares for a fee. Funds that sell shares directly and do not have a sales load are known as *no-load funds*. The sales load often differs from fund to fund, and it is subject to National Association of Security Dealers (NASD) regulation. When an investor sells a share, it is the NAV that the seller usually receives. Some mutual funds may charge a redemption fee if the shares are held for less than a specified period.

BENEFITS AND COST OF INVESTING IN MUTUAL FUNDS

Mutual funds provide investors with a way to diversify their investment under professional management, which most investors may not be able to obtain on their own. Since the funds operate with a large pool of money, the investors benefit from economies of scale, such as a lower trading cost and a higher yield. Besides delivering attractive yields, many funds provide their investors with such services as check-writing privileges, custody (as a service), and bookkeeping. Investors also benefit from the knowledgeable investment choices of securities and investment objectives that funds offer.

The cost to the shareholder of investing in mutual funds comes in various forms: front-end loads, management fees, cost of maintaining and servicing shareholder accounts (administrative cost), redemption fees, and distribution fees (also known as 12b-1 fees). As mentioned before, a redemption fee is usually levied on shares held for less than a specified period. A distribution fee is a charge on current shareholders to cover the costs of advertising, promotion, selling, and other activities. It is sometimes combined with load charges. All these expenses are aggregated to obtain a single measure of cost to the shareholder. An aggregate measure commonly found in the published data is the *expense ratio* (expenses as a percent of assets). This measure does not include sales load, if there is one. Rea and Reid (1998) discuss the calculation of an alternative measure of total ownership cost that includes the sales load.

REGULATION AND TAXATION

All U.S. mutual funds are subject to strict regulation by the Securities and Exchange Commission. They are also subject to states's notice filing requirements and anti-fraud statutes. They are required to provide investors a full disclosure of their activities in a written prospectus. They also provide their investors a yearly statement of distribution with the details of the federal tax status of their distribution. Mutual funds in the United States are not subject to corporate income tax, if they meet certain Internal Revenue Code requirements. Instead, mutual fund shareholders are taxed on the distribution of fund's income. For tax purpose, mutual funds distribute their net income to the shareholders in two ways: (1) dividend and interest payments and (2) realized capital gains.

PERFORMANCE AND COMPARISON

The rate of return is widely used for comparing the performance of mutual funds. The rate of return on a mutual fund investment for a period of one year, for example, is calculated by adding the change in the NAV ($NAV_t - NAV_{t-1}$) to income and capital gains distributed during the year and dividing the sum by the NAV at the beginning of the year. The following describes the calculation of return for no-load funds:

$$R_t = \frac{[(NAV_t - NAV_{t\text{-}1}) + i + c]}{NAV_{t\text{-}1}.}$$

where R, i, and c represent rate of return, income, and capital gains, respectively. For load funds, the calculation of return must account for load charges by adding them to the NAV_{t-1}. The performance of a mutual fund is often compared with the performance of a benchmark portfolio that is selected to reflect the investment risk level of the fund's portfolio to see whether the mutual fund had a superior performance.

The rate of return of a mutual fund with a NAV of $15.00 at the beginning of a year and $15.50 at the end of that year, and distributed $0.75 and $0.50 per share as income and capital gain respectively during the year would be:

$$[(\$15.50 - \$15.00) + \$0.75 + \$0.50]/\$15.00 = 11.67\%$$

ANALYSIS AND REPORTING

Key statistics pertaining to a fund—such as the NAV, offer price, sales charges, expense ratio, and performance measure for various categories of funds—are regularly calculated, analyzed, and published. Two firms well known for their analytical service are the Lipper Analytical Services (Lipperweb.com) and the Morning Star Inc. (Morningstar.com). The *Wall Street Journal* and *Barron's* carry the information supplied by Lipper Analytical Services on a regular basis. Investment Company Institute (www.ici.org) also provides a wealth of information on mutual funds, including historical data and Web site addresses of its member funds.

(SEE ALSO: *Financial Institutions*)

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ANAND G. SHETTY

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NATIONAL ASSOCIATION OF STATE BOARDS OF ACCOUNTANCY

More than 100 years ago, in 1896, New York appointed the first board of certified public accountant (CPA) examiners. By 1925 all US jurisdictions were administering CPA examinations. Though all states today administer a single Uniform CPA Examination, there are still fifty-four independent boards of accountancy (for all states, the District of Columbia, Guam, the Virgin Islands, and Puerto Rico) that issue licenses to accountants. These boards set entry requirements for their licensees; enforce measures to support continuing competence, through both professional education and/or peer review requirements for renewal of individual licenses and firm registrations; and insure that technical and ethical standards are upheld via disciplinary proceedings growing out of a complaint-based system. Board-levied penalties for malpractice range from fines, to additional education requirements, to pre-report issuance reviews, to withdrawal of license.

The average CPA is generally more aware of the activities of the professional associations than of those of the state board of accountancy. But the professional path of all CPAs all begins with the board: They had to apply to the state board of accountancy to take the Uniform CPA Examination; then they took the examination under the auspices of a state board and waited to hear the results of that examination issued by the state board. It is the state board that requires renewal forms and fees to be submitted and the state board that allows licensees from other states to begin to practice within its borders. Fortunately, in the vast majority of cases, the licensee will never see the disciplinary side of the state board's operations. However, that is a vital aspect of the board's operations that protects the public from unqualified practitioners. The wronged consumer needs no legal counsel. A complaint can be brought directly to the board by any individual or organization. In fact, government agencies that uncover inferior performance by licensees are encouraged to refer their complaints to the accountancy boards. With the growth of the Internet, several states accept on-line complaints via their Web sites.

BOARD MEMBERSHIP

For a long time, the CPA profession has prided itself on self-regulation, partially because of the discipline enforced by its professional organizations and partially because the state boards are primarily composed of licensees. Typically members of a board of accountancy are appointed by a state's governor and include both licensed CPAs and public members. The CPA members are often selected by the governor after consulting with the state's CPA society. A small daily stipend for meeting attendance and travel is awarded by some states; others do not provide such compensation. Boards vary in size from five members to nineteen, many with only one public member. In some jurisdictions, there is a limited term of service; in others, board members can be reappointed indefinitely. Many of the boards appoint task forces or committees to handle various activities, such as continuing professional education or investigations, which increases the number of volunteer participants. Legal assistance to the boards may come only from the state's attorney general's office or it may also be available from independent counsel. In some states, boards share their administrative staff with other regulatory boards, yet in one jurisdiction the accountancy board has a dedicated staff of over sixty. Similarly, revenues generated by the boards are not treated uniformly: One state will allow the board to use its revenues directly for its licensees; another will have all revenues go into the state's general fund.

As of 1998, the number of licensees in each jurisdiction ranged from Texas, with more than 74,000, to Guam, with 86. Other states with large numbers of licensees include California, with more than 63,000; Ohio, with more than 36,000; and New York, with more than 33,000.

ABOUT NASBA

While the regulation of certified public accountants (and in some jurisdictions "public accountants" or "licensed public accountants") exists on a state-by-state basis, the boards share many concerns; it is from those mutual concerns that the National Association of State Boards of Accountancy (NASBA) was born. Thanks to the efforts of the New Jersey State Board of Public Accountants, the organization was formed in 1908 as the National Association of CPA Examiners, with seventeen examiners from ten states. At that time the New Jersey Board invited all accountancy board members "to confer in regard to matters of mutual interest."

Today, as in 1908, NASBA provides a forum for the boards to exchange views on professional and regulatory issues and trends affecting regulation. Since 1997 its headquarters have been in Nashville, Tennessee, and a satellite office is maintained in New York City. Committee meetings as well as annual and regional meetings are held at sites throughout the country.

Volunteer leadership includes a chairman, vice chairman, nine directors-at-large, and eight regional directors. The directors-at-large are elected for three-year terms. All others serve one-year terms, and all are elected by the member boards at the annual meeting. Officers are not limited to licensees.

To help NASBA achieve its mission of "enhancing the effectiveness of state boards of accountancy," the association holds an annual meeting and regional meetings as well as special issue conferences (including those on continuing professional education, ethics, and legislation) for representatives of accountancy boards. It has volunteer committees researching and reporting on issues of concern, such as examinations, relations with government agencies, and international recognition. The committees are composed of members of the state boards of accountancy as well as state board administrators. In addition, a state accountancy board administrators' committee and legal counsel committee work to assist these individuals who specifically work for the member boards.

NASBA's communication efforts include a monthly newsletter, a biennial digest of state laws, an annual Uniform CPA Examination candidates' statistics report, and an Internet Web site (www.nasba.org) that is linked to the Web sites of all of the state boards that maintain sites. Some audio- and videotape production is also done.

NASBA promulgates no laws. Its committees develop model statutes and rules; however, it is the state legislatures and accountancy boards that do the final drafting and implementing of the laws that regulate the practice of public accountancy. NASBA's committees consult with professional organizations, including the American Institute of Certified Public Accountants (AICPA), the National Society of Accountants, and the American Accounting Association, as they develop suggestions. A joint NASBA/AICPA committee developed the Uniform Accountancy Act (UAA) and Rules, which are continually reviewed and updated as necessary. Model contracts and handbooks have also been developed by NASBA committees.

The profession's technical standards are developed by the AICPA. Members of the profession can be brought before the AICPA for disciplinary procedures in cases where such standards have not been met; however, while the professional organization can withdraw membership privileges, it is only the state board of accountancy that can withdraw the license to practice. Since a person's livelihood is involved in such a decision, every effort is made by the boards to ensure that due process is followed throughout all disciplinary proceedings. Formal hearings are held with legal counsel present, if the licensee so desires.

ENTRY-LEVEL REQUIREMENTS

Requirements to become a certified public accountant vary slightly from jurisdiction to jurisdiction. As Internet practice increases cross-border engagements, all states are being encouraged to move in the direction of adopting one set of standards, as detailed in the UAA. This model act calls for 150 hours of education, one year of experience as attested to by a CPA, and successful completion of the Uniform CPA Examination. For those licensees signing audit reports, additional experience is required. To find out the specific requirements for each state, a candidate needs to check with the state board of accountancy.

The required 150-semester-hour education includes a baccalaureate degree with a concentration in accounting, though not necessarily an accounting major. Again, it is necessary to check with the appropriate accountancy board.

Each of the state boards is charged with the responsibility of administering the Uniform CPA Examination, which is developed and graded by the AICPA. Grades are released to candidates through the state boards. The examination as given in May 2000, for example, was a four-part test given over a two-day period. The four sections of the examination were: auditing (AUDIT), business law and professional responsibilities (LPR), financial accounting and reporting—business enterprises (FARE), and accounting and reporting—other areas. (ARE).

In November 1997, 20.8 percent of the candidates passed all parts of the exam for which they sat. This does not mean they passed the entire examination, since some candidates retake the examination and consequently only take selected parts. In a few jurisdictions, candidates can choose to take only a limited number of parts at a time. Studies are currently being conducted to transform the Uniform CPA Examination into a computer-based examination rather than paper-and-pencil test. Such a transformation would shorten the time needed to complete the examination and enable candidates to take the examination on additional dates.

Experience is another requirement carefully defined in each state's accountancy rules. At one time only auditing experience in public accounting firms was acceptable. Now, in many states, work in government, industry, and academia that leads to professional competence is also being accepted.

CONTINUING COMPETENCE

Continuing professional education (CPE) is mandatory for license renewal in all jurisdictions except Wisconsin. Some states have course requirements in auditing and accounting, others have course requirements in ethics, and still others allow licensees to select courses to meet CPE requirements. With more than half of CPAs now not working as public accountants, pressure exists for enlarging the scope of CPE to encompass a broader range of programs and experiences that help ensure the licensee's competence.

In many states CPA firms are required to register with the accountancy board. The firms are then required to participate in quality review programs periodically, which bring the firms' attest services under the review of outside professionals.

AREAS OF COMMITTEE ACTIVITY

The focus of NASBA's committees echoes the areas of the boards' mutual concerns. Examination, for entry-level candidates as well as international licensees seeking U.S. recognition, continues to be a primary area of interest. Ensuring that the examination adequately measures competence is an ongoing concern. The Examination Review Board audits the preparation, administration, and grading of the Uniform CPA Examination to ensure the boards' requirements are met.

Many states call for CPAs to give evidence of "good moral character." This has been interpreted to mean having knowledge of professional ethics as well as having no criminal record that could be related to practicing accounting. NASBA's ethics committee and administrators committee both are concerned with these issues.

Committees on public perception, strategic initiatives, new horizons, and so forth demonstrate the association's continuing concern with keeping in touch with the public's and the profession's expectations and goals. Information about NASBA is available from NASBA at 150 Fourth Avenue North, Nashville, TN 37219-2417; (615) 880-4200; or www.nasba.org.

Licensed public accountants and public accountants are also recognized in a limited number of jurisdictions

(SEE ALSO: *American Institute of Certified Public Accountants*; *Public Oversight Board*)

LOUISE DRATLER HABERMAN

NATIONAL BRANDS

(SEE: *Product Labeling*)

NATIONAL BUSINESS EDUCATION ASSOCIATION

The National Business Education Association (NBEA) is an organization whose efforts are directed primarily toward teachers of business and computer technology on all grade levels. One of its mottoes is "Educating for Success in Business and Life."

The NBEA has an executive office at 1914 Association Drive, Reston VA 20191-1596. Its web site is http://www.nbea.org.

The NBEA is administered by the NBEA executive board whose membership in part includes four officers (president, president-elect, secretary-treasurer, past president) and an executive director. In addition, the executive board consists of two representatives each from the five regions (Eastern, Southern, North Central, Mountain-Plains, and Western) and the president of each of its five regional affiliates. The executive board also has representatives from two organizations: National Association for Business Teacher Education (NABTE) and the International Society for Business Education (ISBE).

The official publication of the NBEA is the *Business Education Forum*, published four times a year (October, December, February, and April). The magazine has a publisher, assistant publisher, and editor housed in the NBEA executive office. The editorial policy of the publication is directed by the NBEA Publications Committee, composed of five business educators. The topic editors are business educators. During a recent school year, the editorial topics were accounting, administration and supervision, basic business and economics, entrepreneurship, communications, international business, keyboarding, marketing, methods, research, student organizations, technology, and NABTE review.

In addition to the *Business Education Forum*, the NBEA publishes a yearbook each year as well as other publications.

The NBEA holds an annual convention that rotates from region to region. The convention program incorporates a combination of general sessions featuring well-known speakers, group meetings on a variety of topics, and workshops that often focus on computer topics. One of the features of the convention is a variety of exhibitions showing the latest publications, computer equipment and software, and teaching aids. Awards are presented to outstanding business educators recognized by the regional associations. In addition, the most prestigious award, the John Robert Gregg Award, is presented at the convention.

The NBEA has four categories for membership dues: professional membership, combination professional and ISBE membership, undergraduate student, and retired.

G. W. MAXWELL

NATIONAL LABOR RELATIONS BOARD

The National Labor Relations Board (NLRB) is an independent federal agency. Its creation in 1935 by Congress was in response to the National Labor Relations Act (the Wagner Act). Later acts, such as the Taft-Hartley Act, have amended the original NLRB.

The NLRB is made up of three principal parts: The board, the general counsel, and the regional offices. The board is made up of five members who serve five-year terms. It acts as a quasi-judicial body in deciding cases on formal records. The general counsel is independent of the board, and is responsible for the investigation and prosecution of unfair labor practice cases, as well as overseeing the regional offices. Members of the general counsel serve four-year terms. Both the board and general counsel are appointed by the president with Senate approval. The regional offices and its subdivisions serve certain geographic areas, and they are dispersed throughout the United States—mainly in or near large cities.

The function of the NLRB is twofold. First, it determines and implements, through secret ballot elections, the choice by employees as to whether or not they wish to be represented by a union (and if so by which union) in dealing with their employers. Secondly, it prevents unlawful acts (unfair labor practices), either by employers or by the unions.

Congress, through the National Labor Relations Act, regulates labor-management relations, thereby giving the NLRB its authority. The NLRB, though, has no independent power to enforce its mandates; instead, enforcement is done through the courts of appeals.

One example of what the NLRB does was provided in 1995, when it helped bring a speedy end to the baseball strike. The NLRB secured a 10(j) injunction requiring the owners to withdraw their one-sided imposed changes to the negotiated system of setting baseball wages.

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TOD W. REJHOLEC

NATIONAL RETAIL FEDERATION

The National Retail Federation (NRF) strives to protect and advance retail industry interests by providing services and conducting programs in government affairs, information technology, education, training, and research. NRF members represent leading merchandise, independent, specialty, discount, and mass-merchandise stores; key suppliers to the retail industry; and more than a hundred trade organizations across the globe. NRF's interactive boards and committees, comprised of industry experts in their areas of specialization, are designed to represent and reflect industry's diversity and breadth. These boards and committees formulate and implement policies, standards, guidelines, and strategies that are consistent with retail industry objectives.

The NRF believes lobbying is a "necessary tool to ensure that [NRF] interests and . . . way of doing business is preserved" (Mullin, 1999). *Fortune* magazine, one of the premier publications in the business world, ranked the NRF among the top thirty lobbying organizations in the nation. Additionally, to assist members financially, NRF's member discount program pools the membership's buying power to negotiate reductions on a variety of services and products.

NRF's information technology component serves as the retail industry's information technology headquarters. NRF's groups (the Information Technology Council and various committees) help configure the retail technology environment. They analyze existing and upcoming technologies, as well as potential regulatory and legislative initiatives, and educate private and government entities about retail technology concerns and needs.

Further, through the NRF's various publications (*STORES* Magazine, *Management of Retail Buying*, *Small Store Survival*, *Combined Financial, Merchandising and Operating Results of Retail Stores in 1997*, and many others), valuable information, which can be transformed into best practices, is disseminated. For example, the NRF developed standard color and size codes (used to implement Universal Product Codes) and published them in its *Standard Color and Size Code Handbook*.

More information is available from the NRF at 325 7th St., NW, Suite 100, Washington, D.C. 20004; (202) 783-7971 or (800) NRF-HOW2; or http://www.nrf.com.

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Mary Jean Lush
Val Hinton

NATIONAL TRANSPORTATION SAFETY BOARD

When the National Transportation Safety Board (NTSB) was established in 1967, it was considered an independent federal agency. However, NTSB's administrative support and funding were funneled through the Department of Transportation (DOT). Over time, the need for a totally separate, nonreliant agency was recognized, and the 1975 Independent Safety Board Act severed all DOT ties.

Congress charges NTSB with investigating every U.S. civil aviation accident, as well as significant railroad, highway, marine, and pipeline accidents. NTSB, based on investigation findings, then issues safety recommendations in an effort to prevent future accidents.

NTSB's different from other agencies in that it has no official enforcement or regulatory powers, it is a totally independent agency, and its specially trained staff conduct investigations and determine probable cause. Its investigations are broad, looking more for the *big picture*, rather than attempting to focus on a specific detail or category.

With less than 400 employees, NTSB is a small agency. However, it plays a large role in maintaining and/or restoring public confidence in the safety of the nation's transportation systems. NTSB has investigated thousands of surface transportation accidents and more than 100,000 aviation accidents since it began operation in 1967.

The most important outcomes of NTSB investigations are the safety recommendations the agency issues based on investigation findings. NTSB has proven itself to be thorough and impartial and has been able to achieve an admirable (more than 80 percent) acceptance rate of recommendations made to various individuals and organizations in positions to effect change.

NTSB also uses accident investigation findings to identify trends or issues that may otherwise be overlooked. Through proactive outreach efforts (e.g., conferences, symposia, and state advocacy), NTSB makes the public aware of potential safety problem areas, such as child safety seat concerns or accidents related to human fatigue factors.

NTSB also enjoys an international leadership role, specifically in regard to accidents involving cruise ships or foreign-flag vessels in U.S. waters or U.S. planes or U.S.-made aircraft overseas.

Robert Francis, vice chairman of the National Transportation Safety Board.

NTSB has thus contributed significantly to increasing levels of safety for individuals worldwide.

To focus attention on NTSB recommendations with the most potential to save lives, NTSB has created its "Most Wanted List" of improvements in transportation safety, which includes areas where rapid improvement is considered essential. This list includes requiring railroads to install collision avoidance systems, having natural gas distribution companies install excess flow valves in high-pressure residential systems, having voyage and flight data recorders with increased parameters installed on ships and airplanes respectively, and requiring fire detection and suppression equipment in airplane cargo compartments.

NTSB's safety recommendations have resulted in many safety improvements. For instance, recommendations stemming from the ValuJet Flight 92 accident in Florida resulted in a Department of Transportation's Research and Special Programs Administration Agency (RSPA) rule prohibiting passenger-carrying aircraft from transporting oxygen generators as cargo. In the wake of natural gas pipeline accidents in Catskill, New York, and Allentown, Pennsylvania, cast-iron pipe monitoring and replacement programs were implemented by two major gas-distribution companies. The Federal Aviation Association (FAA) has acted to have Boeing 737 rudder systems modified based on NTSB recommendations stemming from the USAir Flight 427 incident in Pittsburgh. In response to an NTSB-issued emergency recommendation based on its 1996 Child Passenger Protection Study, the automobile industry attached labels and sent warning letters to owners about the dangers posed to children by airbags. Information on other actions resulting from NTSB recommendations is available from NTSB at 490 L'Enfant Plaza SW, Washington, D.C. 20594; (202) 314-6000; or http://www.ntsb.gov/.

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MARY JEAN LUSH
VAL HINTON

NEGOTIATION

Negotiation is the process of two individuals or groups reaching joint agreement about differing needs or ideas. Oliver (1996) described negotiation as "negotiators jointly searching a multidimensional space and then agreeing to a single point in the space."

Negotiation applies knowledge from the fields of communications, sales, marketing, psychology, sociology, politics, and conflict resolution. Whenever an economic transaction takes place or a dispute is settled, negotiation occurs; for example, when consumers purchase automobiles or businesses negotiate salaries with employees.

NEGOTIATION STYLES

Two styles of negotiating, competitive and cooperative, are commonly recognized. No negotiation is purely one type or the other; rather, negotiators typically move back and forth between the two styles based on the situation.

On one end of the negotiation continuum is the competitive style. Competitive negotiation—also called adversarial, noncooperative, distributive bargaining, positional, or hard bargaining—is used to divide limited resources; the assumption is that the pie to be divided is finite.

Competitive strategies assume a "win-lose" situation in which the negotiating parties have opposing interests. Hostile, coercive negotiation tactics are used to force an advantage, and prenegotiation binding agreements are not allowed. Concessions, distorted communication, confrontational tactics, and emotional ploys are used.

Skilled competitive negotiators give away less information while acquiring more information, ask more questions, create strategies to get information, act firm, offer less generous opening offers, are slower to give concessions, use confident body language, and conceal feelings. They are more interested in the bargaining position and bottom line of the other negotiating party, and they prepare for negotiations by developing strategy, planning answers to weak points, and preparing alternate strategies.

A buyer-seller home purchase transaction illustrates competitive negotiating. The buyer gathers information to determine home value, quality, expenses, and title status. The seller gathers information to ensure that the prospective buyer qualifies for the loan. The parties negotiate concessions regarding home repairs, items to remain in the house, closing dates, and price. The negotiations stall as the buyer and seller disagree on a closing date; the seller retaliates by keeping the buyer out of the home for several days after the closing date. As a consequence of the competitive strategies used, the relationship between the buyer and seller suffers; however, the end result (sale and purchase of a home) satisfies both parties.

On the other end of the negotiating style continuum is cooperative negotiating, also called integrative problem solving or soft bargaining. Cooperative-negotiation is based on a win-win mentality and is designed to increase joint gain; the pie to be divided is perceived as expanding. Attributes include reasonable and open communication; an assumption that common interests, benefits, and needs exist; trust building; thorough and accurate exchange of information; exploration of issues presented as problems and solutions; mediated discussion; emphasis on coalition formation; prenegotiation binding agreements; and a search for creative alternative solutions that bring benefits to all players. The risk in cooperative negotiating is vulnerability to a competitive opponent.

Cooperative negotiators require skills in patience; listening; and identification and isolation of cooperative issues, goals, problems, and priorities. Additionally, cooperative negotiators need skills in clarifying similarities and differences in goals and priorities and the ability to trade intelligently, propose many alternatives, and select the best alternative based on quality and mutual acceptability.

Cooperative negotiating might be used, for example, in a hiring situation. An employer contacts a candidate to encourage the candidate to submit his or her credentials for a job opening. Trust is built and common interests are explored as the employer and candidate exchange information about the company and the candidate's qualifications. Creative solutions are explored to accommodate the candidate's and employer's special circumstances, including work at home, flexible scheduling, salary, and benefits. The two parties successfully culminate the negotiations with a signed job contract.

THE NEGOTIATION PROCESS

Stages in the negotiation process are (1) orientation and fact finding, (2) resistance, (3) reformulation of strategies, (4) hard bargaining and decision making, (5) agreement, and (6) follow-up (Acuff, 1997). For example, a consumer purchasing an automobile investigates price and performance, then negotiates with an agent regarding price and delivery date. Resistance surfaces as pricing and delivery expectations are negotiated. Strategies are reformulated as the parties determine motivation and constraints. Key issues surface as hard bargaining begins. Problems surface, and solutions—such as creative financing or dealer trades—are created to counter pricing and delivery problems. After details are negotiated, the agreement is ratified. After the sale, the agent may follow up with the buyer to build a relationship and set the stage for future purchase and negotiation. The six stages of the process would be approached differently depending on where the negotiators reside on the style continuum.

Basic strategies, both cooperative and competitive, that can be applied in the negotiation process are the following:

- Use simple language.
- Ask many questions.
- Observe and practice nonverbal behavior.
- Build solid relationships.
- Maintain personal integrity.
- Be patient.
- Conserve concessions.
- Be aware of the power of time, information, saying no, and walking away.
- Pay attention to who the real decision maker is, how negotiators are rewarded, and information sources.
- Listen actively.
- Educate the other party.
- Concentrate on the issues.
- Control the written contract.
- Be creative.
- Appeal to personal motivations and negotiating styles.
- Pay attention to power tactics.
- Be wary of such unethical tactics as raising phony issues; extorting; planting information; and making phony demands, unilateral assumptions, or deliberate mistakes.

The following summarize strategies that might be used in various stages of negotiations:

INITIAL STAGES

- Plan thoroughly.
- Identify and prioritize issues.
- Establish a settlement range.
- Focus on long-term goals and consequences.
- Focus on mutual principles and concerns.
- Be aware that "no" can be the opening position and the first offer is often above expectations.
- Be aware of the reluctant buyer or seller ploy.

MIDDLE STAGES

- Revise strategies.
- Consider many options.
- Increase power by getting the other side to commit first.
- Add credibility by getting agreements in writing.
- Be wary of splitting the difference.
- To handle an impasse, offer to set it aside momentarily.
- To handle a stalemate, alter one of the negotiating points.
- To handle a deadlock, bring in a third party.
- When asked for a concession, ask for a tradeoff.
- Be wary if the other party uses a "higher authority" as a rationale for not meeting negotiating points.
- Be aware of the "vise" tactic ("you'll have to do better than that").

ENDING STAGES

- Counter the other party's asking for more concessions at the end by addressing all details and communicating the fairness of the deal in closure.
- Counter a persistent negotiator by withdrawing an offer.
- Do not expect the other party to follow through on verbal promises.
- Congratulate the other side.

INTERNATIONAL NEGOTIATING

In international negotiations, obstacles arise when negotiating teams possess conflicting perspectives, tactics, and negotiating styles. Negotiators often assume that shared beliefs exist when, in reality, they do not. Examples are different uses of time; individualism versus collectivism; different degrees of role orderliness and conformity; and communication patterns, that differ widely worldwide. These cultural factors affect the pace of negotiations; negotiating strategies; degree of emphasis on personal relationships; emotional aspects; decision making; and contractual and administrative elements (Acuff, 1997). The goal of the negotiator should be to "look legitimately to the other side by their standards" (Fisher, 1984).

COLLECTIVE BARGAINING

Collective bargaining frequently requires a third party to help the parties reach an acceptable solution. In these situations, such strategies as mediation, arbitration, and conflict resolution are used.

SUMMARY

Negotiation is the process of two individuals or groups reaching joint agreement about differing needs or ideas. Two styles of negotiating, competitive and cooperative, are commonly recognized, with most negotiators moving back and forth between the two styles based on the situation. A number of strategies were discussed that negotiators might use in negotiation stages. The effectiveness of various strategies can vary based on cultural differences.

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DONNA L. MCALISTER-KIZZIER

NETWORKING

Networking means joining or linking devices such as computers. A local area network (LAN) is a collection of computers and other devices connected through some medium that transmits mostly data. The following characteristics are closely associated with LANs; however, one must be aware that LANs are continually changing.

LAN CHARACTERISTICS

Private ownership: LANs consist of devices such as computers, scanners, printers, and cables that are privately owned. Networks also consist of privately owned lines, wires, hubs, and servers. Lines can be made of twisted-pair or coaxial-cable wires, or they can be wireless (such as radio or infrared waves). Hubs connect LAN segments, which are lengths of wire that have one or several attached devices. Servers are computers that are dedicated to one function, such as managing printers or storing applications or data. In short, businesses create and manage their own networks.

LAN size: The size of a LAN is determined by the type of LAN configuration and specifications that are used. Generally, LANs range from several hundred yards up to several miles, but mostly they reside in an office or classroom, building, or several buildings. On one hand, an Ethernet network using 10Base2 ("Thin Ethernet") can have one segment 200 meters in length or five linked segments up to 1,000 meters in length. The *10* in 10Base2 stands for 10 megabits per second, *Base* means baseband, and *2* means 200 meters. On the other hand, FDDI (Fiber Distributed Data Interface) networks can be up to 200 kilometers (124 miles) in length; however, these are mostly used as backbones that link several LANs.

LAN speed: Another characteristic of a LAN is speed. LAN speed is most often measured in bits per second. For example, a byte (or one character or space) consists of 8 bits. If an average word length is 5 characters and an average double-spaced page is about 200 words, then a page (counting words and spaces) would consist of about 9600 bits − [(200 words × 5 characters) + 199 spaces] × 8 bits. If a network speed is 9600 bits per second (bps), then a normal double-spaced page is transmitted every second. Another LAN could operate at 56 kilobits (kbps)—or 56,000 bits—per second, about 6 pages of information per second. However, LANs are typically faster than 9600 and 56,000 bps. Many LANs are 10, 16, or 100 megabits per second (Mbps). A 100-Mbps LAN can send 100,000,000 bits in one second—or 10,416 pages per second. Some LANs can transmit 2.8 billion bits per second—gigabits (Gbps). At 2 Gbps (2,000,000,000/9600), 208,000 pages flash by every second—more than most people read in a lifetime! Engineers and LAN administrators are finding even faster ways to communicate data. LAN speeds are reaching terabits per second (Tbps). One Tbps equals 1000 gigabits—an almost unthinkable speed.

The medium used to carry signals in a LAN can be conducted or radiated. Electric signals over wire are conducted. Fiber-optic lines, microwaves, infrared waves, and radio waves are examples of radiated media.

Wire can be coaxial cable or shielded (STP) or unshielded (UTP) twisted pair. UTP is cheaper to install than STP or coaxial cable; therefore it is a popular network choice. However, STP or coaxial cable should be used if there is risk that a network might be harmed by electromagnetic interference. Other networks that overcome electromagnetic interference are fiber-optic lines and wireless media. They, too, are more expensive than UTP wiring.

Twisted-pair wires are rated by the American Wire Gauge (AWG) standard. The smaller the number, the thicker the wire. Regular telephone wire is rated a 28, which is too thin for most LANs. LANs use AWG that is between 22 and 26. Another characteristic of twisted-pair wires is the number of twists per foot. More twists may reduce crosstalk, but they also increase wire costs. Crosstalk occurs when one line picks up noise or voices from another line during a conversation or data transmission. Usually 2 twists per foot are minimum, while 4 are preferred.

The EIA (Electronic Industries Association) is another standard for rating wires. The EIA classifies LAN wires for different uses. For example, Category 3, or "Cat 3," must contain 3 twists per foot; it is commonly used in creating 10-Mbps LANs. "Cat 5" is good for 100 Mbps and up to 2 Gbps.

Low error rates: Older LANs had a difficult time eliminating electromagnetic interference, which created errors during data transmission. Therefore, error checking of data frames was necessary and performed by a protocol. On LANs, data are sent in separate frames controlled by protocols. Protocols are rules between sending and receiving LAN devices. Protocols used parity checks or algorithms to determine whether a data frame had transmission errors. As LAN technology has improved, less error checking is necessary. Less error checking converts to higher bit-rate speeds. An example of new LAN technology, with less error checking, is the ATM (asynchronous transfer mode), or cell-relay, LAN.

Currently, most LANs use baseband transmission. Baseband means that there is one signal transmission per line. What this means is that only one device can use the line at a time. The channel is full when one device is sending data. Because baseband LANs are easily monitored, so errors can be detected and reduced. Broadband means that the line can handle several transmissions at one time. This is accomplished using different frequencies that act as separate channels; this is called frequency division multiplexing (FDM). Broadband LANs are more complex than baseband LANs, and they require expensive technology. Additionally, broadband is more susceptible to errors than baseband.

LAN USES

LANs have become an operational necessity for just about every business. Burgeoning information demands make it necessary to link all computers for efficient data sharing and storage. Furthermore, e-mail, electronic commerce, and video conferencing are enhanced services for today's LAN users.

In addition to sharing data and hardware, properly managed networks increase productivity. Things like standardized applications, controlled access, users' rights, companywide backups, and recovery strategies help businesses manage their information more efficiently than at any time in the past.

Standards also help LAN development and allow different devices from many manufacturers to be connected. Standards originate from businesses, organizations, and networking practices that are associated with electronics, communications, and computers.

When LANs are linked to other LANs, a network structure called a wide area network (WAN) is formed. WANs have many configurations and can extend globally. One aspect of a WAN is a gateway to the Internet. Gateways are special switches that allow LANs with different topologies, controls, and protocols to communicate.

LAN CONFIGURATIONS

Three common LAN configurations are bus, ring, and star topologies. All topologies have advantages and limitations.

A bus topology is a physical layout in which microcomputer workstations and other devices are connected to a UTP/STP or cable segment. Data travel in frames through a wire, called a bus, from the sending station to the receiving station. Bus wiring is looped together with terminators at each end. Terminators are used so that signals can recognize the bus end. When this happens, the signal is reflected back to the other end of the bus. This LAN topology is the most widely used configuration due to the popular Ethernet bus protocol.

Ring configurations are used, too. IBM is responsible for developing and promoting ring configurations. On a ring, all computers are connected to a continuous loop wire or cable. Data flow in one direction. Each workstation is a repeater. Repeaters charge up a signal and send it over the next segment to the next workstation; this process is repeated around the ring.

A star topology is a group of workstations connected to a controlling switch. Data packets always flow through the switch to get from one workstation to another. Switches control and manage all data flow. Switches can read the destination address on a data frame and route the frame to the line segment that contains the destination workstation.

LAN DATA FLOW

LANs need flow control to operate at high speeds. Flow control is another protocol function. Two common LAN protocols are CSMA/CD (carrier sense multiple access/collision detection) and token passing.

CSMA/CD is also called contention. CSMA/CD is used by one of the oldest and most used standards—Ethernet. Contention is a LAN term that means that any station can broadcast a data frame on the bus line at any time. A sending station creates a frame by putting a destination address along with its own address around a unit of information called a data unit. This frame is broadcast to every workstation on the bus. All stations check the destination address to see if the frame is for them.

Token-passing protocols can work on a ring or bus, but they are mainly used on a ring. A 3-byte "free" token is always circulating around a ring and stops at every station. When Station A wants to send data to Station B, it waits for the token. When the token stops at Station A, A changes the "free" token to "busy" and attaches a data frame. The data frame contains a header with the destination and source address around a data unit. The combined token and data frame go from one station to another until they get to Station B. Station B recognizes the busy token and checks the destination address. Since the frame has "its" destination address, it copies the data frame and changes a part of the header, acknowledging that it received the data. The token and data frame return to Station A and A deletes the data frame and changes the token back to "free." This process continues when any station wants to send a frame.

CONCLUSION

LANs are efficient and necessary business tools. They began as individual, stand-alone microcomputers that evolved not in any pattern but based on unique business needs. Technology and standards help networking grow. Perhaps someday a worldwide network of linked computers will exist to communicate data, voice, and video to everyone in the world.

DENNIS J. LABONTY

NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM

The North American Industry Classification System (NAICS) groups establishments into industries according to their primary economic activities. It facilitates the collection, calculation, presentation, and analysis of statistical data by industry. The United States, Canada, and Mexico developed the system to provide comparable statistics among North American Free Trade Agreement countries. Statistical agencies in these countries use NAICS to produce information by industry on inputs and outputs, productivity, industrial performance, unit labor cost, and employment. Both government and business use this information to understand industries and the economy.

NAICS is founded on a production-oriented conceptual framework. It groups establishments according to similarity in the processes used to produce services or goods. This supply-based framework delineates differences in production technologies. In this system, an industry is not solely a grouping of products or services.

BACKGROUND

The NAICS replaced the Standard Industrial Classification (SIC) in the United States. Developed in the 1930s, the SIC was periodically revised to reflect economic changes through 1987. The SIC was increasingly criticized as rapid changes affected both the U.S. and world economies. NAICS addresses such changes by developing production-oriented classifications for new industries, high-technology industries, and service industries in general.

In 1992, the Office of Management and Budget (OMB), an Executive Office of the President, established the Economic Classification Policy Committee (ECPC). The ECPC was chartered to provide a "fresh-slate" examination of economic classifications for statistical purposes. The ECPC ultimately joined with Mexico's Instituto Nacional de Estadistica, Geografia e Informatica (INEGI) and Statistics Canada to develop the NAICS. The three countries will rejoin to update the NAICS codes on a regular five-year cycle, in contrast to the sporadic revisions of the SIC codes.

All federal agencies have adopted NAICS United States for statistical use. NAICS commences implementation for reference year 1997 in the United States and Canada, and for 1998 in Mexico. The U.S. Bureau of the Census used NAICS to prepare the 1997 Economic Census, available in 1999. Government-wide implementation of NAICS will continue at least through 2004 in the United States. Updated information about implementation is available from the Census Bureau's NAICS Internet site at www.census.gov/naics.

STRUCTURE OF NAICS

NAICS uses a six-digit code to identify particular industries, in contrast to the four-digit SIC code. The structure of NAICS is hierarchical. The first two digits of each code indicate the sector. The third, fourth, fifth, and sixth digits indicate the subsector, industry group, NAICS industry, and national industry respectively. There are codes for 1170 U.S. industries in NAICS—United States, 1997.

NAICS classifies sectors first. The NAICS—United States, 1997 manual presents the twenty sectors, their two-digit codes, and the distinguishing activities of each, as follows:

11 Agricultural, Forestry, Fishing and Hunting—Activities of this sector are growing crops, raising animals, harvesting timber, and harvesting fish and other animals from farms, ranches, or the animals' natural habitat.

21 Mining—Activities of this sector are extracting naturally occurring mineral solids, such as coal and ore; liquid minerals, such as crude petroleum; and gases, such as natural gas; and beneficiating (e.g., crushing, screening, washing, and flotation) and other preparation at the mine site, or as part of mining activity.

22 Utilities—Activities of this sector are generating, transmitting, and/or distrib-

uting electricity, gas, steam, and water and removing sewage through a permanent infrastructure of lines, mains, and pipe.

23 Construction—Activities of this sector are erecting buildings and other structures (including additions); heavy construction other than buildings; and alterations, reconstruction, installation, and maintenance and repairs.

31-33 Manufacturing—Activities of this sector are the mechanical, physical, or chemical transformation of material, substances, or components.

41-43 Wholesale Trade—Activities of this sector are selling or arranging for the purchase or sale of goods for resale, capital or durable nonconsumer goods, and raw and intermediate materials and supplies used in production, and providing services incidental to the sale of the merchandise.

44-46 Retail Trade—Activities of this sector are retailing merchandise generally in small quantities to the general public and providing services incidental to the sale of the merchandise.

48-49 Transportation and Warehousing—Activities of this sector are providing transportation of passengers and cargo, warehousing and storing goods, scenic and sightseeing transportation, and supporting these activities.

51 Information—Activities of this sector are distributing information and cultural products, providing the means to transmit or distribute these products as data or communications, and processing data.

52 Finance and Insurance— Activities of this sector involve the creation, liquidation, or change in ownership of financial assets (financial transactions) and/or facilitating financial transactions.

53 Real Estate and Rental and Leasing—Activities of this sector are renting, leasing, or otherwise allowing the use of tangible or intangible assets (except copyrighted works), and providing related services.

54 Professional, Scientific, and Technical Services—Activities of this sector are performing professional, scientific, and technical services for the operations of other organizations.

55 Management of Companies and Enterprises— Activities of this sector are the holding of securities of companies and enterprises, for the purpose of owning controlling interest or influencing their management decision, or administering, overseeing, and managing other establishments of the same company or enterprise and normally undertaking the strategic or organizational planning and decision making of the company or enterprise.

56 Administrative and Support and Waste Management and Remediation Services— Activities of this sector are performing routine support activities for the day-to-day operations of other organizations.

61 Educational Services— Activities of this sector are providing instruction and training in a wide variety of subjects.

62 Health Care and Social Assistance— Activities of this sector are providing health care and social assistance for individuals.

71 Arts, Entertainment, and Recreation—Activities of this sector are operating or providing services to meet varied cultural, entertainment, and recreational interests of their patrons.

72 Accommodation and Food Services—Activities of this sector are providing customers with lodging and/or pre-

paring meals, snacks, and beverages for immediate consumption.

81 Other Services (Except Public Administration) — Activities of this sector are providing services not elsewhere specified, including repairs, religious activities, grantmaking, advocacy, laundry, personal care, death care, and other personal services.

91-93 Public Administration—Activities of this sector are administration, management, and oversight of public programs by federal, state, and local governments.

EXAMPLE

NAICS code 711211 identifies the Sports Teams and Clubs industry in the United States and Canada. It belongs to:

Sector 71—Arts, Entertainment and Recreation

Subsector 711—Performing Arts, Spectator Sports, and Related Industries

Industry Group 7112—Spectator Sports

NAICS Industry 71121—Spectator Sports

National Industry 711211—Sports Teams and Clubs

The NAICS—United States, 1997 manual gives a detailed description of the Sports Teams and Clubs industry. It consists of professional or semiprofessional sports teams or clubs engaged in live sporting events (e.g., football, baseball, and soccer games) for a paying audience. These establishments may or may not run their own stadium, arena, or other facility to present sporting events. The United States, Canada, and Mexico collect similar data for NAICS industry 71121, Spectator Sports. The United States and Canada collect more detailed data at the six-digit national industry level for Sports Teams and Clubs. The United States collects data for two additional national industries within the NAICS industry: Spectator Sports: Racetracks (code 711212) and Other Spectator Sports (code 711219).

ASSIGNMENT OF NAICS CODES

NAICS is a classification system for establishments. NAICS—United States, 1997 defines an establishment as "the smallest operating entity for which records provide information on the cost of resources—materials, labor, and capital—employed to produce the units of output" (EOP 1998, p. 16). In the United States the establishment is generally a single physical location using a distinct process to produce goods or services. An enterprise (company) may consist of more than one establishment. Each establishment within the enterprise is assigned a NAICS code. Statistical agencies such as the Census Bureau and the Bureau of Labor Statistics assign NAICS codes based on information reported to them.

INTERNATIONAL COMPARABILITY

Comparable data for the United States, Canada, and Mexico are generally available at the five-digit NAICS industry level. The sixth digit of the NAICS code is used to define national industries, which differ among the three countries due to differences in economic and organizational structures.

Many other countries collect data using the International Standard Industrial Classification (ISIC) system established by the United Nations (UN) in 1948. The UN's Statistical Commission revised the ISIC structure and codes in 1958, 1968, and 1989. Similar to NAICS, ISIC primarily classifies establishments (rather than enterprises and firms). The criteria used to classify ISIC division and groups are: (1) the type of goods and services produced; (2) the uses of goods and services produced; and (3) the inputs, process, and technology of production. The third classification criterion of the ISIC is the conceptual foundation of NAICS. Hence, NAICS is aligned more closely with ISIC than the 1987 SIC system. Statistics compiled on NAICS are comparable with statistics compiled according to ISIC, Revision 3, for some sixty high level groupings.

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MARY MICHEL

NOT-FOR-PROFIT ACCOUNTING

The terms "not-for-profit," "nonprofit," and even "nonbusiness" have been used to describe organizations that have one basic characteristic in common: Their primary purpose is related to social objectives, not to profit. These organizations may also have other common characteristics, such as nonprofit tax status, an appointed board, and for some, oversight of their operations by a governmental agency. Examples of such not-for-profits (NFPs) include libraries, museums, performing arts organizations, zoological and botanical societies, trade associations, unions, professional associations, fraternal organizations, private and community foundations, voluntary health and welfare organizations, social and country clubs, religious organizations, and public broadcasting stations.

State and local governments are not considered to be part of this group, although the accounting practices for some NFPs may be the same as those used by state and local governments as a number of NFPs are part of a state or local government.

BUSINESS MANAGEMENT OBJECTIVES

These have a broader focus than traditional for-profit company management goals and objectives. The comprehensive management of NFPs incorporates a wide range of goals beyond the generation of profits. Evaluative measures closely related to profits, such as return on investment and earnings per share, are not relevant to the managers of NFP organizations.

Yet, simply meeting annual budget targets does not mean an NFP is successful. In fact, it could mean just the opposite if financial goals have been achieved through the minimization of important social and customer goals. Like for-profit organizations, NFP management methods should begin with a mission statement and incorporate sets of interrelated goals that clearly relate the performance of numerous organizational activities back to the mission. Unfortunately, many times the evaluative focus is largely based on financial measures.

One recognized management method that uses a diverse approach beyond just financial measure for evaluating organizational performance is the balanced scorecard (BSC). BSC ties performance objectives together within the perspectives of the customer/client, financial, learning and growth, and internal business processes. Although traditional financial goals are in the mix, client needs, employee learning and growth, and the analysis of unique internal business processes take on equal importance with financial goals. The BSC links short-term goals to a long-term strategy guided by the organization's mission statement. These four areas are linked with objective performance measures that support one another. The BSC is an example of a management method that uses more than bottom-line or budget criteria in guiding the performance of organizations. Such a method is particularly pertinent to nonprofit organizations with a wide range of objectives beyond traditional financial ones.

Clearly there is an underlying difference in NFP measures of performance when compared with similar for-profit measures. For example, financial concerns for an NFP may be focused on flexibility of resource usage rather than return on investment. Since NFPs may work with client caseloads, a performance measure may be related to the number of documents processed or response time tied to measures of customer satisfaction. Employee growth measures might relate to training levels or measures of expanding growth in job skills. Evaluations of internal business processes might trace the employee training to its innovative effect on older programs and the introduction of successful new programs.

NFP ACCOUNTING STANDARDS

These standards are established by the Financial Accounting Standards Board (FASB) or the Government Accounting Standards Board (GASB). Additionally, the American Institute of Certified Public Accountants (AICPA) influences the accounting for nonprofit organizations with its industry and accounting guides and Statements of Position (SOPs).

It may appear that the accounting methods used by NFPs are the same among all of them. Currently, this is not the case, however, because NFPs can be considered either "governmental" or "nongovernmental" NFPs for accounting purposes. The distinction is important because it affects the generally accepted accounting principles (GAAPs) to be followed—modified accrual for "government" organizations and accrual for "nongovernmental" organizations. Even among organizations classified "governmental" NFPs, the methods of accounting may differ.

A governmental NFP has one or more of the following characteristics (American Institute of Certified Public Accountants, *Not-for-Profit Organization*, par. 1.03, New York: AICPA, 1996):

1. Popular election of officers or appointment (or approval) of a controlling majority of the members of the organization's governing body by officials of one or more state or local governments.
2. The potential for unilateral dissolution by a government with net assets reverting to a government.
3. The power to enact and enforce a tax levy.

One of the most common characteristics that result in an NFP's being classified as a governmental NFP is that a majority of its board is appointed by a state or local government.

There are three different GAAP methods of accounting used to prepare financial statements for a nonprofit organization, depending on how it is classified. The choices are business accrual, nonprofit SOP accrual, and modified accrual. Governmental NFPs may use nonprofit SOP accrual or modified accrual methods of accounting. They would use nonprofit SOP accrual if they had been previously applying an SOP for nonprofit organizations or health and welfare organizations and decided to continue to use this method. These organizations have a choice of using either modified accrual or nonprofit SOP accrual.

The standard-setting organization that establishes modified accrual accounting standards for NFPs is the GASB. Nongovernmental NFPs follow the business accrual methods that are used by corporations. These accounting standards are set by the FASB. It should be clear that there are both governmental museums and nongovernmental museums, for example. This governmental/nongovernmental division is present among other NFPs, too. Therefore, if resources used in a program, for example, are compared between governmental/nongovernmental NFPs without adjustments for the accounting method in use, there can be serious misinterpretations.

There are other differences. Under accrual accounting for nongovernment NFPs, the Statement of Activities (income statement) uses the term "net assets" in place of "excess" or "deficiency," as is the case under modified accrual. Corporations call this the "net income." Typical revenue and expense items are included in the Statement of Activities, but nongovernmental NFPs also includes increases and decreases in restricted assets. Restricted assets are received grants or donations for which the organization has not completed its obligations under the grant or donation requirements. Thus, changes in restricted grants or donations are included in the calculation of *net assets*, whereas the *excess* or *deficiency* in a modified accrual statement for a governmental NFP does not include these items.

As an example, assume that Nonprofit A, a nongovernmental NFP, receives a restricted grant, and at the same time Nonprofit B, a governmental NFP, gets the same restricted grant. Under modified accrual accounting, the restricted grant is considered to be a liability because the terms of the grant have not been fulfilled. Under accrual accounting, it is not considered a liability; instead it is recorded as a revenue item. Under accrual concepts, the restricted grant is considered to be temporarily restricted, but its restrictions are assumed to be removed when expenditures are made under the grant. Because total revenues are different in the two hypothetical NFPs, the balances transferred to their respective balance sheets are also different.

On the balance sheet, another important difference is that the term "fund balance" is not used on an accrual-based balance sheet for a nongovernment NFP but is used on the balance sheet of a governmental NFP. A fund balance develops as a result of the difference between assets and liabilities. It represents the residual between those account groupings. For most funds, the balance in the Fund Balance is a source of additional appropriations. In the balance sheet for a nongovernmental NFP, the residual is termed "net assets." Net assets are a residual between assets and liabilities, but there is a difference. First, net assets are divided into unrestricted, temporarily restricted, and permanently restricted amounts. Permanently restricted net assets are those with a donor-related stipulation restricting the donated resources from being used and allowing only the income earned on the balance to be used. Temporarily restricted net assets are those donations that can be used for spending after the expiration of specific actions or the occurrence of a specified event. The remaining net assets are classified as unrestricted and include those resources that are typically found in the Fund Balance.

These classifications do not appear in the Fund Balance for a governmental NFP where all reserved amounts in the Fund Balance have been determined by the direct internal actions of managers, not by the external actions of granter or donors. Consequently, the Fund Balance reflects the summation of the appropriation process occurring inside the organization. Under modified accrual, the classifications within the Fund Balance show the restrictions on available *spendable* resources only. Reserve for Encumbrances and Designated Funds are examples of managerial restrictions of previously received appropriations that remain unexpended. Here, restricted grants are recorded as liabilities rather than as part of the residual, that is, the Fund Balance. This difference in the two methods is related to differing views about the resources that are actually available for spending.

Another difference between the methods is that accrual accounting for NFPs does not strongly support the fund concept whereby assets and related liabilities are grouped into self-balancing funds. Rather, accrual for NFPs views the entity's assets as being part of one entity rather than as separately grouped accounts for each fund. Modified accrual divides the organizational accounting activities into a series of separate funds that are viewed as separate entities within the organization. Separate funds make it easier to ensure that restricted monies and appropriations are being properly expended.

Obviously, the two methods support diverging accounting viewpoints. Accrual methods use a for-profit income measurement perspective that emphasizes proper matching of revenues and expenses within the correct time period. Modified accrual accounting emphasizes showing the amount of funding that is available for spending and clearly identifying that such funding has been properly used for the purpose for which it was intended. Thus, modified accrual does not emphasize profit determination, but rather fund availability and fund flows for expenditure purposes. The two systems do not even use the same terminology to refer to expended resources. Under accrual, the term "expenses" is used; whereas under modified accrual, the term "expenditures" is used.

Although both accrual and modified accrual accounting require a Balance Sheet and Income Statement, nongovernmental NFPs require a third financial report. For these organizations, a Statement of Cash Flows must be prepared. This statement shows how cash flowed into and out of the organization and analyzes the events that caused an increase or decrease in the cash balance from the beginning to the end of the year. Cash changes are shown as cash inflows or outflows from operations, investing activities, and financing activities. Operations are considered to be cash received from normal business operations with adjustments for the effects of depreciation, changes in receivables, payables, gains or loss on the sale of assets, and capital additions, for example. Investing activities refer to cash transactions such as sale of equipment, investments, or the purchase of buildings and equipment. Cash transactions related to obtaining or paying off notes, expired endowment transfers, and cash interest payments are considered financing activities. These three groupings help determine which types of activities are generating the cash inflows or causing cash outflows in the nongovernmental NFP.

With an accrual system, it is necessary to prepare a Statement of Cash Flows, too. Under modified accrual methods, this statement does not have to be prepared because modified accrual methods already closely correspond with cash methods.

Within this accounting framework of accepted accounting practices for NFPs, there are several real-world practices that are common. First, the small NFP of a larger government is usually considered to be a component unit of that larger governmental body. As a component unit, its financial reports may or may not be separately reported outside the larger governmental unit. In fact, the financial report produced for the NFP by the larger governmental unit may be aggregated with other component units. Consequently, the NFP's internal staff may prepare only separate financial reports issued by the NFP. As a result, the cash method of accounting may be in use. Unless these financial reports have been audited, there is little indication that they have followed GAAP.

The cash basis of accounting for NFPs is not considered to be GAAP, but the cash basis should not be ruled out immediately. If there is no significant difference between the cash system and one of the other methods of GAAP reporting, the cash basis may be acceptable to use. As a result, a fourth method of accounting may be acceptable for use.

G. Stevenson Smith

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OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

Prior to and during the early 1970s, workplace safety concerns became an issue in the United States. No consistent guidelines required employers to provide safe and healthful working environments. Workers were experiencing job-related injuries, and too often those injuries were fatal. To address these concerns, Congress enacted PL 91-596 (Occupational Safety and Health Act of 1970), which established the Occupational Safety and Health Administration (OSHA), a federal agency headed by an Assistant Secretary of Labor for Occupational Safety and Health. OSHA is functionally structured, with its major programs grouped into eight directorates (Administrative Programs, Construction, Compliance Programs, Federal-State Operations, Health Standards Programs, Policy, Safety Standards Programs, and Technical Support) as well as an Office of Statistics. Senior executive service members head these directorates and offices. Regional offices and subordinate area and district offices or service centers carry out various programs.

OSHA's mission, as set forth in the 1970 legislation, is to "assure . . . every working man and woman in the nation safe and healthful working conditions." Therefore, OSHA developed and implemented certain standards and enforcement procedures, as well as employers' compliance assistance plans to help employers achieve and maintain healthful and safe workplaces.

Organizations with ten or more employees are subject to OSHA regulation, and those not in compliance may suffer large fines. For instance, OSHA proposed fines of $46,300 against a steel firm where alleged safety violations cost two workers their lives (Kane, 1998). Since OSHA was created, workplace fatalities have decreased by half; but every day, according to Kane (1998), about seventeen Americans die on the job.

OSHA strives to create worker awareness of and commitment to resolving workplace safety and health issues by collecting and studying data to identify workplace safety and health problems, as well as achieving problem resolution through regulation, compliance assistance, and enforcement strategies. To enforce regulations, OSHA conducts unannounced, on-site inspections. Data on the OSHA Facts homepage indicate that 34,264 federal and 56,623 state inspections were conducted by OSHA during Fiscal Year 1997, and 87,710 federal and 147,610 state violations were documented. For both federal and state violations, approximately $147 billion in penalties were assessed.

While businesses agree that workplaces should be safe and healthy, many have experienced difficulty in meeting OSHA standards. Because small business owners have found OSHA standards to be financially constricting and consider OSHA penalties harsh, a reform movement is in progress. The House of Representatives has been considering incremental reform of the OSHA Act. On 17 March 1998, two bills (H.R. 2877 and H.R. 2864) concerning OSHA's consultation program and elimination of inspection and penalty quotas were approved; and on 27 March, the Workforce Protections subcommittee heard bills recommending peer review panels to oversee OSHA's rulemaking process, as well as protection from enforcement proceedings for employers meeting certain criteria. Additionally, the Safety Advancement for Employees (SAFE) Act approved in October 1997 exempts small business owners from OSHA fines for two years and allows third-party inspectors. Even with ongoing OSHA reform initiatives, no comprehensive reform bill requiring substantial change in OSHA's structure, procedures, or standards has been enacted.

More information is available from OSHA at U.S. Department of Labor, OSHA, Office of Public Affairs, Room N3647, 200 Constitution Ave. NW, Washington, DC 20210; (202) 693-1999; or http://www.osha-slc.gov/html/oshdir.html.

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Mary Jean Lush
Val Hinton

OFFICE LAYOUT

Office productivity is influenced by a number of factors, one of which is office layout. Because office layout influences the entire white-collar-employee segment of the organization, its importance to organizational productivity should never be underestimated. Office layout is based on the interrelationships among three primary factors: employees, flow of work through the various work units, and equipment.

Efficient office layout results in a number of benefits to the organization, including the following:

1. It affects how much satisfaction employees derive from their jobs.
2. It affects the impression individuals get of the organization's work areas.
3. It provides effective allocation and use of the building's floor space.
4. It provides employees with efficient, productive work areas.
5. It facilitates the expansion and/or rearrangement of work areas when the need arises.
6. It facilitates employee supervision.

Planning the layout tends to occur in two steps, a preliminary stage and a final stage.

PRELIMINARY PLANNING

When designing office layout, a number of factors need to be taken into consideration during the preliminary planning stage, which is generally carried out by administrative office managers, employees, or consultants. Among the factors to consider during preliminary planning are these:

Work flow: Studying the flow of work vertically and horizontally between individuals and work units is critical in designing office layout. The goal is to design a layout pattern in which work moves in a straight-line direction with minimal (if any) backtracking or crisscrossing patterns. The major source documents found within the various work areas are often considered in analyzing work flow.

Organization chart: Studying the organization chart, which visually depicts who reports to whom as well as the relationships among and between employees, is also considered in the preliminary planning stages. Generally, the organization chart helps determine which units should be physically located near one another.

Projection of number of employees needed in the future: Having a good understanding of the possibility of expansion helps assure that layout is designed to accommodate future growth. Among the factors to be considered are the potential need for additional work units as well as the number of additional employees likely to be needed in both existing work units and new work units.

Communication network: Studying the organization's communication network identifies who within the organization has considerable contact (either face-to-face or by phone) with whom. The more contact employees have, the greater is the likelihood that they or their work units need to be physically located near one another.

Departmental organization: Studying departmental organization also helps determine which departments should be placed in close proximity to one another. For example, those departments with significant responsibilities for the accounting and financial aspects of the firm should be located near one another; those with frequent contact with outsiders (personnel and sales, for example) should be located near the entrance to the structure; and noise-producing departments (copying/duplicating, loading dock, etc.) should be located near one another and away from areas where low noise levels are required.

Ratio of private to general offices: Increasingly, many organizations are opting for more general offices and fewer private offices. This trend probably helps reduce the amount of total office space needed, and it certainly facilitates the rearrangement of office areas. A number of advantages result from using general offices rather than with private offices. General offices are more economical to build than private offices; general offices make it easier to accommodate change in office layout; and it is easier to design efficient heating, cooling, and lighting systems for general offices.

Space requirements: The total amount of needed space is determined by the amount of space needed for each employee (including projections for growth) in each work unit as well as the amount of space needed for various specialized areas. The amount of space each employee needs is determined by the employee's furniture/equipment requirements, the location of such structural features as windows and pillars, and the employee's job functions and hierarchical position.

Specialized areas: Many organizations have a number of specialized areas that must be taken into consideration in the preliminary planning of office layout. Included are such needs as a reception area, board or conference rooms, a computer center, a mailroom, a printing/duplicating room, a central records area, and a storage area.

Safety considerations: A number of safety considerations play an important role in the preliminary planning of layout, including aisles/corridors of sufficient width, door openings, stairwells, and exits. Providing for quick evacuation of the premises in case of an emergency is a critical aspect of the preliminary planning of office layout.

Barrier-free construction: A number of federal laws require that office layout accomodate individuals with disabilities. The 1990 Americans with Disabilities Act requires "reasonable accommodation" of individuals with disabilities. Perhaps most significant in office layout is designing office/work areas in which individuals can easily maneuver wheelchairs.

Expansion: To stay abreast of developing space needs, many organizations undertake a yearly space analysis, just as they prepare a yearly budget. Doing so enables these organizations to be proactive rather than reactive in anticipating future space needs.

Equipment and furniture needs: The amount of equipment and furniture that needs to be accommodated in an organization must be taken into consideration during the preliminary planning of office layout. Failure to take these needs into consideration often results in inefficient office layout.

PLANNING OFFICE LAYOUT

Perhaps the most critical decision that will be made in planning office layout is whether private offices only or a combination of private and general office areas will be used. The trend is toward a minimum of private office areas and maximum use of general office areas. Typically, the general office areas make use of the open office concept, which overcomes a number of the disadvantages of conventional private offices. Whereas private offices tend to be based on the hierarchical structure of the organization, open office areas are based on the nature of the relationship between the employee and his or her job duties.

Open office planning takes into account the cybernetics of the organization, meaning that information flows and processes are considered in the design process. Information flows pertain to paper flow, telephone communications, and face-to-face interaction.

Three different alternatives are used in designing space around the open office concept. These include the modular workstation approach, the cluster workstation approach, and the landscape approach. In each case, panels and furniture components comprise work areas. Typically, the panels and furniture components are prewired with both electrical and phone connections, which considerably simplifies their installation. Panels are available in a variety of colors and finishes, including wood, metal, plastic, glass, carpet, and fabric.

Modular workstation approach. A prime characteristic of the modular workstation approach is the use of panel-hung furniture components to create individual work areas. Storage cabinets and files of adjustable height are placed adjacent to desks or tables. The design of modular workstations enables employees to have a complete office in terms of desk space, file space, storage space, and work-area lighting. Modular workstations are designed according to the specific job duties of their occupants.

In certain situations, the modular workstation approach is preferred to either of the other two open-space concepts. It is especially well suited for those situations that require considerable storage space, and the work area can be specifically designed around the specific needs of the user. Also, changes in layout can be made easily and quickly.

Cluster workstation approach. An identifying characteristic of the cluster workstation approach is the clustering of employee work areas around a common core, such as a set of panels that extend from a hub, much like the spokes in a wheel. The panels define each employee's work area, which typically includes a writing surface, storage space, and filing space. As a rule, cluster workstations are not as elaborate as either modular workstations or landscaped alternatives. Cluster workstations work well for situations in which employees spend a portion of their workday away from their work area.

Two distinct advantages of the cluster workstation are economics and the ease with which layout changes can be made. The cluster workstation is less expensive than either of the other two alternatives.

Landscape approach. Originally developed in Germany, office landscaping is now used extensively throughout the United States. In a way, office landscaping is a blend of the modular and cluster workstation approaches. One significant difference, however, is the abundant use of plants and foliage in the decor. Plants and foliage, in addition to being aesthetically pleasing, provide a visual barrier. Whereas both the modular and the cluster approaches tend to align the components in rows, landscaping arranges work areas in clusters and at different angles.

In its original form, landscaping eliminated all private offices. However, most organizations that make use of landscaping use a hybrid approach in which a ratio of 80 percent open office areas to 20 percent private offices is common.

In conventional office layout, status was accorded employees through their assignment of a private office. Because the open-space concept removes a considerable number of private offices, employees are accorded status through such other aspects as their work assignments, their job duties, the location and size of their work area, and the type and amount of furniture they are given.

PREPARING THE LAYOUT

The actual preparation of the layout is carried out using a variety of tools, including templates, cutouts, plastic models, magnetic boards, and computer-aided design (CAD). For more complex layout projects, CAD is most likely the tool of choice. For simple layout projects, any of the others work well. Regardless of which tool is used, a primary concern is making sure every aspect of the layout (perimeter, structural features, equipment and furniture components, etc.) is scaled properly and consistently.

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ZANE K. QUIBLE

OFFICE TECHNOLOGY

Office technology focuses on the office information functions, including word processing, data processing, graphics, desktop publishing, and communications. The backbone of technology-rich office environments is a local area network (LAN), which is a single-site computer network, or a wide area network (WAN), which can support worldwide work groups. These networks provide tools for users to transmit data, graphics, mail, and voice across a network. All office functions, ranging from correspondence, to multimedia presentations, to videoconferences, to automated records management, to technologies to support distributed work groups, depend on office technologies. Office technologies, such as keyboarding, dictation, filing, copying, fax, Telex, records management, and telephone and switchboard operations, are candidates for integration.

OFFICE SYSTEMS

Office technologies are integral components of office systems. Office systems exist to facilitate and retain communications, including the creation, processing, retention, and distribution of information. Office systems consist of tasks to be performed, procedures for completing tasks, a set of automated technologies designed to enhance productivity, and people working within the framework of an organizational structure. A compatible synergy among these components creates a smoothly functioning office operation that enhances the productivity and efficiency of the overall organization and contributes to the success of the business. Contributing factors to the synergy include integrated hardware components and integrated software applications.

With the advent of the PC (personal computer), office technologies have radically changed the way companies do business. Prior to the use of PCs in business, secretaries or administrative assistants typed letters, created reports, and organized information in files. Now most office workers have a PC and take responsibility for these functions, as well as many more. Employees key their own letters and e-mails, create spreadsheets, graphs, and multimedia presentations, and keep their files on computer networks.

Laptop computers are used by business travelers to make multimedia presentations, send and receive e-mail, do research on the Internet, play games, and create and send reports and spreadsheets. Laptop computers can also be used to take notes in meetings.

Voice-mail technology has also radically changed the way business is conducted. Voice mail has greatly reduced the need to have an employee answer the phone and take messages for others. Because messages are recorded on voice mail, workers can retrieve the communications and process them as time permits. The messages can be forwarded to other employees, saved, or deleted. An option on some messaging systems is sending messages to groups of people.

Caller-identification became available in the mid-1990s as an option on office telephone systems. This innovation allows the caller to be identified by name and number before the telephone is answered. Some office systems have caller-i.d. only for internal telephones, while other companies have systems that identify callers from outside the company as well.

OFFICE TECHNOLOGIES SUPPORT ALL TYPES OF BUSINESSES

So many office systems functions today depend on office technology that it is difficult to imagine accomplishing all the necessary tasks without them. Sophisticated office technologies are available to support a wide range of businesses.

Independent Entrepreneurs and Small Businesses From a desktop computer, a home-based independent entrepreneur may conduct business locally and worldwide using e-commerce via the Internet. Affordable, high-quality office technology for copying, faxing, and printing is available for small businesses. In fact, some multifunction machines incorporate all these features into one system. Phone, pager, and voice-mail services are provided using cellular telephones via digital network systems.

The most widely used office software packages include word processing, desktop publishing, spreadsheet, database, presentation graphics, personal information management, accounting, project management, e-mail, and Internet browser software. These applications are available as integrated solutions software, rather than independent applications. The integration capabilities lead to increased efficiencies and higher productivity, provided users are trained well to maximize the power and flexibility available using these automated office tools. Integration between applications supports the following features: common documentation, automatic updating, mail merge, multiple open files, networking capability, ease of use and learning, and common error handling.

Large Businesses and Multinational Organizations The range of office technologies available to support large businesses and multinational organizations is vast and continues to grow. WANs and LANs enable distributed work teams to complete projects using groupware and decision support systems. They provide access to large corporate databases and records management systems to support research, reporting, budgeting, and forecasting. Examples of the types of technologies available and their uses are discussed here.

TYPES OF TECHNOLOGIES

The following section describes various types of office technologies.

Intranets and Extranets An intranet is an internal computer network that is basically a small version of the Internet used within a company. Intranets, which are sometimes called enterprise networks, use Web technologies and the Internet to communicate information to the company employees. Users can post and update information on the intranet by creating and posting a Web page, similar to the method used on the

Internet. Examples of information that might be posted include telephone directories, event calendars, procedure manuals, e-mail, job postings, and employee benefits information. Additional uses of an intranet might include group scheduling and videoconferencing.

An extranet is a company's intranet that extends to authorized users outside the company. It is used to facilitate communications among the company's suppliers or customers. An example might be an airline that would allow travelers and their companions to access flight information for on-time arrivals or delays for specific flights.

Groupware and Decision Support Systems Groupware is software that supports the work of a group. The three major functions are document formatting, information management, and wide area communication. An electronic calendar is used to keep a group informed, on schedule, and coordinated. It tracks management objectives and goals, arranges meetings, sends reminders, and warns when a project falls behind schedule. Groupware also runs an electronic mail network that links the work group with remote operations. It also includes an information system to handle all data relevant to the business and to make this data instantly available throughout the organization. Decision support systems facilitate group decision making by providing a formalized process for brainstorming, distilling key concepts, prioritizing or ranking topics, and achieving group consensus. These systems facilitate the work of project teams distributed worldwide.

Videoconferencing and Teleconferencing A videoconference is a meeting between two or more geographically separated individuals who use a network or the Internet to transmit audio and video data. To participate in a videoconference, a microphone, speakers, and a video camera are necessary. Any image in front of the video camera, such as a person's face or visual aid, displays in a window on each participant's video screen. Another window on the screen, called a whiteboard, that displays notes and drawings simultaneously on all the participants' screens provides multiple users with an area on which they can write or draw. This is becoming a cost-effective way to conduct business meetings, corporate training, and educational classes.

Teleconferencing links a number of people from a number of geographical locations to discuss topics via audio contact. For example, telephones with speakers could be used in two or more locations with one or more participants per location to conduct a meeting. Teleconferences are sometimes used for project progress reports or to discuss alternative strategies for problem resolution among team members distributed geographically.

Multimedia Multimedia integrates text, graphics, animation, audio, and video. Multimedia applications are used for business and education in the office environment. Marketing presentations are developed to advertise and sell products using multimedia. Using a computer, a video projector, and a display screen, presentations can be made to large and small audiences. Interactive advertisements as well as job applications and training applications can be published on the Internet or in kiosk displays.

Computerized Records Management Records management involves managing and controlling office information. Typical applications include maintaining a records center, tracking active and inactive records, making note of vital records, creating archives or historical records, and developing a record retention schedule.

The processing capabilities and storage capacity of computers have made electronic storage and retrieval of information a common practice in business. Computer-generated document management, records management software, and imaging systems assist businesses with large volumes of records. Imaging systems convert all types of documents to digitized electronic data that can be stored and retrieved readily.

These systems include a scanner that converts the paper document to a digitized form, a processor that compresses the image, a storage medium to retain the image, a retrieval mechanism to convert the image for viewing on a monitor, and an output device that processes the image to hard-copy format. Laser optical disks are well suited for high-volume record management because of their high capacity and durability.

Micrographics is the process of creating, using, and storing images and data in microform. The most common type of microform is microfilm. Images, reduced in size, are stored on reels, in cartridges, on cassettes, on aperture cards, on microfiche, and in jackets. Information stored in a computer can be converted to microfilm. Computer output microfilm (COM) is imaged directly from magnetic media. The electrical impulses on the media are converted to visual images and stored on microfilm. Computer input microfilm (CIM) can be converted to electrical impulses, stored on magnetic media, and used as input. CIM can be used to introduce information from a large microfilm file, such as census data, into a computer for processing. Computer-assisted retrieval (CAR) systems are used for high-speed microform indexing and retrieval.

For many businesses, manual records management systems are still the norm. Businesses use one or more of the five basic filing methods—alphabetic, subject, numeric, geographic, and chronological—to store records in vertical and lateral files, open-shelf files, and rotary files. Good records management practices include establishing complete archives, developing retention schedules, and using timelines for transferring records to permanent storage.

Reprographics Reprographics is the multiple reproduction of images. Reprographics today involves the use of two primary types of equipment: copiers and duplicators. Copiers use an image-forming process similar to a camera to create copies directly from existing originals. Duplicators make copies from masters on special paper that must be prepared before copies are reproduced.

Telephone Systems PBX (private branch exchange) and PABX (private automatic branch exchange) systems are telephone switching systems used by larger businesses. A PBX requires a full-time operator, whereas a PABX may be attended or unattended. Calls are automatically distributed to the proper extension in the order in which they were received by an unattended, cordless switchboard. Voice mail is usually included with these telephone systems. In addition, voice recognition may also be a feature, which allows a caller to choose among various options within the voice mail by simply saying a number.

Security A firewall is used to restrict the access to data and information on a network. A firewall is composed both of equipment and software. Companies use firewalls to deny access to the network to outsiders and to restrict employees' access to sensitive data such as payroll or personnel records.

A computer virus is a potentially dangerous computer program designed to cause damage to other computer files. Viruses can spread by users sharing files. These files may be on floppy disks, e-mail, or the Internet. Programmers create viruses for specific purposes, sometimes for a harmless prank, such as scrolling a note across a computer screen, but sometimes for the purpose of destroying or corrupting other files. Viruses have become a significant problem in recent years. The increased use of networks, the Internet, and e-mail has increased the opportunity for viruses to spread as users share files more easily.

An anti-virus program protects a computer from viruses. It functions by scanning for programs that attempt to modify operating systems files or other files that normally are not changed.

Swipe cards, cards with magnetic strips similar to those on credit cards, provide security in offices because they limit access to restricted areas. Employees who need to access the office after hours or to enter secure areas, such as those housing the company's server computers, may use swipe cards.

TV surveillance cameras are used to record people as they enter, exit, and move about the office. Unauthorized access to certain offices or areas is recorded on videotape and may be used when documenting the occurrence. Picture badges are used to identify company employees.

COMMUNICATION IN ORGANIZATIONS

All these office technologies facilitate communication among people in organizations. Increasingly, organizations need personnel with good communication skills—interpersonal, written, verbal, listening skills. They also need personnel who exercise good judgment about which method and medium for communication is most appropriate for a given situation, as well as the technical expertise to use the various office technologies available.

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Linda J. Austin
Debbie Hughes

OLIGOPOLY

An oligopoly is an intermediate market structure between the extremes of perfect competition and monopoly. Oligopoly firms might compete (noncooperative oligopoly) or cooperate (cooperative oligopoly) in the marketplace. Whereas firms in an oligopoly are price makers, their control over the price is determined by the level of coordination among them. The distinguishing characteristic of an oligopoly is that there are a few mutually interdependent firms that produce either identical products (homogeneous oligopoly) or heterogeneous products (differentiated oligopoly).

Mutual interdependence means that firms realize the effects of their actions on rivals and the reactions such actions are likely to elicit. For instance, a mutually interdependent firm realizes that its price drops are more likely to be matched by rivals than its price increases. This implies that an oligopolist, especially in the case of a homogeneous oligopoly, will try to maintain current prices, since price changes in either direction can be harmful, or at least nonbeneficial. Consequently, there is a kink in the demand curve because there are asymmetric responses to a firm's price increases and to its price decreases; that is, rivals match price falls but not price increases. This leads to "sticky prices," such that prices in an oligopoly turn out to be more stable than those in monopoly or in competition; that is, they do not change every time costs change. On the flip side, the sticky-price explanation (formally, the kinked demand model of oligopoly) has the significant drawback of not doing a very good job of explaining how the initial price,

McDonald's bases its pricing on its rivals' prices.

which eventually turns out to be sticky, is arrived at.

Airline markets and automobile markets are prime examples of oligopolies. We see that as the new auto model year gets under way in the fall, one car manufacturer's reduced financing rates are quickly matched by the other firms because of recognized mutual interdependence. Airlines also match rivals' fares on competing routes.

In oligopolies, entry of new firms is difficult because of entry barriers. These entry barriers may be structural (natural), such as economies of scale, or artificial, such as limited licenses issued by government. Firms in an oligopoly, known as oligopolists, choose prices and output to maximize profits. However, firms could compete along other dimensions as well, such as advertising, location, research and development (R&D) and so forth. For instance, a firm's research or advertising strategies are influenced by what its rivals are doing. When one restaurant advertises that it will accept rivals' coupons, others are compelled to follow suit.

The rivals' responses in an oligopoly can be modeled in the form of reaction functions. Sophisticated firms anticipating rivals' behavior might appear to act in concert (conscious parallelism) without any explicit agreement to do so. Such instances pose problems for antitrust regulators. Mutually interdependent firms have a tendency to form cartels, enabling them to coordinate price and quantity actions to increase profits. Besides facing legal obstacles, cartels are difficult to sustain because of free-rider problems. Shared monopolies are extreme cases of cartels that include all the firms in the industry.

Given that mutual interdependence can exist along many dimensions, there is no single model of oligopoly. Rather, there are numerous models based on different behavior, ranging from the naive Cournot models to more sophisticated models of game theory. An equilibrium concept that incorporates mutual interdependence was proposed by John Nash and is referred to as Nash equilibrium. In a Nash equilibrium, firms' decisions (i.e., price-quantity choices) are their best responses, given what their rivals are doing. For example, McDonald's charges $2.99 for a Value Meal based on what Burger King and Wendy's are charging for a similar menu item. McDonald's would reconsider its pricing if its rivals were to change their prices.

The level of information that firms have has a major influence on their behavior in an oligopoly. For instance, when mutually interdependent firms have asymmetric information and are unable to make credible commitments regarding their behavior, a ''prisoner's dilemma'' type of situation arises where the Nash equilibrium might include choices that are suboptimal. For instance, individual firms in a cartel have an incentive to cheat on the previously agreed-upon price-output levels. Since cartel members have nonbinding commitments on limiting production levels and maintaining prices, this results in widespread cheating, which in turn leads to an eventual breakdown of the cartel. Therefore, while all firms in the cartel could benefit by cooperating, lack of credible commitments results in cheating being a Nash equilibrium strategy—a strategy that is suboptimal from the individual firm's standpoint.

Models of oligopoly could be static or dynamic depending upon whether firms take intertemporal decisions into account. Significant models of oligopoly include Cournot, Bertrand, and Stackelberg. Cournot oligopoly is the simplest model of oligopoly in that firms are assumed to be naive when they think that their actions will not generate any reaction from the rivals. In other words, according to the Cournot model, rival firms choose not to alter their production levels when one firm chooses a different output level. Cournot thus focuses on quantity competition rather than price competition. While the naive behavior suggested by Cournot might seem plausible in a static setting, it is hard to image real-world firms not learning from their mistakes over time. The Bertrand model's significant difference from the Cournot model is that it assumes that firms choose (set) prices rather than quantities. The Stackelberg model deals with the scenario in which there is a leader firm in the market whose actions are imitated by a number of follower firms. The leader is sophisticated in terms of taking into account rivals' reactions, while the followers are naïve, as in the Cournot model. The leader might emerge in a market because of a number of factors, such as historical precedence, size, reputation, innovation, information, and so forth. Examples of Stackelberg leadership include markets where one dominant firm dictates the terms, usually through price leadership. Under price leadership, the leader firm's pricing decisions are consistently followed by rival firms.

Since oligopolies come in various forms, the performance of such markets also varies a great deal. In general, the oligopoly price is below the monopoly price but above the competitive price. The oligopoly output, in turn, is larger than that of a monopolist but falls short of what a competitive market would supply. Some oligopoly markets are competitive, leading to few welfare distortions, while other oligopolies are monopolistic, resulting in deadweight losses. Furthermore, some oligopolies are more innovative than others. Whereas the price-quantity rankings of oligopoly vis-à-vis other markets are relatively well established, how oligopoly fares with regard to R and D and advertising is less clear.

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Rajeev K. Goel

OPERATIONAL STRATEGIES

(SEE: *Strategic Management*)

OPERATIONS MANAGEMENT

An important element of any business system is management, whether an individual or a team performs it. In our society, we no longer think of company management in terms of one person acting as the entrepreneur, but rather as a team effort. Each member possesses specialized knowledge and understanding of one functional area of the business system and is by temperament and training able to work cooperatively with other members of the team toward a common goal.

Whatever the system or organization, the functions of management are always the same: (1) designing, (2) planning, (3) organizing, (4) directing, and (5) controlling. Management establishes the goals and objectives of the firm or organization and plans how to attain them. It is management that organizes the system and directs it so that its goals can be reached. Finally, management must be able to analyze the working of the system in order to control it and to correct any variations from the planned procedures in order to reach the predetermined goals. These functions interact with one another and managers must be skilled in these coordinating processes and functions if they are to accomplish their goals through the efforts of other people.

The concepts of managerial functions has some hidden difficulties when one attempts to apply them to a specific managerial job. First, one cannot tell which functions are most important and how much time must be allocated to each. All functions are important parts of a manager's job, but the significance attached to each one may vary at different times, such as at different stages of a product life cycle. Furthermore, the significance of each function varies at different management levels in the same organization. Operations management, for example, is more focused on directing and controlling than on planning or organizing.

All organizations have operations. Operation management, or technical management, is comprised of department managers and persons with professional technical competence. This level is oriented downward to basic operations, such as producing goods and moving them out the door. A manufacturing company may conduct operation in a mill or factory. The driving force in operations management must be an overriding goal of continually improving service to customers, where "customer" means the next process as well as the final, external user. Since there is an operations element in every function of the enterprise, all people in all jobs in every department of the organization should work together for the improvement of their own operations management elements. It is important to note that the technical expert often seeks recognition from peers and colleagues rather than from managers at the administrative level.

INPUT

The *input* of a system depends on its specific objective. What raw materials will yield the desired output? If one were to visually illustrate a system, the input would be shown as the components vital to it. A television repairperson needs a diagram of a TV set in order to repair it, or an auditor might need a flowchart of a company's accounting system to check for possible diversion of funds. If a system is designed to maintain a state, the input is information or feedback concerning the essential variable that must be maintained. If the purpose of a system is to make a decision, the input is relevant information about the problem. In a production system, the input consists of raw material, labor, and other manufacturing costs that are combined in the final product.

TRANSFORMATION

After input is established the input, it is necessary to *transform* it into a desirable output. In business, the transformation operation is extremely important. Manufacturing, marketing, and distribution must be studied and known in detail. However, there are some areas in which little is known. In a business system, for example, one must consider the way people act and react. Often behavior is placed in this gray area because so little is known about what motivates it. Also, for some people in an organization it may not matter how something works, while others may be vitally interested. A manager may not care how a report gets to him or her, but an accountant would be concerned with all the steps in gathering data, preparing the report, and communicating it to the manager. Thus, in studying any transformation operation, it is important to know the reliability of the process and who is interested in it. This system will vary depending on the output.

OUTPUT

In one sense, *output* is the quality and quantity of the services and goods produced. In another sense, output may be thought of as the payments made for all the factors of production used. In the first sense, the entire system of the firm is designed to produce something that is desired in a market. Consumers want and seek out goods and services that will make their lives happier, more comfortable, healthier, longer, and so on. In order to produce those goods and services, the firm needs inputs. What may be output for one business may be input for another.

In the second sense, output is converted into revenue for the firm that is used to compensate the owners for the risks they have taken, management for its role in producing the revenue, and employees for their role in producing the good or service; it is also used to pay interest for the use of borrowed capital and wages for labor. Rent must be paid for the use of land; goods and materials used in production must be paid for; and taxes must be paid to the government. The output is the result of the system and is closely related to its objective. Output will accomplish or help to accomplish the specific objective if the system has been designed correctly.

FEEDBACK

All systems should include *feedback*. When an input is received in the system and undergoes a transformation operation, the result or output is then monitored and transmitted for comparison with a standard. If there is variation between the output and the standard, suitable action can be taken to correct the variation.

A business organization with many systems that range from very simple to very complex requires a much more complicated feedback network. Information must be communicated from person to person and from one part of the organization to another. In fact, the original data may be transformed many times before it reaches its final destination. Each of these transformations is subject to feedback.

Feedback can be defined as knowledge of results. Three basic types of feedback are needed: informational feedback, corrective feedback, and reinforcing feedback. The flow of information in an organization should be two-way—from managers to workers as well as vice versa. In contrast to informational feedback, corrective feedback is evaluative and judgmental. An effective manager will not only point out mistakes but also get the individual worker headed in the right direction by means of corrective feedback. Positive consequences or reinforcements are one key to desired performance. In other words, reinforcing feedback is a prime means of achieving growth in job performance.

PRODUCTION MANAGEMENT

Products can be classified in many ways and their distribution can take many forms. But the essence of *production management* is that the factors of production—land, labor, and capital—are transformed by management from raw materials into something finished, something to be used, or something to be sold profitably in order to keep the business in operation.

Before production can be started, the firm must determine what kind of product it can profitably produce. Management must decide what markets the product will satisfy, what materials it will contain, what processes will be required to form it, by what means it can be transported, and what quality and quantity of labor will be needed to produce it. Knowledge of all this provides direction to the planning and organization of manufacturing.

Once the firm has decided on the basic product or service to produce, design and development can begin. Planning the product involves all parts of the business system. The marketing department may discover the need for a new or improved product, and the production department may then determine whether it can manufacture the product for sale at a given price. The finance department then decides whether the venture will be profitable and whether financing is available to cover the costs of development, manufacturing, and distribution. Such product planning determines whether development and design will go forward.

The process of refining a product to a finished form sheds further light on the problems of manufacture: the equipment, raw materials, and fabricated parts that will be required, as well as the flow of production. Planning for production actually starts as soon as the decision is made to develop and design a product.

Production management makes suggestions for manufacturing that will save time, effort, and money without impairing the design of the product. Production management is very complex. Decisions must be made about labors, money, machinery, and materials. Inventories of parts must be maintained, and proper machinery and equipment must be combined with labor. All these activities, although performed within the production system, must be closely coordinated with the overall system of the firm.

Production managers are involved in many diverse areas. They are concerned with all the peripheral aspects of production and must be able to manage workers, materials, and machines in a changing environment.

Why is productivity so important? The basic reason is that productivity is a measure of the efficiency with which a person, business, or entire economy produces goods and services. It is a key indicator of a nation's economic strength. In general, the concept of productivity refers to a comparison of the output of a production process with one or more of its inputs. Thus, productivity may mean different things in different situations.

Manufacturing is simply a special form of production by which raw and semifinished materials are processed and converted into finished products needed by consumers. In a broader and more basic sense, production is the transformation of inputs from human and physical resources into outputs desired by consumers. These outputs may be either goods or services. The production of services is often called operations management.

We are now entering an era in which production and corporate management are becoming recommitted to one of the basics of business: making a better product faster and cheaper. This effort is important because the great bulk of assets used in manufacturing companies—capital invested, people employed, and management time—are allotted to the production function of the business rather than to marketing or finance. This situation is also true in service firms.

The organization for manufacturing depends on the complexity of the products manufactured and the size of the company. In a large company the manufacturing organization has divisions such as engineering, production control, inspection, and purchasing. The success of a product depends on the proper development and management of the product.

CONCLUSION

Management is universal. When more than one person is concerned with a goal, there is need for a process by which this goal can be attained. Management is active in every part of business and at every level. Its functions are performed in every department and in every function of the business. The practice of operations management is a continuous process of problem solving and decision making. The functions of management are based on the ability to make decisions and then to carry out all the implications of those decisions.

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JANEL KUPFERSCHMID

OPPORTUNITY COST

One of the lamentable facts of life is that nobody can have everything that he or she wants. This is due, in part, to scarce resources. Whether a teenager with a part-time job or a wealthy businessperson, no single person owns all of the money in the world. Furthermore, there are only twenty-four hours in a day, and seven days in a week. Time and money are only two of the many resources that are scarce in day-to-day living.

Unfortunately, because of these limits, individuals have to make choices in using scarce resources. One can use his or her time to work, play, sleep, or pursue other options. Or, one can select some combination of possible activities. People can't spend twenty-four hours a day working, twenty-four hours a day playing, and twenty-four hours a day sleeping. People can choose to spend their salary on a nice house, an expensive vacation, or on a yacht, but they probably can't afford all three. They must make choices with their limited resources of money.

In making choices for using limited resources, it is reasonable to evaluate the costs and benefits of all possible options. For instance, suppose one has been trying to decide how to spend the next few years of one's life. He or she has narrowed the options down to two: (1) working at a full-time job, or (2) becoming a full-time student. Going to school will cost approximately $12,000 per year in tuition, books, and room and board at the local state university for the next four years. In addition, he or she will forego the salary of a full-time job, which is $24,000 per year. This makes the total cost of going to school $36,000 per year. In return he or she gets the pleasure, social interaction, and personal fulfillment associated with gaining an education, as well as the expectation of an increase in salary through the remainder of his or her work life.

The question that must be answer is, "do the benefits of education outweigh the costs?" If they do, school should be selected. If the costs are greater than the benefits, the full-time job should be kept.

An "opportunity cost" is the value of the next-best alternative. That is, it is the value of the option that wasn't selected. In the example, if the person had chosen to keep your job, then the opportunity cost is the benefit of going to school, including the intangible benefits of pleasure, social interaction, and personal fulfillment as well as the tangible benefit of an increased future salary for their remaining working life. If the person had chosen to go to school, then the opportunity cost is the $24,000 per year that would have been earned at the full-time job.

One way of visualizing this concept is through the use of a production possibilities curve—a graph that relates the tradeoff between two possible choices, or some combination of the possibilities. Consider a very simple possible economy for a country. This country can produce two goods: guns (i.e., defense) or butter (i.e., consumer goods). If this country has historically used all of its resources to produce guns then it may be willing to consider allocating some of its resources to the production of butter. Initially, the resources that are least effective in producing guns (e.g., farmland) will be reallocated to the production of butter. Thus, the country doesn't forfeit many guns to produce a relatively large amount of butter. However, as the country reallocates more resources to the production of butter they are decreasingly productive. At the extreme, when the country gives up the last of its production of guns, the resource is very good for producing guns and not very useful in the production of butter (e.g., a high-tech armaments production facility). Figure 1 demonstrates this situation graphically in showing an example of the production possibilities curve.

In Figure 1, everything on the curved line or in the gray area is a possible production combination of guns and butter in the simple economy. Any combination on the line uses all of the available resources, while any combination in the gray area is considered inefficient since it does not use all of the available resources. Any combination in the white area is impossible to achieve, given the country's resource limitations.

The idea that the country will initially reallocate its least productive resource to the production of the other good is known as the *law of increasing opportunity cost.* Thus, if the production of the initial ton of butter costs five hundred guns, then the next ton of butter, which uses resources that are better at producing guns, will cost more guns. The next ton of butter will cost still more guns, and so on. This is represented in Figure 1 by the changing slope of the production possibilities curve.

SUMMARY

Because resources are limited, choices must be made. When evaluating choices in this decision-making process, one attempts to select the best option; that is, one selects the option that offers the most benefit for the costs incurred, and which are possible given any constraints. This is true for individuals, businesses, or countries, though the decisions that each entity makes are vastly different. The second best option is called the opportunity cost and is what is given up when decisions are made.

DENISE WOODBERRY

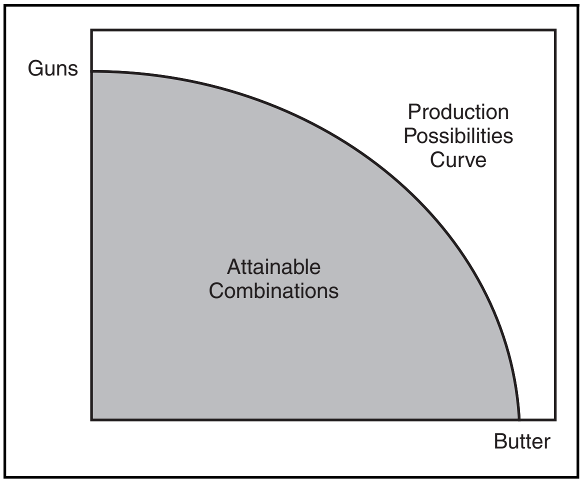

Figure 1

ORGANIZATIONAL BEHAVIOR AND DEVELOPMENT

The discipline of organizational behavior is concerned with identifying and managing the attitudes and actions of individuals and groups, looking particularly at how people can be motivated to join and remain in the organization, how to get people to practice effective teamwork, how people can accomplish their jobs more efficiently, and how employees can be encouraged to be more flexible and innovative. Attention is brought to these attitudes and actions in order to help managers identify problems, determine how to correct them, and change behavior so that individual performance and ultimately organization effectiveness increase.

As a field of study, organizational behavior is built on a succession of approaches or ways of thinking about people. Since the early 1900s those who studied behavior in organizations have attempted to prescribe ways to effectively manage employees in order to achieve the organization's goals. The early approaches, referred to as the classical view, promoted increased management coordination of tasks, strict specialization and standardization of work tasks, a strict chain of command, and centralized decision making at the manager level. During the 1920s and 1930s the next new school of thought began to emerge, which was referred to as the human relations movement. By and large this movement began with the famous Hawthorne studies at the Western Electric plant that demonstrated how psychological and social processes could affect productivity and work behavior. This new way of thinking looked at organizational behavior by advocating a more people-oriented style of management that was more participative and oriented toward employee needs. Contemporary organizational thought has shifted to a more integrative systems approach, which includes the consideration of external influences; the relationship of the organization with managers and employees; and organizational processes, which are the activities through which work gets accomplished. In other words, the best solution for the situation depends on many factors. The organization is depicted as a number of interrelated, interdependent, and interacting subsystems that are continually changing.

Those who managed by the classical approach emphasized the critical role of control and coordination in helping organizations to achieve goals. Those who managed by the human relations approach considered the risks of high levels of control and coordination, focusing instead on the need for flexibility. So where do today's managers fit in? A contemporary approach to management recognizes that there is no one best way to manage; management approaches need to be tailored to fit the situation.

The manager's role is to effectively predict, explain, and manage behavior that occurs in organizations. Particularly, managers are interested in determining why people are more or less motivated or satisfied. Managers must have a capacity to observe and understand the behavior patterns of individuals, groups, and organizations; to predict what responses will be drawn out by managerial actions; and ultimately to use this understanding and eventual predictions to effectively manage employees. Behavior can be examined on three levels—the individual, the group, and the organization as a whole. Managers seek to learn more about what causes people—individually or collectively—to behave as they do in organizational settings. What motivates people? What makes some employees leaders and others not? How do people communicate and make decisions? How do organizations respond to changes in their external environments?

Although it may be said that the responsibility for studying organizational behavior rests with researchers, assessing and increasing organizational effectiveness is a primary responsibility of managers. They need to collect data about the environment in which people work and describe events, behaviors, and attitudes in order to develop plans for changing and improving behavior and attitudes. Managers can begin to understand organizational behavior by accurately describing events, behaviors, and attitudes. How can this be accomplished?

Data can be gathered by observing situations, surveying and interviewing employees, and looking at written documents. These methods help to objectively describe events, behaviors, and attitudes—a first step in determining their causes and then acting on them.

By direct observation, for example, managers can attend meetings and then describe what is happening, such as who talks most often, what topics are discussed, or how frequently those attending the meeting ask for the managers' viewpoint on the topic. In addition, survey questionnaires could be sent to employees; these might provide concrete data about the situation, proving more useful than relying solely on personal perception of events. Sending the same questionnaire to employees each year could provide some insight into changes in behavior and attitude over time. Employees could also be interviewed in order to examine attitudes in greater depth. Some valuable information about attitudes and opinions may also be gathered by talking informally with employees.

Finally, data could be gathered from organizational documents, including annual reports, department evaluations, memoranda, and other nonconfidential personnel files. An analysis of these documents might provide some insight into the attitudes of employees, the quality of management, group interactions, or other possible reasons behind the problems or situation.

ORGANIZATIONAL DEVELOPMENT

Organizational development (OD) is a planned, ongoing effort by organizations to change in order to become more effective. The need for organizational change becomes apparent when a gap exists between what an organization is trying to do and what is actually being accomplished. OD processes include using a knowledge of behavioral science to encourage an organizational culture of continual examination and readiness for change. In that culture, emphasis is placed on interpersonal and group processes. The fact that OD links human processes such as leadership, decision making, and communication with organizational outcomes such as productivity and efficiency distinguishes it from other change strategies that may rely solely on the principles of accounting or finance.

The fact that OD is planned distinguishes it from the routine changes that occur in the organization, particularly through a more effective and collaborative management or organization culture with special emphasis on forming work teams. The focus on interpersonal and group processes to improve performance recognizes that organizational change affects all members and that their cooperation is necessary to implement change.

The forces compelling an organization to change can be found both inside and outside the organization. Internal forces toward change can affect changes in job technology, composition of the work force, organization structure, organizational culture, and goals of the organization. There are a variety of external forces that may require managerial action: changes in market conditions, changes in manufacturing technology, changes in laws governing current products or practices, and changes in resource availability.

An organization can focus OD change efforts in several areas: changes to structure, technology, and people using a variety of strategies for development. Some of the more common techniques for changing an organization's structure include changes in work design to permit more specialization or enrichment, clarification of job descriptions and job expectations, increase or decrease of the span of control, modification of policies or procedures, and changes in the power or authority structure. Another general approach to planned change involves modifications in the technology used as tools to accomplish work. The assumption behind enhancing technology is that improved technology or work methods will lead to more efficient operations, increased productivity, or improved working conditions. Examples of technological approaches to change include changing processes for doing work, introducing or updating computers or software, and modifying production methods. The third general approach to change focuses on the people in the organization. This approach is intended to improve employee skills, attitudes, or motivation and can take many forms, such as introducing training programs to enhance work skills, increasing communication effectiveness, developing decision-making skills, or modifying attitudes to increase work motivation.

ORGANIZATIONAL DEVELOPMENT STRATEGIES

Choosing the appropriate approach to organizational change depends on the nature of the problem, the objectives of the change, the people implementing the change, the people affected by the change, and the resources available. Several strategies are often thought of as effective techniques for organization development: reengineering, team building, total quality management, job enrichment, and survey feedback.

Reengineering is the sweeping redesign of organizational processes to achieve major improvements in efficiency, productivity, and quality. What makes reengineering so far-reaching is that it goes beyond just modifying and altering existing jobs, structures, technology, or policies. This approach asks fundamental questions, such as: What is the purpose of our business? If this organization were being created today, what would it look like? Jobs, structure, technology, and policies are then redesigned according to the answers to these questions.

As part of the OD process, teams are used as a way of responding quickly to changing work processes and environments; they are encouraged and motivated to take the initiative in making suggestions for improving work processes and products. The term *team* can refer to intact work groups, new work units, or people from different parts of an organization who must work together to achieve a common goal. Often team building begins with a diagnostic session, held away from the workplace, where the team's members examine their strengths and weaknesses. The goal of team building is to improve the effectiveness of work teams by refining interpersonal interactions, improving communication, and clarifying goals and tasks in order to improve overall effectiveness in accomplishing goals. In ideal circumstances, team building is a continual process that includes periodic self-examination and development exercises. Managers must continually develop and maintain strategies for effective team performance by building trust and keeping lines of communication open.

Effective teams are generally attractive to others and cohesive. The extent to which people want to belong to the team makes the team more attractive to others. If others see the team as cooperative and successful, they are more willing to belong. Teams are seen as less appealing if the group's members feel that unreasonable demands are made on them, if the group is dominated by a few members, or if competition exits within the group. A cohesive team exhibits strong interpersonal interaction among its members as well as, increased performance and goal accomplishments.

Reengineering efforts place a strong emphasis on teamwork with the intent of fostering collaboration to accomplish a goal, to resolve problems, and to explore alternatives. These teams can be traditionally managed by an appointed leader or manager or self-managed. Self-managed teams work without an official leader and therefore share responsibility for managing the work team. Managers continue to coach the team, develop strategies for improving performance, and provide resources even though they may not direct the daily activities of the team.

Total quality management (TQM) is the term used to describe comprehensive efforts to monitor and improve all aspects of quality within a firm. Teamwork plays a major role in quality improvement. Total quality management efforts could include employee training, identification and measurement of indicators of quality, increased attention to work processes, and an emphasis on preventing errors in production and service. What is the connection between TQM and OD? Both require a high degree of employee commitment, involvement, and teamwork. Many decisions must be made at the level where the work is accomplished, and managers must be willing to give employees this power. Managers empower employees to make decisions and take responsibility for their outcomes.

Job enrichment is often thought of as a technique of OD. It involves changing a job by adding additional tasks and by adding more responsibility. The widespread use of self-managed teams results in significant job enrichment. By the mere definition of *self-managed teams*, employees are now being asked to perform new tasks and exercise responsibilities within the team that they haven't had to perform before.

Survey feedback involves collecting data from organizational members; these data are then shared with the members during meetings. In these meetings suggestions for formulating change are made based on the trends that emerge from the data. Survey feedback is similar to team building; however, the survey strategy places more emphasis on collecting valid data than on the interpersonal processes of work teams.

OD EFFORTS AND CHANGE

The success or failure of planned change depends not only on the correct identification of the problem but also on recognition of possible resistance to change. It is critical to the successful achievement of organizational development efforts for the manager to recognize the need for change, diagnose the extent of the problems that create this need, and implement the most effective change strategy. Successful OD efforts require an accurate analysis of the needed changes and an identification of the potential resistance to the proposed changes. Two critical points should be addressed concerning the areas in which organizations can introduce change. First, changes made in one area often trigger changes in other areas as well. Managers and those proposing the change must be aware of this systemic nature of change. Second, changes in goals, strategies, technology, structure, process, and job design require that people change. Serious attention must be given to the reactions of employees and possible resistance to changes in these areas.

People may be resistant to change for a number of reasons. They may feel that they will lose status, power, or even their jobs. People react differently to change; even if no obvious threat to their jobs exist, some people's personalities make them more uncomfortable than others with changes in established routines. The reasons for the change or the exact change that will take place may not be understood. However, even if the reasons for the change are understood, employees may not have a high level of trust in the motives of those proposing the change. Also, those who are the targets of the change may genuinely feel that the proposed change is not necessary.

Organizational culture could also influence people's reactions to OD efforts. Organizational culture can be thought of as the organization's personality. The culture is defined by the shared beliefs, values, and patterns behaviors that exist in the organization—in other words, "the way we do things around here." Some organizational cultures may even reward stability and tradition while treating those who advocate change as outsiders. Sometimes the definition and strength of an organization's culture aren't evident until it undergoes change.

How can managers deal with resistance to change? An individual's low tolerance for change is largely a personal matter and can often be overcome with support and patience. Open communication can go a long way toward overcoming resistance to change based on misunderstanding, lack of trust, or different viewpoints. Those who will be affected by the change must be identified, and the reasons for and details about the change must be conveyed accurately to them. Keeping this information "secret" is bound to cause resistance. Also, the people who are the targets of the change should be involved in the change process. This is particularly important when true commitment to, or "ownership" of, the change is critical and those affected have unique knowledge about the processes or jobs that may be altered.

DOES ORGANIZATION DEVELOPMENT WORK?

Genuine efforts at organizational development require an investment of time, human effort, and money. Do the benefits of OD outweigh these costs? Reviews of a wide variety of OD techniques indicate that they tend to have a positive impact on productivity, job satisfaction, and other work attitudes. These reviews have also pointed out that OD efforts seem to work better for supervisors and managers than for blue-collar workers and that changes that use more than one technique seem to have more impact. There are several factors exist that increase the likelihood of successful OD efforts:

- Recognition of organization problems and influences. Before changes can be proposed, correct identification of the gaps between what an organization is trying to do and what is actually being accomplished must be made.
- Strong support from top-level managers. If managers at the higher levels in the organization do not provide obvious and open support for the OD efforts, the program is likely to fail.
- Action research that provides facts, not opinions, for decision making. Action research includes an identification of the attitudes and behaviors of employees and is part of an ongoing assessment of organizational behavior.
- Communication of what OD is and is not and awareness of why it is being used. The culture of the organization should be such that employees are aware of what organizational development is and is not so that it is not seen as a threat.

To thrive in tomorrow's business environment—characterized by a dynamic work force, rapid changes in technology, and the increasing volatility of the global environment—organizational development must be an ongoing effort; encouraging continual examination and readiness for change must be part of the organization's culture.

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CHERYL L. NOLL

ORGANIZATIONAL EFFECTIVENESS

(SEE: *Organizational Behavior and Development*)

ORGANIZATIONAL STRUCTURE

One of the most challenging tasks of a business may be organizing the people who perform its work. A business may begin with one person doing all the necessary tasks. As the business becomes successful and grows, however, there is generally more work, and more people are needed to perform various tasks. Through this division of work, individuals can become specialists at a specific job. Because there are several people—often in different locations—working toward a common objective, "there must be a plan showing how the work will be organized. The plan for the systematic arrangement of work is the *organization structure*. Organization structure is comprised of functions, relationships, responsibilities, authorities, and communications of individuals within each department" (Sexton, 1970, p. 23). The typical depiction of structure is the organizational chart. The formalized organizational chart has been around since 1854, when Daniel McCallum became general superintendent of the New York and Erie Railroad—one of the world's longest railroads. According to McCallum, since the railroad was one of the longest, the operating costs per mile should be less than those of shorter railroad lines. However, this was not the case. To remedy management inefficiencies, McCallum designed the first organizational chart in order to create a sense of structure. The organizational chart has been described as looking like a tree, with the roots representing the president and the board of directors, while the branches symbolize the various departments and the leaves depict the staff workers. The result of the organizational chart was a clear line of authority showing where subordinates were accountable to their immediate supervisors (Chandler, 1988, p. 156).

TRADITIONAL STRUCTURES

Traditional organizational structures focus on the functions, or departments, within an organization, closely following the organization's customs and bureaucratic procedures. These structures have clearly defined lines of authority for all levels of management. Two traditional structures are *line* and *line-and-staff.*

LINE STRUCTURE

The line structure is defined by its clear chain of command, with final approval on decisions affecting the operations of the company still coming from the top down (Figure 1). Because the line structure is most often used in small organizations—such as small accounting offices and law firms, hair salons, and "mom-and-pop" stores—the president or CEO can easily provide information and direction to subordinates, thus allowing decisions to be made quickly (Boone and Kurtz, 1993, p. 259).

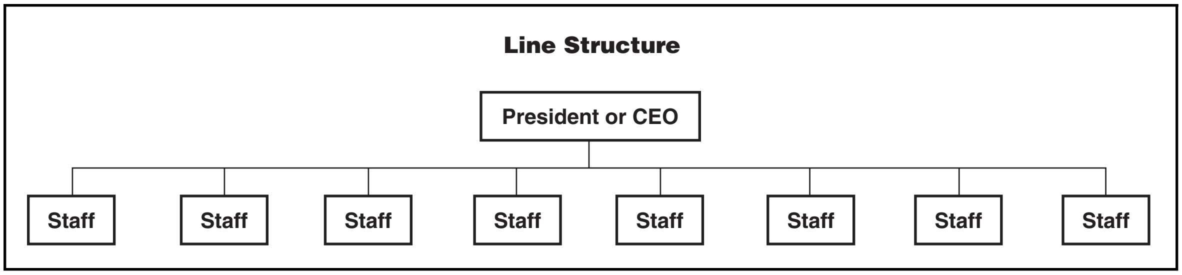

Figure 1

Line structures by nature are fairly informal and involve few departments, making the organizations highly decentralized. Employees are generally on a first-name basis with the president, who is often available throughout the day to answer questions and/or to respond to situations as they arise. It is common to see the president or CEO working alongside the subordinates. Because the president is often responsible for wearing many "hats" and being responsible for many activities, she or he cannot be an expert in all areas (Figure 1).

LINE-AND-STAFF STRUCTURE

While the line structure would not be appropriate for larger companies, the line-and-staff structure is applicable because it helps to identify a set of guidelines for the people directly involved in completing the organization's work. This type of structure combines the flow of information from the line structure with the staff departments that service, advise, and support them (Boone and Kurtz, 1993, p. 259).

Line departments are involved in making decisions regarding the operation of the organization, while staff areas provide specialized support. The line-and-staff organizational structure "is necessary to provide specialized, functional assistance to all managers, to ensure adequate checks and balances, and to maintain accountability for end results" (Allen, 1970, p. 63).

An example of a line department might be the production department because it is directly responsible for producing the product. A staff department, on the other hand, has employees who advise and assist—making sure the product gets advertised or that the customer service representative's computer is working (Boone and Kurtz, 1993, p. 259).

Based on the company's general organization, line-and-staff structures generally have a centralized chain of command. The line-and-staff managers have direct authority over their subordinates, but staff managers have no authority over line managers and their subordinates. Because there are more layers and presumably more guidelines to follow in this type of organization, the decision-making process is slower than in a line organization. The line-and-staff organizational structure is generally more formal in nature and has many departments (Figure 2).

MATRIX STRUCTURE

A variation of the line-and-staff organizational structure is the matrix structure. In today's workplace, employees are hired into a functional department (a department that performs a specific type of work, such as marketing, finance, accounting, and human resources) but may find themselves working on projects managed by members of another department. Organizations arranged according to project are referred to as matrix organizations. Matrix organizations combine both vertical authority relationships (where employees report to their functional manager) and horizontal, or diagonal, work relationships (where employees report to their project supervisor for the length of the project). "Workers are accountable to two supervisors—one functional manger in the department where the employee

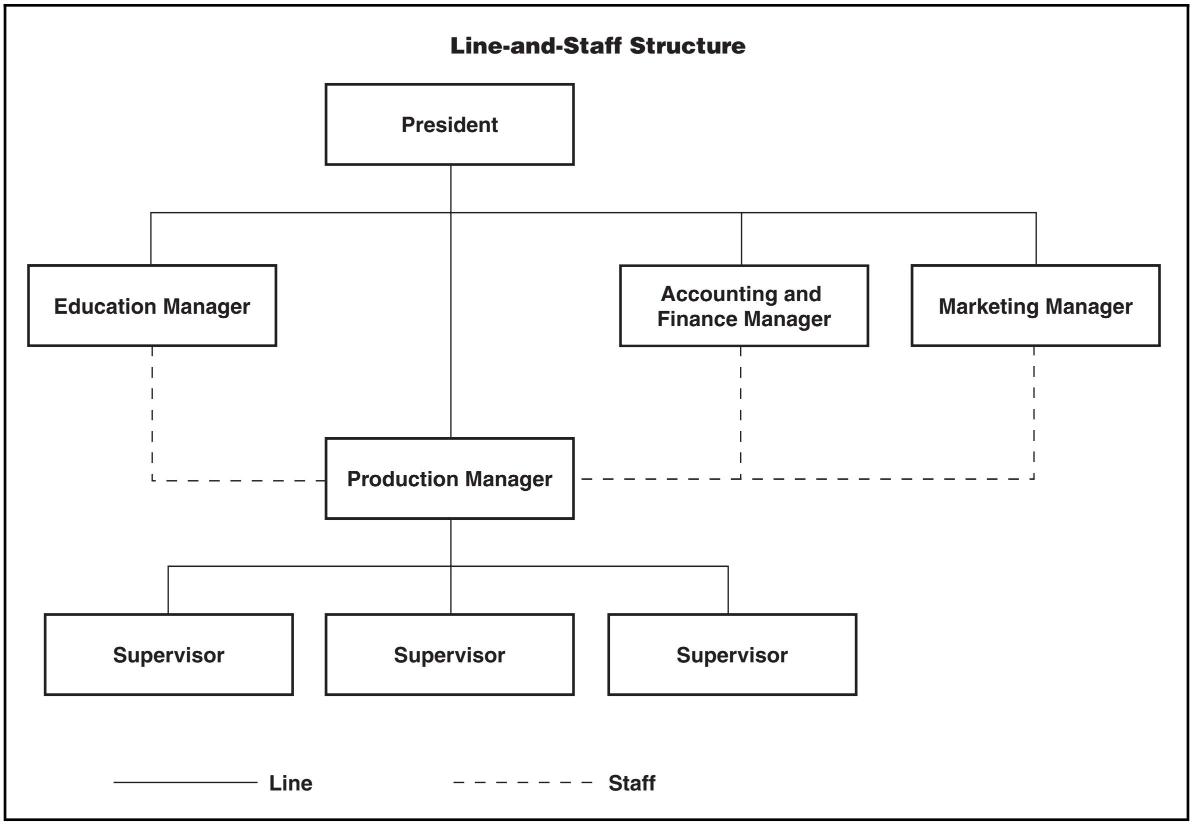

Figure 2

regularly works and one special project manager who uses the employee's services for a varying period of time" (Keeling and Kallaus, 1996, p. 43).

Since employees report to two separate managers, this type of organizational structure is difficult to manage—especially because of conflicting roles and shared authority. Employees' time is often split between departments and they can become easily frustrated if each manager requires extra efforts to complete projects on similar timelines.

Because the matrix structure is often used in organizations using the line-and-staff setup, its also fairly centralized. However, the chain of command is different in that an employee can report to one or more managers, but one manager typically has more authority over the employee than the other manager(s). Within the project or team unit, decision making can occur faster than in a line-and-staff structure, but probably not as quickly as in a line structure. Typically, the matrix structure is more informal than line-and-staff structures but not as informal as line structures (Figure 3).

CENTRALIZATION

Organizations with a centralized structure have several layers of management that control the company by maintaining a high level of authority, which is the power to make decisions concerning business activities. With a centralized structure, line-and-staff employees have limited authority to carry something out without prior approval. This organizational structure tends to focus on top-down management, whereby executives at the top communicate by telling middle managers, who then tell first-level managers, who then tell the staff what to do and how to do it. Since this organizational structure tends to be

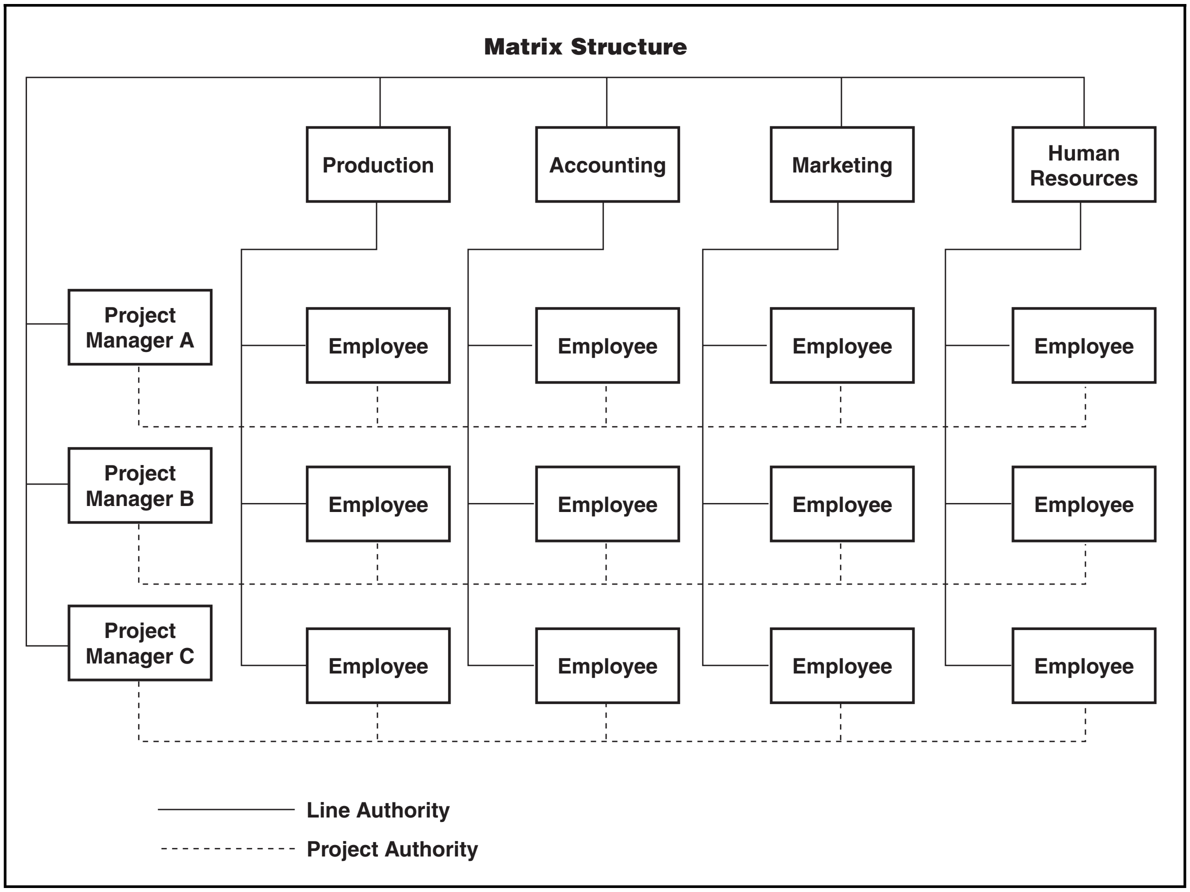
Matrix Structure
Production
Accounting
Marketing
Human Resources
Project Manager A
Project Manager B
Project Manager C
Employee
Line Authority
Project Authority

Figure 3

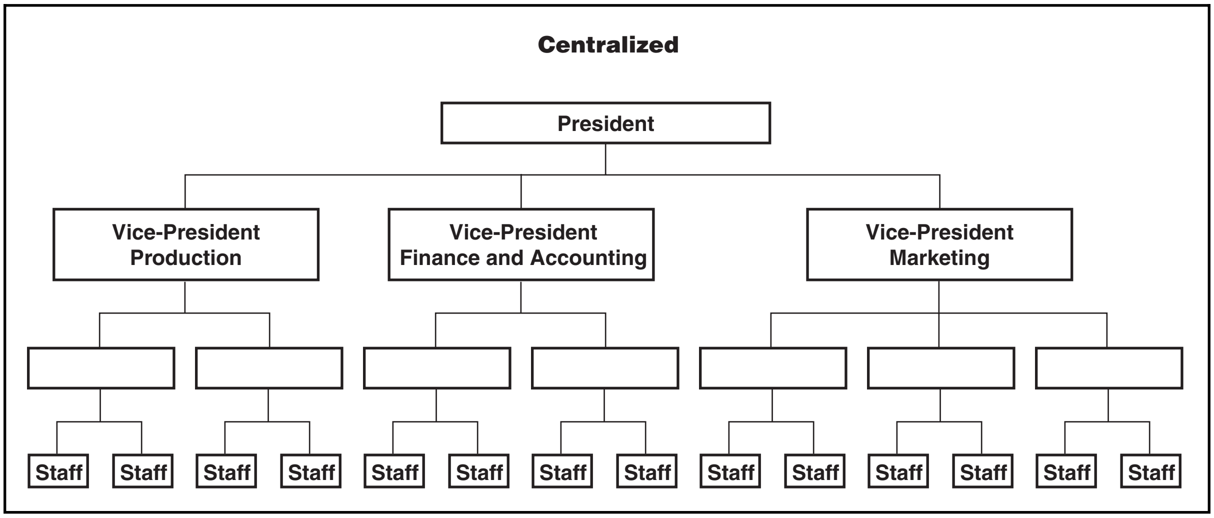
Centralized
President
Vice-President Production
Vice-President Finance and Accounting
Vice-President Marketing
Staff

Figure 4

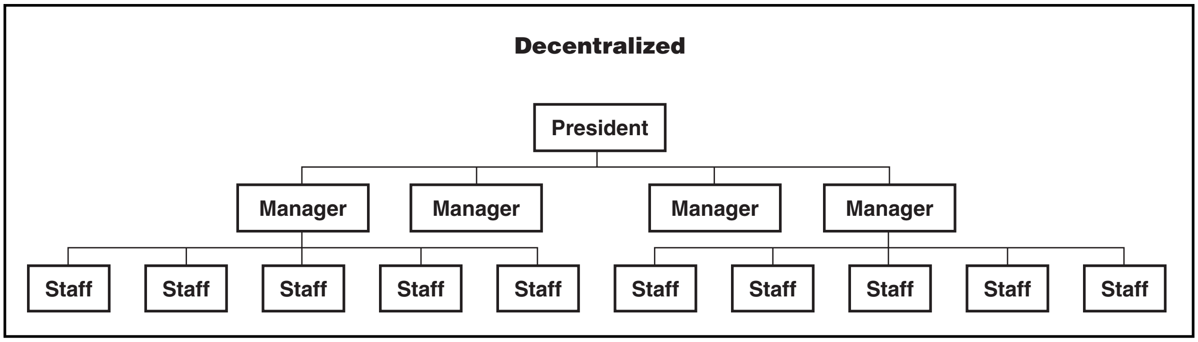

Figure 5

fairly bureaucratic, employees have little freedom. Centralized organizations are known for decreased span of control—a limited number of employees report to a manager, who then reports to the next management level, and so on up the ladder to the CEO (Figure 4).

DECENTRALIZATION

Because individual creativity can be stifled and management costs can be greater in a centralized organization, many organizations continue to downsize into a more decentralized structure. Decentralization seeks to eliminate the unnecessary levels of management and to place authority in the hands of first-line managers and staff—thus increasing the span of control, with more employees reporting to one manager. Because more employees are reporting to a single manager than before, the managers are forced to delegate more work and to hold the employees more accountable. Downsizing has also helped to change the flow of communication, so that top management hears staff concerns and complaints in a more direct manner and management has a more hands-on approach. The hands-on approach involves less bureaucracy, which means there is a faster response to situations that demand immediate attention. This structure also takes advantage of bottom-up communication, with staff issues being addressed in a timely manner.

The restructuring generally takes place at the mid-management level. Because some middle managers have lost their jobs, been laid off, or simply taken advantage of early retirement and severance packages, their positions have been phased out, thus helping to reduce unnecessary costly salaries and increasing employee span of control. Many middle managers who stayed in their current "positions" found that their jobs have changed to being coaches, or team leaders, who allow their employees greater freedom in completing their work responsibilities (Csoka, 1995, p. 3).

The chain of command is the protocol used for communication within organizations. It provides a clear picture of who reports to whom. Quick decisions can be made in decentralized organizations because approval usually has to come only from the manager one level higher than the person making the decision. The chain of command involves line-and-staff employees, where the staff's job is completing the actual work and the line functions to oversee the staff (Figure 5).

DEPARTMENTALIZATION

Organizations can be divided into various departments, or units, with individuals who specialize in a given area, such as marketing, finance, sales, and so forth. Having each unit perform specialized jobs is known as *departmentalization.* Departmentalization is done according to five major categories (Figure 6): (1) *product*, which requires each department to be responsible for the product being manufactured; (2) *geographic*, which divides the organization based on the location of stores and offices; (3) *customer*, which

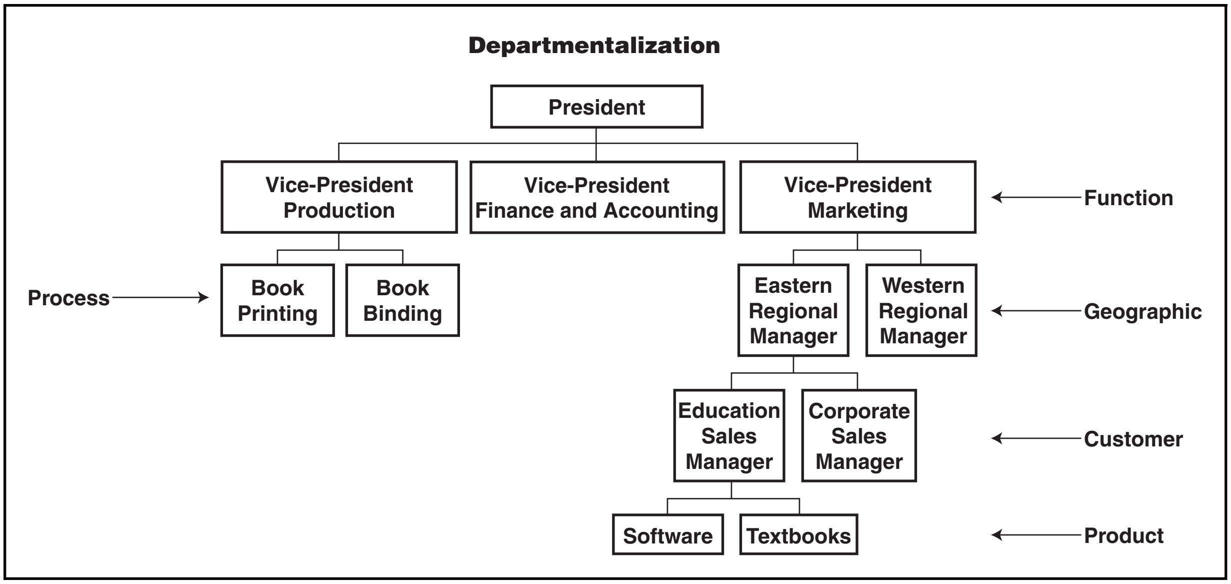
Departmentalization
President
Vice-President Production
Vice-President Finance and Accounting
Vice-President Marketing
Function
Process
Book Printing
Book Binding
Eastern Regional Manager
Western Regional Manager
Geographic
Education Sales Manager
Corporate Sales Manager
Customer
Software
Textbooks
Product

Figure 6

separates departments by customer type—for example, textbook companies that cater to both grade schools and community colleges; (4) *functional*, which breaks departments into specialty areas; and (5) *process*, which creates departments responsible for various steps in the production process (Boone and Kurtz, 1993).

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CHRISTINE JAHN

OUTPUT

(SEE: *Operations Management*)

OUTSOURCING IN THE BUSINESS ENVIRONMENT

Outsourcing is an option for managing internal tasks. A staffing tool, outsourcing is an arrangement whereby an organization contracts with another organization to perform tasks or functions traditionally handled by internal staff (Boone and Kurtz, 1999).

When an organization decides that more personnel are needed, it must first decide whether to hire more employees, contract workers, or outsource the functions. The focus is on efficiency and cost-effectiveness when deciding whether to outsource. This decision-making process involves internal analysis and evaluation, needs assessment and vendor selection, and implementation and management (Outsourcing Interactive, 1999).

Organizations should remember that outsourcing does not mean abdicating management responsibility. Therefore, companies should

FAIR WAGE
NIKE
FAIR WAGE
BOYCOTT NIKE!
WAGES
Buy American made Shoes

Protestors picket Nike's manufacturing practices of outsourcing.

avoid acting compulsively when deciding on an alternative solution. If the requirements, expectations, and needed resources are not clearly understood, outsourcing does not improve the situation and may even cause it to become worse.

Internal analysis and evaluation involves examining the need for outsourcing and identifying the implementation strategy. Top management of an organization makes these kinds of decisions. People internal and external to the organization provide needs assessment and vendor selection. To assist in identifying qualified vendors, research is focused on the needs of employees and on companies outsourcing the same functions.

Implementation and management allow for administration of the relationship as it evolves between the two—outsourcer and client. Strategy includes ways to monitor and evaluate performance, communicate issues, resolve conflicts, and help employees adapt to change.

ADVANTAGES OF OUTSOURCING

There are several advantages for organizations that choose outsourcing as an alternative to hiring full-time employees. The ten most important reasons for organizations to outsource, as identified in a Survey of Current and Potential Outsourcing End Users in 1998 by the Outsourcing Institute, are:

- *Improved efficiency*: To improve efficiency, a company must aim for dramatic improvements in critical measures of performance such as cost, quality, service, and speed. In some instances, the need to increase efficiency can directly conflict with the need to invest in the primary focus of the business. Outsourcing secondary functions to a specialist allows the organization to realize the benefits of maximizing efficiency.
- *Access to experts and specialists*: Experts and specialists make extensive investments in technology, procedures, and people. Expertise is

gained by working with many clients facing similar obstacles.

- *Asset infusion*: Outsourcing often involves the transfer of assets from the customer to the provider. Equipment, facilities, vehicles, and licenses used in the internal operations have value and are sold to the supplier. Certain assets sold to the supplier reveal a win–win approach between outsourcer and client.
- *Freeing of resources for other purposes*: Every organization has limits on the resources available. Outsourcing permits an organization to redirect its resources, most often people, from noncore activities toward activities that serve the customer. Employees whose focus is on internal tasks can now be focused externally toward the customer.
- *Better control over difficult or complex functions*: Outsourcing is a smart option for managing complex tasks. When a function is viewed as difficult to manage or out of control, the organization needs to examine the underlying causes. The organization must understand its own needs in order to communicate those needs to an outside provider.
- *Improved company morale and focus*: Outsourcing lets a company focus on its primary business by having operational functions assumed by an outside expert. In turn, the employees will have increased motivation and morale, since their jobs will be less routine and more meaningful.
- *Reduced capital expenditures*: There is enormous competition within most organizations for capital funds. Deciding where to invest these funds is one of the most important decisions that top management makes. It is often hard to justify secondary capital investments when primary departments compete for the same money. Outsourcing can reduce the need to invest capital funds in these secondary business functions. Instead of acquiring the resources through capital expenditures, they are contracted on an "as-used" basis.
- *Reduced operating costs*: Companies that try to do everything themselves may incur very high research, development, marketing, and deployment expenses, all of which are passed on to the customer. Outsourcing the secondary functions to experts whose only function is one particular task can be much less expensive in the long run. By outsourcing a task and avoiding hiring full-time employees, a company does not have to pay for insurance, retirement, 401K, or vacation benefits. These benefits can add up to huge expenditures by companies each year.
- *Reduced risk*: Tremendous risks are associated with the investments an organization makes. All aspects of the environment—such as markets, competition, government regulations, financial conditions, and technologies—change rapidly.
- *Utilization of resources that are not available internally*: Outsourcing is a good alternative to adding a new department or creating a costly task force to complete a function. New organizations, spin-offs, or companies expanding into new geographic areas or new technology should consider the benefits of outsourcing from the beginning.

The Survey of Current and Potential Outsourcing End Users (1998) also identified factors leading to successful outsourcing. The most important factors identified were: (1) effective and open communication with the individual and/or groups involved, (2) top-level support and involvement, (3) choice of right vendor, (4) continuous management of the relationships, (5) clarity of company goals and objectives, (6) a visionary plan, (7) availability of external resources, (8) contractual agreement, (9) awareness of personal concerns, and (10) justification of financial involvement.

DISADVANTAGES TO OUTSOURCING

Although there are many advantages to outsourcing, there are also a number of disadvantages. And in some instances, advantages can become disadvantages, depending on the organization and the problems involved.

"Outsourcing is no bed of roses" according to Ed Foster (1996). In order to get the most out of outsourcing, the best in management resources are necessary. The drawbacks to outsourcing include the following:

- *No benefit from a drop in cost of work outsourced*: In some industries, when a long-term contractual agreement ends, a drop in the cost of outsourcing work does not necessarily mean a lowering of the cost to perform the work internally.
- *Problems occurring in the aftermath of layoffs/downsizing*: Morale becomes a concern in the aftermath of some outsourcing deals. Employees are doing more than before for less pay and struggling with problems such as meeting schedules, budget, and quality specifications.
- *Outsourcing impeding the work of the organization*: On rare occasions, organizations have experienced production delays caused by the outsourcing company. John Wyatt, president of James Martin & Company, states, "You rarely hear about the failures of these contracts, but there are many of them" (quoted in Griffin and Ebert, 1999).
- *Managing long-term relationships*: Several factors contribute to a not-so-perfect outsourcing relationship. The factors include (1) pricing and service levels, (2) differing buyer and supplier cultures, (3) lack of flexibility in long-term contracts leading to increased dissatisfaction, (4) both parties failing to make the most of the relationship at the expense of one another, (5) underestimating the time and attention required to manage the relationship or giving management responsibility to the vendor, and (6) lack of management oversight (InfoServer, 1999).

Peter Bendor-Samuel, editor of *InfoServer*, the Journal for Strategic Outsourcing Information, and president of Everest Software Corporation, an outsourcing management company, has definite views regarding outsourcing. He states: "Many companies have been dissatisfied [with outsourcing] and have ranged from being mildly annoyed to extremely unhappy. But there is no question that outsourcing is here to stay, so the question is how to get the most out of it" (quoted in Foster, 1996).

SUMMARY

At one time outsourcing was limited to such services as housekeeping, architectural design, food service, security, and relocation. Today, however, outsourcing has become a popular choice in business and industry. Telemarketing, accounting, travel, data processing, manufacturing, and human resource management are some of the businesses utilizing outsourcing.

Although outsourcing began with small businesses, both large and small organizations are now outsourcing. Griffin and Ebert (1999) reveal that a study by the National Association of Purchasing Management in 1997 projected that at least $121 billion would be spent in the global outsourcing market by the year 2000. However, the Outsourcing Institute in New York projected more than twice that figure.

Outsourcing is no longer solely a domestic concern. Globally, organizations are considering and utilizing outsourcing. With e-commerce playing a significant role in the economy, outsourcing is expected to play a considerable role in the growth of e-commerce.

A number of factors contribute to the decision to outsource, such as improved efficiency, access to experts and specialists, resources available for other purposes, and better control over difficult or complex functions. Organizations utilizing the three-step outsourcing process must perform an internal analysis and evaluation, assess their needs, and select a vendor, and decide on how to implement and manage the function.

There are both advantages and disadvantage to outsourcing. Each must be carefully considered when determining the potential effect on the organization. In order for an organization to successfully outsource, a total commitment by both outsourcer and client is required so that a thriving relationship that benefits both can be formed.

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CAROLYN H. ASHE

P

PACKAGING

(SEE: *Promotion*)

PARTNERSHIP

A *partnership* is an association of two or more persons to carry on as co-owners a business for profit. Partnerships are governed by state law. However, many state legislatures have looked to the Uniform Partnership Act, originally adopted by the National Conference of Commissioners of Uniform State Laws, for guidance. The act was adopted in forty-six states, the District of Columbia, and the U.S. Virgin Islands. The 1990s witnessed major changes to the act, which was originally adopted in the form of the 1992 Uniform Partnership Act. The 1992 act has undergone several amendments, and it currently exists as the Uniform Partnership Act (1997), which had been adopted in approximately half of the states as of the close of the twentieth century. This article will generally follow the Uniform Partnership Act (1997) with an effort to identify those provisions that are less widely accepted, but the reader must keep in mind that state law, not the Uniform Act, will govern in a court of law.

PARTNERSHIP AS DISTINGUISHED FROM OTHER ENTITIES

General partnerships, which are referred to in this article simply as "partnerships," are to be distinguished from other types of entities, including *for-profit* and *nonprofit corporations*, *nonprofit associations*, and *limited liability companies (LLCs)*. Partnerships are like for-profit corporations and most limited liability companies in that they are intended to operate for profit. However, corporations and limited liability companies are creatures of statute, created and able to exist only by following specific statutory procedures. Partnerships, on the other hand, may exist on a far more informal basis; they can even be based on a handshake agreement. Perhaps the single most significant distinction between corporations and limited liability companies on one hand, and partnerships on the other, is that the former offer liability protection to those who invest in, own, and operate the entities, while general partnerships offer no such protection.

The majority of this article will focus on general partnerships, which are the traditional form of partnerships. However, some discussion will be given below to *limited partnerships* and *limited liability partnerships*, both of which offer at least some liability protection in exchange for conformity with statutory procedures.

PARTNERSHIP ELEMENTS AND FORMATION

As stated earlier, a partnership is an association of two or more persons to carry on as co-owners a business for profit. From this definition, it follows that the essential elements of a partnership are: It is (1) a voluntary agreement (2) to associate for the purpose of sharing profits and losses arising from (3) a common business enterprise and (4) the intention of the principals to form a partnership for those purposes.

The first element of a partnership is a contract among the partners. Any person or entity, so long as that person or entity has the legal capacity to contract, may become a partner. However, because a partnership is a voluntary contractual relationship, no person may become a partner without the consent of all other partners. This contract may be either express or implied and may be written or oral. Of course, the careful planner would favor an express written partnership agreement to provide for the creation, operation, management, and dissolution of the partnership, but this is not a required element. Two individuals who begin making furniture in their garage, selling the furniture to others, and splitting the profits and expenses have formed a partnership, even if neither has ever uttered the word *partnership*.

Unlike the other for-profit entities discussed earlier, there are no organizational documents that must be filed with a public office, and the partnership agreement, even if written, is not a public document. To further illustrate this, to form a corporation the *incorporators* must execute *articles of incorporation* and file those articles with the secretary of state in the state in which the corporation will exist. A corporation is also required to have written *bylaws*, which are the rules of management, operation, and existence of the corporation. Similarly, an LLC does not exist until the *articles of organization* have been filed with the secretary of state, and most state statutes require a limited liability company to have a written *operating agreement* to govern its conduct. There are no such prerequisites to the existence of a partnership. Generally, the only public documents that must be filed by a partnership are those documents necessary to register the business name of the partnership, and this requirement only applies if the partnership is using a name other than the real names of the partners.

PARTNERSHIP AS A DISTINCT ENTITY

An important issue in partnership law is whether the partnership is an entity distinct from the partners in their individual capacity. By way of comparison, it is a fundamental tenet of the law of corporations and of LLCs that those entities are separate and distinct from their shareholders and members, respectively. The issue is not so clear in the case of partnerships. At common law, a partnership was clearly not a legal entity distinct from, or independent of, the partners and had no legal existence apart from the partners themselves. With the adoption of the Uniform Partnership Act (1914), a school of thought emerged a partnership was, at least for some limited purposes, an entity distinct from its partners. However, this issue remained largely unresolved throughout much of the twentieth century. Even the adoption of the 1992 Uniform Partnership Act did not resolve the issue. Finally, the 1997 Uniform Partnership Act stated unequivocally that "[A] partnership is an entity distinct from its partners." [Uniform Partnership Act (1997) (U.L.A.) 201(a).]

The concept of the partnership as a distinct entity remains a difficult issue. In most states, a partnership is a distinct entity for some purposes but not for others. For example, generally a partnership may sue or be sued and may own, hold, or convey real or personal property on its own behalf. The U.S. Bankruptcy code also treats partnerships as distinct entities. However, for purposes of federal income tax, the partnership is not a distinct entity. Although the partnership is required to file a federal tax return, that return is an informational return only, and the partnership has no federal tax liability. All profits and losses of the partnership flow directly to the partners in their individual capacity.

PARTNERSHIP PROPERTY

As mentioned above, a partnership is recognized as a distinct entity for purposes of owning, holding, or conveying real estate. Property contributed to the partnership by the partners, as well as property purchased or otherwise acquired by the partnership, is partnership property, while the property of the partners, such as a partner's personal home and banking account, is not considered partnership property.

LIABILITY OF PARTNERS

Despite the fact that the partnership is an entity distinct from its partners, each partner, in his or her personal capacity, is liable for the debts, obligations, acts, or omissions of the other partners. Therefore, an individual who is owed money by a partnership, is the victim of a breach of contract by the partnership, or is harmed by any act or omission of the partnership, any employee or agent of the partnership, or of any partner acting in his or her capacity as partner has the right to bring suit and collect compensation or damages from the partnership or any of the partners individually. This individual liability is probably the single most important characteristic of a partnership, and it is essential to the consideration of any group of individuals about to embark on a partnership.

The distinction between partnership property and the personal property of partners is of critical importance with regard to creditors of a partnership. In bringing action to collect debts, a partnership creditor must first attach the property of the partnership. Only after all partnership property is exhausted may the partnership creditor become the creditor of the individual partners.

Liability for partnership debts must be distinguished from liability for the personal debts of a partner. A creditor of a partner in his or her individual capacity must collect that debt from the property owned by the partner personally, not from the partnership property. Such a creditor, after exhausting the partner's property, may acquire a *charging order* against the partnership, which entitles the creditor only to the debtor partner's future profits and distributions from the partnership.

PARTNER'S RIGHTS

The partner's right to partnership property is described as a *tenancy in partnership*. The partner is co-owner of this property with his or her partners but has no right to possess, sell, transfer, or assign specific partnership property in any capacity other than on behalf of the partnership. When a partner dies, his or her ownership of specific partnership property automatically *vests* in the surviving partners.

A partner's interest in the partnership itself is a personal property interest in the profits and surplus of the partnership. While a partner is prevented from transferring an interest in individual partnership property, the partner may transfer an interest in the partnership itself. Of course, this right to transfer is subject to the consent of all existing partners to the admission of a new partner, and it may be restricted by a partnership agreement.

Unless a partnership agreement provides otherwise, each partner has the right (1) to be repaid the partner's capital investment in the partnership, (2) to share equally in the profits and losses of the partnership, (3) to share equally in the management and conduct of the partnership business, and (4) to inspect the books and records of the partnership. A partner does not have the right to be compensated for services performed for the partnership. Any dispute among the partners regarding the conduct of the partnership's business is to be decided by a majority of the partners.

DUTIES AND LIABILITY OF PARTNERS

In conduct among partners, each partner owes the other partners an obligation to act with the utmost good faith and loyalty. Partners are not considered to be merely individuals transacting with one another at arm's length, but rather to be fiduciaries of one another. Therefore, the duty among partners involves a very high standard of conduct. A partner may not take advantage of a partnership opportunity, compete with the partnership, or engage in conduct that is detrimental to the best interest of the partnership. In conducting business with individuals who are not partners, every partner is an *agent* of the partnership. Therefore, the acts and words of a partner may be imputed to the partnership.

DISSOLUTION AND WINDING UP

Dissolution is the triggering event that begins the *winding up* of a partnership. Unless the partnership agreement specifically provides otherwise, a dissolution may be caused by the termination of a definite term or the partnership as specified in the partnership agreement, the express will of any partner, the agreement of all partners, the expulsion of a partner, the unlawfulness of the partnership's business, the death or retirement of a partner, or the bankruptcy of any partner or the partnership. These triggering events are further evidence in support of the assertion that a written partnership agreement is essential to a successful partnership. For example, a viable partnership may have many partners, but without an express provision in the partnership agreement to the contrary, the retirement of any one of those partners would trigger the dissolution of the partnership, despite the desires of the remaining partners to continue the partnership. During the winding-up process, the remaining partners may complete unfinished transactions, cease the conduct of the partnership's business, pay the debts of the partnership, and distribute any remaining assets to the partners.

LIMITED PARTNERSHIPS

As opposed to general partnerships, limited partnerships (LPs) are creatures of statute. In most states, it is necessary to file a certificate of limited partnership with the secretary of state to receive approval and to file annual reports. It is also necessary to have a partnership agreement. LPs consist of one *general partner* and one or more *limited partners.* The general partner possesses all management and decision-making power and is afforded no liability protection. The limited partners may not participate in the management of the LP, but in return they receive limited liability protection.

LIMITED LIABILITY PARTNERSHIPS

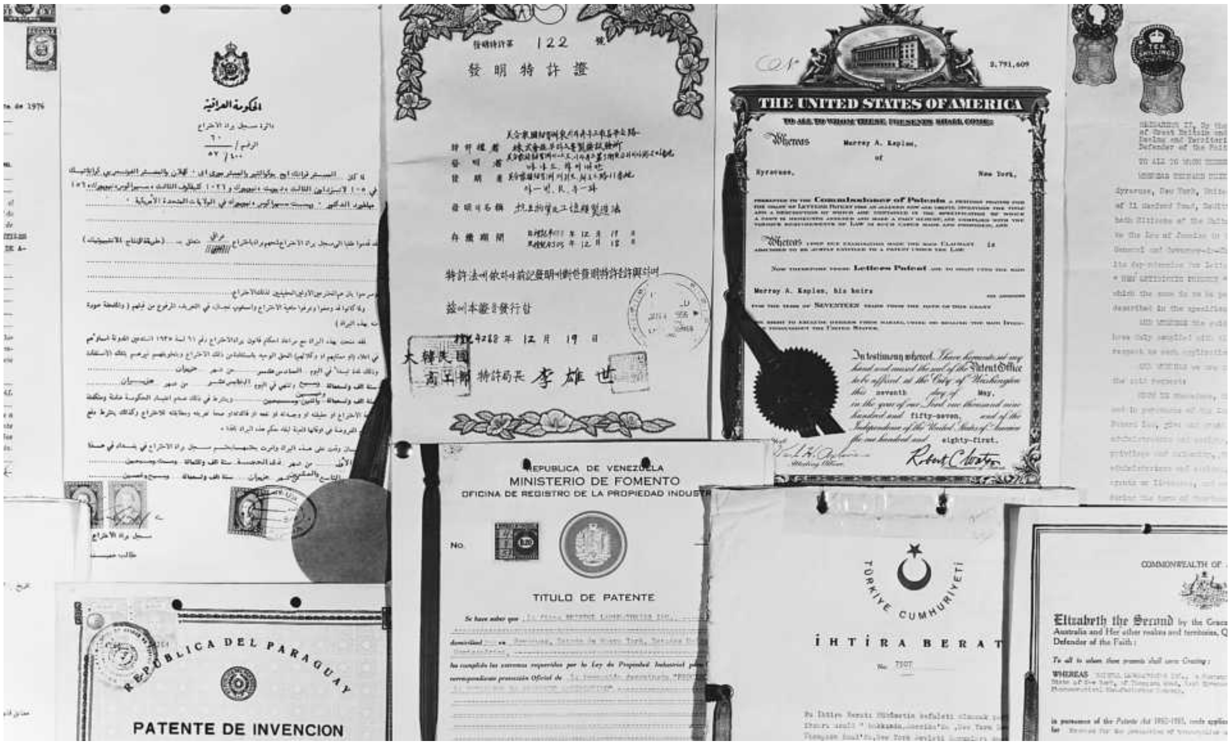
Like LPs, it is necessary to file a statement of qualification and annual reports to form an LLP. Unlike an LP, all partners in an LLP may participate in the management and control and receive limited liability protection.

KEITH A. BICE

PATENTS

A patent is the grant of a property right for an invention from the United States Patent Office to the inventor. A patent is granted for a twenty-year term beginning with the date on which the patent was filed in the United States, and U.S. patents are only effective in the United States, its territories, and its possessions. The language of the statute gives the inventor the right to exclude others from *making*, *using*, *offering for sale*, or *selling* the invention in the United States or *importing* the invention into the United States. Thus, the inventor is guaranteed the right to exclude others from making, using, offering for sale, selling or importing the invention.

The U.S. Constitution gives Congress the power to enact laws relating to patents in Article I, Section 8, which reads "Congress shall have power . . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." Under this power, Congress has from time to time enacted various laws relating to patents. The first patent law was enacted in 1790; the law now in effect is a general revision that was enacted on July 19, 1952, came into effect on January 1, 1953, and is codified in Title 35 of the United States Code. The patent law specifies the subject matter for which a patent may be obtained and the conditions for patentability. The law established the United States Patent Office to administer the law relating to the granting of patents and contains various other provisions relating to patents.


THE UNITED STATES OF AMERICA
REPUBLICA DE VENEZUELA
MINISTERIO DE FOMENTO
OFICINA DE REGISTRO DE LA PROPIEDAD INDUSTR
TITULO DE PATENTE
REPUBLICA DEL PARAGUAY
PATENTE DE INVENCION
TÜRKIYE CUMHURIYETI
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Patent certificates.

In the language of the statute, an individual who "invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent," subject to the conditions and requirements of the law. The term *process*, as defined by law, is a process, act, or method, and primarily includes industrial or technical processes. The term *machine*, as used in the statute, needs no explanation; the term *manufacture* refers to articles that are made and includes all manufactured articles. The term *composition of matter* relates to chemical compositions, which may include mixtures of ingredients as well as new chemical compounds. These classes of subject matter taken together include practically everything that is made by humans and the processes for making them. Consequently, the Atomic Energy Act of 1954 excludes the patenting of inventions useful solely in the utilization of special nuclear material or atomic energy for atomic weapons. The patent law further specifies that the subject matter must be *useful*. The term *useful*, in this context, refers to the condition of the subject matter having a useful purpose and also being operable. That is, a machine that will not operate to perform the intended purpose would not be called useful; therefore, the inventor would not be granted a patent. Recent interpretations of the statute by the courts have defined the limits of the field of subject matter that can be patented. Thus the courts have held that the laws of nature, physical phenomena, and abstract ideas are not patentable subject matter.

A patent may only be granted for the creation of a new machine, manufacture, and so on—not for the mere idea or suggestion of the new machine. A complete description of the actual machine or other subject matter for which a patent is sought must be filed with the U.S. Patent Office.

The U.S. Patent Office administers the patent laws as they relate to the granting of patents for inventions and performs other duties relating to patents. Examiners with the office review patent applications to determine if the applicants are entitled to patents under the law. If the inventor is so entitled, the Patent Office approves and issues the patent. Further, the Patent Office publishes not only a list of issued patents but also various other information concerning patents as well as records of assignments of patents. The U.S. Patent Office has no jurisdiction over questions of infringement and the enforcement of patents.

The major purpose of the U.S. Patent Office as an agency of the U.S. Department of Commerce is to grant patents for the protection of inventions and to register trademarks. Further, the Patent Office advises the Department of Commerce and other governmental agencies concerning intellectual property—patents, trademarks, and so on—as well as assisting inventors and businesses in matters concerning their inventions and corporate products. In essence, the United States Patent Office encourages the scientific and technical advancement of the country.

Randy L. Joyner

PEER REVIEW

(see: *Performance Appraisal*)

PENETRATION PRICING

(see: *Pricing*)

PERFORMANCE APPRAISAL

Performance appraisal (PA) is one of the important components in the rational and systemic process of human resource management. The information obtained through performance appraisal provides foundations for recruiting and selecting new hires, training and development of existing staff, and motivating and maintaining a quality work force by adequately and properly rewarding their performance. Without a reliable performance appraisal system, a human resource management system falls apart, resulting in the total waste of the valuable human assets a company has.

There are two primary purposes of performance appraisal: evaluative and developmental. The evaluative purpose is intended to inform people of their performance standing. The collected performance data are frequently used to reward high performance and to punish poor performance. The developmental purpose is intended to identify problems in employees performing the assigned task. The collected performance data are used to provide necessary skill training or professional development.

The purpose of performance appraisal must be clearly communicated both to raters and ratees, because their reactions to the appraisal process are significantly different depending on the intended purpose. Failure to inform about the purpose or misleading information about the purpose may result in inaccurate and biased appraisal reports.

CRITICAL CRITERIA OF DEVELOPING A PA SYSTEM

In order for performance appraisal information to be useful, the PA system must be able to consistently produce reliable and valid results. Measurement items in the performance appraisal system must be designed in such a way that the results of rating are consistent regardless of the raters and the timing of the assessment.

Another critical criterion in developing a PA system is the validity of the measurements. It is important to make sure that the appraisal items are really measuring the intended performance or target behavior. If they are not, the PA system encourages the wrong kind of work behaviors and produces unintended, frequently negative, organizational outcomes. For instance, if the number of traffic violation tickets issued is an item in performance appraisal of police officers, it encourages them to sit on a corner of a street and pull over as many violators as possible during heavy traffic hours. The true purpose of a police force, which is public safety, may become secondary to issuing a large number of tickets for many officers.

WHAT TO EVALUATE

The first important step in developing a PA system is to determine which aspects of performance to evaluate. The most frequently used appraisal criteria are traits, behaviors, and task outcomes.

Traits. Many employees are assessed according to their traits, such as personality, aptitudes, attitudes, skills, and abilities. Traits are relatively easy to assess once a rater gets to know ratees. But traits are not always directly related to job performance. Trait-based assessment lacks validity and thus frequently raises legal questions.

Behaviors. For many jobs, performance is so broadly defined or so conceptual in nature—such as ensuring public safety in the police department—that it is hard to come up with reliable performance measures. In such cases, desirable behaviors can be identified and assessed in the belief that such behaviors lead to successful performance. Such behavior-focused assessment encourages employees to adopt desirable behavioral patterns in the workplace.

Task outcomes. When information about task outcomes is readily available, it is the most appropriate factor to use in evaluating performance. When an organization has a clear and measurable goal as in the case of a sales force, this approach is recommended. However, it has its own pitfalls. There is a problem if employee behaviors are not directly related to the task outcome. Too narrow a focus on measuring outcome only sometimes results in unintended negative consequences. When sales staff narrowly focus on target sales figures to increase their performance measure, for example, they are encouraged to help a few large-volume customers and to ignore many smaller buyers. This may result in poor customer service on the floor.

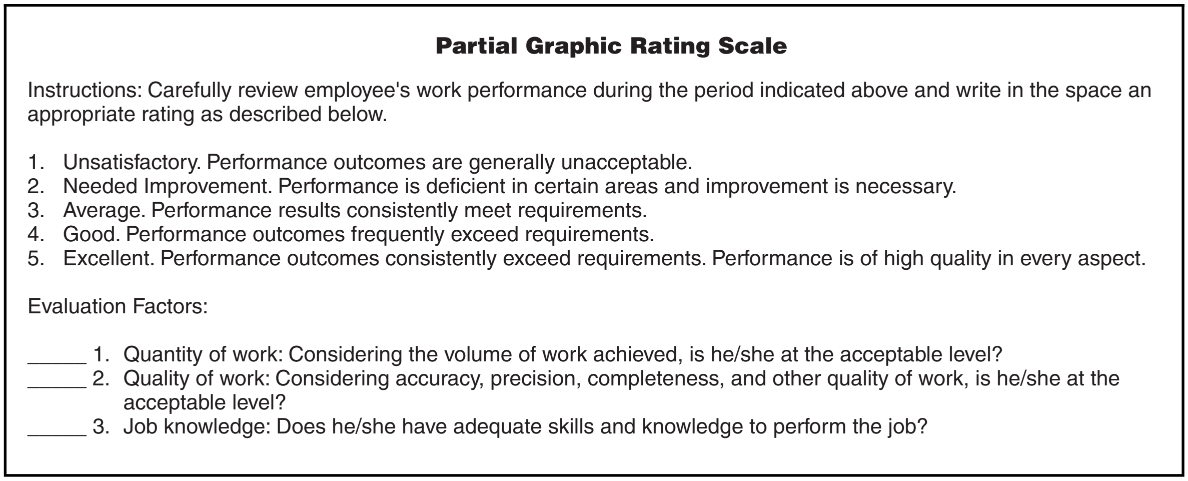
WHO EVALUATES?

The most common raters of performance are employees' immediate supervisors, who are usually in the best position to know and observe the employees' job performance. They are also responsible for employees' work. Their evaluation is a powerful tool in motivating employees to achieve successful and timely completion of tasks. However, as a result of working together over a long time with the same employees, the immediate supervisor may build up a fixed impression about each employee and use it every time he or she has to evaluate performance.

Some companies find that subordinates are in an excellent position to observe and evaluate their managers' performance, especially when it comes to measuring effective management of their department. While there is merit in asking subordinates to evaluate how they are managed, such evaluation may turn into a popularity contest. Accurate and objective assessment may not be obtained if employees are fearful of possible retaliation from their supervisors. Anonymity of the evaluators is key to the successful use of subordinates for objective evaluation.

Other raters who are frequently used in some companies include peers, customers, and the employees themselves. Peer evaluation is particularly useful when teamwork and collegiality are important to successful task performance. Peer pressure is sometimes a powerful motivator in encouraging teamwork among members. Customer satisfaction is vital to a company's success and can be used in performance appraisal. Many companies systematically collect performance information from customers, typically through anonymous surveys and interviews. Self-assessment is also a useful means, especially when the performance appraisal is intended to identify the training and development needs of potential employees.

Each of these raters contributes to assessing certain aspects of performance. Since job performance is multidimensional in nature, it is important to use different raters or a combination of multiple raters depending on the goal of a performance appraisal system. This multirater



Partial Graphic Rating Scale

Instructions: Carefully review employee's work performance during the period indicated above and write in the space an appropriate rating as described below.

1. Unsatisfactory. Performance outcomes are generally unacceptable.
2. Needed Improvement. Performance is deficient in certain areas and improvement is necessary.
3. Average. Performance results consistently meet requirements.
4. Good. Performance outcomes frequently exceed requirements.
5. Excellent. Performance outcomes consistently exceed requirements. Performance is of high quality in every aspect.

Evaluation Factors:

_____ 1. Quantity of work: Considering the volume of work achieved, is he/she at the acceptable level?
_____ 2. Quality of work: Considering accuracy, precision, completeness, and other quality of work, is he/she at the acceptable level?
_____ 3. Job knowledge: Does he/she have adequate skills and knowledge to perform the job?

Figure 1

evaluation, or so-called 360-degree feedback system, is becoming increasingly popular among many American corporations, including General Electric, AT&T, Warner Lambert, and Mobil Oil.

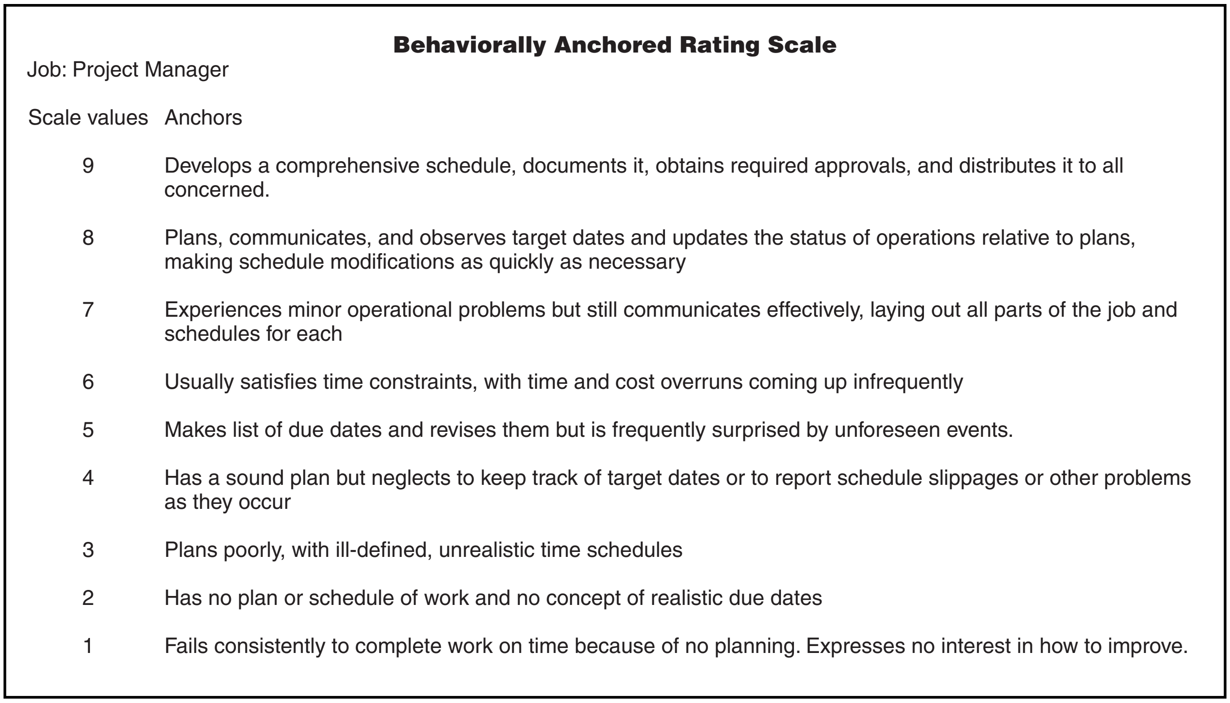
PA METHODS

To ensure the reliability and validity of a PA system, a company must design the evaluation process carefully and develop appropriate measuring scales. Among the many assessment methods developed by human resource management experts, commonly used ones include the Graphic Rating Scale, Behaviorally Anchored Rating Scale, Narrative Technique, Critical-Incident Method, Multiperson Comparison Method, Forced Choice Method, and Forced Distribution Method.

The Graphic Rating Scale is the simplest and most popular method for performance appraisal. As shown on Figure 1, the Graphic Rating Scale offers a list of areas related to job performance. A manager rates each employee on the listed areas according to a numerical score. Although this method is relatively simple and quick to complete, some experts question its validity and reliability. Without elaborate description, appraisal items and scores are subject to various interpretations of raters.

In order to overcome pitfalls of the Graphic Rating Scale, numerous other methods have been developed. The Behaviorally Anchored Rating Scale (BARS), illustrated in Figure 2, offers rating scales for actual behaviors that exemplify various levels of performance. Because raters check off specific behavior patterns of a ratee, PA results of BARS are more reliable and valid than those of the Graphic Rating Scale. Human resource managers must carefully analyze each job and develop behavior patterns pertinent to various levels of performance for the job before they use the BARS.

The Narrative Technique is a written essay about an employee's job performance prepared by a rater. The essay typically describes the rate's job-related behaviors and performance. Without standard performance description, it is a cumbersome task for raters to write an essay for several employees. For example, a rater can be asked to describe the activities, achievements, and level of performance of the employee in a completely open-ended format (unstructured narration). Alternatively, the rater can be provided with some structure to use in the evaluation; for example, "Describe briefly the activities, achievements, and level of performance of the staff member in the following areas: (1) work habits, (2) planning and organizing the tasks, (3) management skills, communications, and development of others."



Behaviorally Anchored Rating Scale

Job: Project Manager

Scale values	Anchors
9	Develops a comprehensive schedule, documents it, obtains required approvals, and distributes it to all concerned.
8	Plans, communicates, and observes target dates and updates the status of operations relative to plans, making schedule modifications as quickly as necessary
7	Experiences minor operational problems but still communicates effectively, laying out all parts of the job and schedules for each
6	Usually satisfies time constraints, with time and cost overruns coming up infrequently
5	Makes list of due dates and revises them but is frequently surprised by unforeseen events.
4	Has a sound plan but neglects to keep track of target dates or to report schedule slippages or other problems as they occur
3	Plans poorly, with ill-defined, unrealistic time schedules
2	Has no plan or schedule of work and no concept of realistic due dates
1	Fails consistently to complete work on time because of no planning. Expresses no interest in how to improve.

Figure 2

The performance review form at a college asks an evaluator to describe the activities, accomplishments, and creative works of the professors in the areas of (1) teaching and (2) research/creative activity. A dean of the college writes about the professor's teaching performance: "Dr. Michael Johnson has been nominated by his students for the Outstanding Teacher Award several times during his service. He introduced many teaching innovations into his classes. His teaching record is exemplary." In the area of creative activity, the dean writes: "Dr. Johnson has a strong and productive research record with a defined focus in organizational leadership. His research has been recognized with several awards given by professional organizations. His creative activity is exemplary."

Similar to the Narrative Technique is the Critical-Incident Method, which involves keeping a running log of effective and ineffective job performance. For example, the PA log of an employee, Mr. Campbell, contains Unsatisfactory Incidents as follows: 1/28/2000: "Refused to try a new work procedure," and 2/15/2000: "Argued with a customer about the origin of error in the paperwork." The log also contains Satisfactory Incidents as follows: 1/20/2000: "Volunteered to help Charlie complete his assignment in time"; 2/19/2000: "Trained new employees in safety regulations."

The Multiperson Comparison Method asks raters to compare one person's performance with that of one or more others. It is intended to effectively eliminate the possibility of giving the same rating to all employees. In order to separate performance scores among multiple employees, the Forced Choice or Forced Distribution Methods are adopted. Raters must choose one high performer from the list of employees or distribute certain scores to employees at different ranks. For example, only one top person will get 40 percent, two second-rank persons 20 percent, and the bottom one person 10 percent. The Paired Comparison Method is a special case of the Multiperson Comparison Method. Everyone in the evaluation pool is compared against everyone else as a pair and recorded "plus" or "minus" when the target ratee is better or worse,

Paired Comparison Method of Employee Evaluation

For the quality of work: Performance in meeting quality standards

	Employees that are rated:				
	Amy	Barbara	Charlie	Dave	Elaine
As compared to:					
Amy		+	+	–	–
Barbara	–		–	–	–
Charlie	–	+		+	–
Dave	+	+	–		+
Elaine	+	+	+	–	

Note: Barbara ranks the highest.

Figure 3

respectively, than his/her comparison. The final performance ranks are determined by the number of positives. Figure 3 provides for an example.

SUBJECTIVITY AND OBJECTIVITY

Accuracy is critical to performance appraisal. In order to obtain accurate performance information, raters must provide objective and unbiased ratings of employees. But, because it is almost impossible to develop a perfectly accurate performance checklist, managers' subjective opinions are frequently called for. Many companies use some combination of subjective and objective assessment for actual performance appraisal.

Yet there are numerous problems in the actual assessment of employee performance, mainly due to rater bias. Some raters tend to rate all employees at the positive end rather than to spread them throughout the performance scale; this is called "leniency." Alternatively, "central tendency", which places most employees in the middle of the scale, also raises concern about possible appraisal error.

Another common error in performance appraisal is the halo effect. This occurs when a manager's general impression of an employee, after observing one aspect of performance, influences his/her judgment on other aspects of the employee's performance.

Researchers have found that personal preferences, prejudices, appearances, first impressions, race, and gender can influence many performance appraisals. Sometimes raters' personal opinions or political motives creep into the performance appraisal process. They intentionally inflate or deflate performance ratings of certain employees as a way to punish them or promote them out of the department.

Using unreliable and unvalidated performance appraisals may cause a legal problem. A number of court cases have ruled that the performance appraisal systems used by many companies were discriminatory and in violation of Title VII of the Civil Rights Act.

In order to avoid legal problems, companies must develop an appraisal system based on careful job analysis and establish its reliability and validity. They must give clear written instructions to raters for completing evaluations and provide them adequate training if necessary. The company must allow employees to review the results of the appraisals. Human resources departments must play a key role in the development and implementation of an effective performance appraisal system.

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LEE W. LEE

PERFORMANCE AUDITS

Performance audits or performance auditing is the public sector version of "Operational Audits" or "Operational Auditing," that are conducted to determine if an entity's operations, programs, or projects are run effectively and efficiently. The Government Accounting Office (GAO) defines a performance audit in its *Government Accounting Standards*, or *Yellow Book*, as:

> *An objective and systematic examination of evidence for the purpose of providing an independent assessment of the performance of a government organization, program, activity, or function in order to provide information to improve public accountability and facilitate decision-making by parties with responsibility to oversee or initiate corrective action.*

A performance audit has two parts: (1) an economy and efficiency review, and (2) a program review. The economy and efficiency review determines if resources have been used efficiently. The program review, on the other hand, determines whether the resources were used effectively, that is, for the purpose intended by the grantor of resources. Thus, the two reviews complement each other in providing a complete picture of an agency's performance.

The typical performance audit, like all audits, has three phases: planning, fieldwork, and reporting. The planning phase of a performance audit tends to involve more professional judgment and business commonsense than the planning phase of a financial audit, which is limited to a review of financial statements. In planning an audit, the auditor should first determine specific objectives for the audit. *Government Auditing Standards* lists the following specific audit objectives, stated as questions, for the economy and efficiency review:

1. Have sound procurement practices been followed?
2. Have the appropriate type, quality, and amount of resources been acquired at an appropriate cost?
3. Have resources been properly protected and maintained?
4. Has duplication of effort by employees and work that served little or no purpose been avoided?
5. Have idleness and overstaffing been avoided?
6. Have efficient operating procedures been used?
7. Have the optimum amount of resources been used in producing or delivering the appropriate quantity and quality of goods or services in a timely manner?
8. Have laws and regulations been complied with that could significantly affect the acquisition, protection, and use of the entity's resources?
9. Has an adequate management control system for measuring, reporting, and monitoring a program's economy and efficiency been installed and maintained?
10. Have measures of economy and efficiency that are valid and reliable been reported?

Specific objectives, as questions, listed in the *Government Auditing Standards* for the program review include:

1. Have program objectives that are proper, suitable, and relevant been developed?
2. Has the extent to which a program achieves a desired level of program results been determined?
3. Has the effectiveness of the program and/or of individual program components been assessed?
4. Have factors inhibiting satisfactory performance been identified?
5. Has management considered alternatives for carrying out the program that might yield desired results more effectively or at a lower cost?
6. Does the program complement, duplicate, overlap, or conflict with other related programs?
7. Have ways of making programs work better been identified?
8. Has compliance with laws and regulations applicable to the program been ensured?
9. Has the adequacy of the management control system for measuring, reporting, and monitoring a program's effectiveness been assessed?
10. Has management reported measures of program effectiveness that are valid and reliable?

After determining the specific objectives relevant for the audit, the auditor conducts a preliminary survey to obtain information needed to write an audit program and estimate a budget.

The auditor, in completing the preliminary survey, meets with the entity's key employees, reviews relevant documentation such as policy and procedures manuals, and observes the entity's employees as they perform their duties. At the conclusion of the preliminary survey, the auditor is expected to have a thorough understanding of the entity's mission, objectives, goals, operating procedures, and policies. Such knowledge enables the auditor to reach tentative conclusions concerning the audit objectives.

The well-run agency or program will have adopted a well-crafted mission statement, defined a set of goals and objectives that relate to the mission statement, and identified a set of performance measures that accurately reflects entity performance. Thus, the auditor is typically reviewing existing missions, objectives, and goals to determine their reasonableness. Likewise, the entity normally has identified the laws and regulations that its operations or programs must honor. However, an important issue arises if these items are not present or are inadequately prepared. In those cases, the auditor must either stop the performance audit and request that the entity develop the missing items, or the auditor can develop the items and assist the entity in adopting the items recommended by the auditor.

Fieldwork in a performance audit consists of performing the audit tests listed in the audit program. If the preliminary survey was done successfully, then the fieldwork portion of the audit should proceed to confirm the tentative conclusions drawn from the preliminary survey. However, the auditor should fully investigate audit test results that contradict the tentative conclusions and change the audit program accordingly. Once the audit tests are completed, the auditor reaches a final conclusion concerning the entity's performance, which is then presented to interested parties in a draft of the audit report. The draft is then discussed with the entity's management and revised accordingly before it is issued to the appropriate parties. The auditor should return to the entity after giving the entity's management sufficient time to implement any recommendations contained in the audit report. The purpose of this "follow-up" visit is to assess the degree to which management has addressed the findings contained in the audit report.

Management has the responsibility for operating an organization in an effective and efficient manner. In the for-profit sector, this usually means maximizing profit or net income. However, organizations in the not-for-profit sector do not have a measure such as net income or profit to guide the allocation of resources. They adopt alternative performance measure(s) and evaluate them in a manner that fairly reflects performance.

Internal auditors are hired by organizations to assist management in effectively and efficiently operating an organization. Internal auditors do this by reviewing the effectiveness of the organization's internal control process and making suggestions for improving it. In conducting their internal control reviews, the internal auditor should identify the potential risks faced by the organization and then ensure that the most effective and efficient controls are present to address the risks. An internal control review can take many forms, from simply ensuring that controls are present and functioning to an operational audit involving the review of an organization's mission, goals, objectives, and operating procedures.

Up until the 1980s, most internal auditing departments limited the scope of their audits to simply determine whether the organization's policies and procedures were being followed. During the course of these audits, inefficiencies or poor operating procedures were identified and money-savings suggestions generated by the auditors. Concurrently, many organizations have adopted Total Quality Management (TQM) which defines quality in terms of customer satisfaction and measured quality using performance measures that were tracked over time or compared (benchmarked) to other organizations. In addition, organizations faced an increase in legal exposure from laws and regulations enacted beginning in the 1970s and continuing to the present. In the public sector, grantors and constituents demanded accountability in return for the resources provided. Such accountability was to be reported in a document that described efforts and accomplishments. These factors all caused organizations to initially request, and then demand, that their internal auditors downplay compliance with the organization's policies and procedures and emphasize the effective and efficient use of resources and compliance with laws and regulations. This shift in audit scope occurred simultaneously in for-profit and not-for-profit sectors.

The benefits and importance of operational (performance) audits in improving long-term performance is recognized. For example, consider an organization's purchasing function. During the financial audit, an auditor considers only those aspects of the purchasing function that directly affects the financial statements. Thus, the audit would consider whether the terms of purchases are written down in the form of contracts or purchase orders. In addition, the auditor would check to ensure that appropriate officials have been identified who can approve the purchase order. The auditor in a financial audit may go on to check that these two controls were in fact being done, namely that properly approved purchase orders were prepared for all purchases.

The operational auditor, on the other hand, would first identify the purpose of the purchasing function—to get the best terms from vendors for materials and services obtained for the organization. The operational auditor would then obtain the policy and procedures manual for purchasing and review it in the context of the purchasing function's purpose. Additional information may have to be obtained to answer questions raised in the auditor's review. For example, how effective is the bidding process or how much money is actually being saved by obtaining bids? The operational auditor may find that purchasing agents are getting bids for small dollar items, with little return being realized for the effort expended. This type of finding could lead to changes in the policies and procedures followed in the purchasing office with resulting benefits in terms of cost savings accruing to the organization.

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DOUGLAS E. ZIEGENFUSS

PERSONAL FINANCIAL PLANNING

The best investment a person can make is in himself. Financially, he must have some knowledge about his own affairs because he cannot hand over everything to a financial adviser or broker and expect that person to do it all. If he takes the time to learn about money matters, he will receive a rich reward—dividends in understanding that in the long run will improve his financial position.

HOW DOES ONE BEGIN A FINANCIAL PLAN?

The first step he should take in creating a financial plan is to identify his personal and family financial goals. Goals are based on what is most important to an individual. Short-term goals (up to a year) are things that one desires soon (household appliances, a vacation abroad), while long-term goals identify what one wants later on in life (a home, education for children, sufficient retirement income). Take these short- and long-term goals and establish priorities, making sure an emergency fund is listed as the first item. Then estimate the cost of each goal and set a target date to reach it.

The changing life cycle affects financial planning. A person's goals must be updated as his needs and circumstances change. In one's young adult years, short-term goals may include adequate insurance, establishing good credit, and just getting under way. During a person's middle years, the goals shift from immediate personal spending to education for children and planning for retirement. In one's later years, travel may become a primary goal.

When planning for the future, age is a vital factor. Here are some guidelines to use, depending on one's present age:

> *Age 20 to 40*: When a person is young, growth of financial resources should be a primary goal; a relatively high degree of risk is tolerable. Suggestion: Invest in a diversified portfolio of common stocks or in a mutual fund managed for growth of assets, not income. Speculation (in real estate, coins, metals, etc.) is acceptable.
>
> *Age 40 to 60*: Stocks are still an attractive choice, but now one needs a more balanced approach. Begin to invest in fixed-rate instruments (bonds) and look into bonds that are tax-free (municipals).
>
> *Age 60 and over*: By now, the majority of an investor's funds should be in income-

producing investments to provide safety and maximum current interest.

There is a rule of thumb that may be appropriate here. It is based on the concept that the percentage of one's portfolio in bonds should approximate one's age, the balance going into equities (stocks). For example at age 40 an investor would keep 40 percent in bonds and 60 percent in equities. At age 60 the reverse would be appropriate; 60 percent bonds and 40 percent equities. Of course, this is a very general idea that may not be appropriate for everyone.

When planning investments for one's age bracket, consider the following:

1. *Security of principal*: This refers to the preservation of one's original capital. Treasury bills are guaranteed by the government, while stocks fluctuate greatly.
2. *Return*: This means the money one earns on investment (interest, dividends, profit).
3. *Liquidity*: This deals with the ease of converting investment into cash.
4. *Convenience*: This refers to the time and energy a person is willing to expend on his investment.
5. *Tax status*: Depending on one's tax bracket, each investment will bear heavily on one's personal situation. Municipal bonds are tax-free, while certificates of deposit (CDs) are fully taxable.
6. *Individual personal circumstances*: Included under this category would be a person's age, income, health, individual circumstances, and ability to tolerate risk.

HOW SHOULD ONE DEAL WITH FINANCIAL RISK IN PLANNING FOR THE FUTURE?

The single most important factor in deciding on the best investments for an individual is the level of risk one can afford to take. Thus the first step in formulating an investment plan is a careful self-examination. How much money does a person have to invest? How great will his financial needs be for the foreseeable future? How much of his capital can he realistically afford to risk losing, and how great a degree of risk can he and his family handle psychologically? Each of these factors will have a bearing on the degree of risk a person can tolerate in his investment decisions.

The trade-off is simple: To get larger rewards one has to take greater risks.

A person can achieve a balance by investing in a pyramid fashion: Begin with conservative (safe) investments at the foundation (Treasury obligations, insured money markets, CDs) and then gradually build up, accepting a bit more risk at each step. At the very top, you may have high-risk investments (e.g., coins, gold, real estate), but because of the pyramid, these investments will be small compared with the rest of one's holdings. Also, to minimize loss, one should have at least two different types of investments that perform differently during a specific period of time. For example, when interest rates are low, stocks usually gain while money markets do poorly. Diversify!

Every investor must find a comfortable-zone balance of security and risk. This is one of the cardinal rules of financial planning.

Ironically, the goal is to live in comfort, but the key is not to get too "comfortable." Investors don't want to miss out on profitable opportunities.

Here are some guidelines for handling risk that should make an investor more "comfortable"—in both senses of the word.

1. Don't invest in any instrument in which one can lose more that one can potentially gain. This factor is sometimes referred to as *risk-reward balance*.
2. Diversify one's holdings. Spread investment dollars among a variety of instruments, thereby minimizing the potential risk.
3. When investments fail to perform up to expectations (the period to hold them is based upon one's objectives), sell them. "Cutting one's losses" is the only sure way to prevent minor setbacks from turn-

ing into financial nightmares. A rule of thumb is to sell when the value declines by 10 percent of your original cost.

4. Institute a "stop order." Most small market investors have not heard of a "stop order," yet it can "cut one's losses" automatically. When an investor purchases a stock, he gives his broker instructions to sell that stock if it should decline by, say, 10 percent of its original purchase price. The moment the predetermined level is reached, the stock will be sold.
5. Don't discount risk altogether. The rewards may justify "taking a chance." Remember the turtle. It makes progress only when it sticks its neck out.

HOW CAN COMPUTERS HELP WITH FINANCIAL PLANNING?

Financial planning and computers are an ideal match. A person inputs the information; the computer crunches the numbers, makes the projections, and helps keep him on track.

There are software programs designed for personal financial planning and investment. These programs can help one devise a household budget, monitor expenditures in numerous categories, keep meticulous records, and plan for the future. Some programs make year-to-year projections of one's income, expenses, and retirement benefits from now to age 125, and virtually all the programs will import pertinent data into tax-preparation software. Whether an individual prepares his own tax returns or has them done by a professional, having good records is a real boon when that April 15 deadline looms.

If one finds visual data useful, these programs will delight by producing spreadsheets, charts, and graphs. Most programs can even print out checks.

Computer programs make it especially easy to track one's investments. One can enter as many accounts and portfolios as desired, including stocks, mutual funds, bonds, individual retirement accounts (IRAs), and so on. With a link to the Internet, these programs allow an investor to calculate his current net worth with the touch of a key.

HOW DOES ONE CHOOSE A FINANCIAL PLANNER?

Once a person has developed an overall plan, he may want to "go it on his own" or he may use a financial professional, one who shares his sense of values and objectives. Financial planners are paid for their work in one of three ways: fee only, commission only, or fee plus commission. As investors will quickly discover, financial planners do not all charge the same level of fees. Think about how one selects a physician, a school for one's children, a home for one's family. With one's future quality of life hanging in the balance, forgo the "bargain" and choose the best-qualified person available—one whose personal style is compatible. What happens with money in one's life is as intimate as sex—and as central to one's well-being. So choose an adviser one can trust and like.

When considering an individual as one's financial professional, make certain to inquire about his or her education, degrees, certificates, and specializations, if any. However, there are many types of experts, each with a special service and fee schedule. In certain cases, an individual may have more than one title. The following list explains the most frequently encountered titles:

Accredited Estate Planner (AEP): Title awarded by the National Association of Estate Planners to professionals who pass an exam and meet educational requirements.

Chartered Financial Analyst (CFA): Awarded by the Association for Investment Management and Research to securities analysts, money managers, and investment advisers who complete a course and pass an exam.

Certified Financial Planner (CFP): Licensed and certified by the Certified Financial Planner Board after meeting educational, examination, and experience requirements.

Chartered Life Underwriter (CLU): Also awarded by the American College to insurance and financial service professional.

> *Certified Public Accountant (CPA)*: Licensed by the state after completing educational courses and passing a uniform national examination administered by the American Institute of Certified Public Accountants.
>
> *Registered Investment Adviser (RIA)*: Indicates registration with the Securities and Exchange Commission; no examination required. (Stockbrokers are exempt from registering as RIAs since they're regulated by the National Association of Securities Dealers [NASD]. They must pass an NASD exam.)
>
> *Registered Financial Consultant (RFC)*: Awarded by the International Association of Registered Financial Consultants to professionals who meet educational and experience requirements and who have earned a securities or insurance license or a certification such as CPA.

When a person has decided on the type of financial professional he wants, he should visit a few and ask them for information on how other clients' investments have performed under their guidance and carefully try to assess how well the planners have been able to achieve for their clients the objectives he is seeking. But it is most important to for him to ask himself whether he would be comfortable with this person handling his financial affairs.

An investor owes it to himself to read (newspapers, magazines, annual reports), learn (seminars, courses), ask (brokers, financial planners), and make certain that he can apply the knowledge gained so that when opportunity does knock, he is not in the backyard looking for four-leaf clovers.

And that is the point. A person must act now so that he can build a firm financial future for himself and his family. Remember that the flowers of all tomorrows are in the seeds of today. The information in this encyclopedia can be the first building block in the creation of a secure and comfortable financial future that only the reader can initiate. There is a saying that sums up financial planning in ten two-letter words: If it is to be, It is up to me.

(SEE ALSO: *Bonds*; *Insurance*; *Mutual Funds*; *Stocks*)

JOEL LERNER

PERSONAL LOANS

(SEE: *Personal Financial Planning*)

PERSONAL SELLING

(SEE: *Promotion*)

PLANNING

(SEE: *Strategic Management*)

POINT OF PURCHASE DISPLAYS

(SEE: *Promotion*)

POLICY DEVELOPMENT

Companies develop policies generally to help them run efficiently in achieving their objectives. They also develop them to comply with the legal and social environment in which they operate as well as to build goodwill with both their employees and their customers. In this way, policies help shape the culture of an organization. They run the gamut from simple parking policies and dress codes to operational policies to complex policies involving benefits and legal rights. To help companies run efficiently, these policies must be appropriate, well written, and easily accessible. Furthermore, as management tools, they must be updated and maintained regularly to work effectively.

DEVELOPMENT METHODOLOGY

To create appropriate policies, companies must decide who is best for the job of creating policy, ensure that they are written clearly, and make them readily available to employees.

Who makes company policy? Depending on the size and management style of a company, the task of creating and writing policy statements varies widely. A small, growing company may start with unwritten policies created by the owners and move to written ones as the need arises. Today, many such companies purchase template policy manuals, adapting them as appropriate to their businesses. As companies grow larger, their need for formal policies grows. These policies help ensure consistency and fairness to all employees.

The management style of the company often determines who sets the policies. Typically, companies with a top-down management style tend to delegate the policy making. Boards of directors often create policies for executives, while executives and managers create them for their subordinates. Very large companies not only have written policies; they often have different policies for different groups of employees. A set of travel policies, for example, may apply only to those employees who travel, or there may even be different policies for international and domestic travelers. The policy may even vary by level in the organization.

As organizational structures have flattened in recent years, companies are moving toward more employee involvement in policy making. A poll of Fortune 500 companies reported that almost half (47 percent) of these companies involve employees in policy decisions. Sometimes policy ideas are solicited from all employees, and sometimes teams of employees create the policies. When policies affect only one department, the department's members contribute substantially to those policies. When policies affect several groups, cross-functional teams are often formed to create those policies.

How should policies be written? One of the most important aspects of effective policies includes communicating them clearly to all affected by them. Two major objectives of well written policy statements are that they be clear and concise. Writers should use words their readers understand; after all, they want statements to be interpreted as they are intended. Also, the tone should be pleasant and the statements should reflect sound practices on such subjects as hiring and firing, pay, and benefits. Many companies also have policies about practices such as giving and receiving gifts, political and charitable contributions, e-mail privacy, Internet use, and health and safety. Some companies even have written policies for activities outside work hours and personal conduct.

Table 1 gives some examples of original and improved policy statements. As you can easily see policy statements need to be specific and precise. A vague policy will not only lead to confusion but could also cause hard feelings, not to mention legal problems. Without the specific detail defining how the three days paid leave could be taken, an employee might expect to have three days tagged on to his or her vacation for the death of a spouse's distant uncle. Or an employee could be under the false impression that vacation days could be accumulated without a cap. That employee might be not only extremely disappointed to learn that the trip to Europe this summer is off because forty days of vacation had not been accumulated but also extremely angry to learn that twenty vacation days were actually lost because they were not taken earlier.

Companies today are extremely sensitive to discriminatory policies. Law requires that women and men be treated uniformly. Most companies with maternity leave have rewritten their policy statements to include paternity leave; others have rewritten their disability policies to include pregnancy. Discriminatory policies relating to age, race, and religion policies are illegal. Policies requiring someone to work on their religious holidays without telling them before they are hired are viewed as discriminatory. Of course, you cannot have a policy that is illegal.

Level of flexibility is another factor to consider in writing policy statements. The objective in writing policy statements is to inform the reader about the content of company policy as clearly as possible. For first-line employees and customers, this usually means being very precise. However, management may want the flexibility to make some decisions on a case-by-case basis.

Original	Improved Revision
If a member of your family dies, you will receive three days off.	If a member of your immediate family dies, you will receive up to three days paid leave for travel to and from the funeral or for funeral and estate business. Your immediate family includes spouse or significant other, parents, grandparents, stepparents, step-grandparents, aunts and uncles, sisters and brothers, stepsisters and stepbrothers, first cousins, sisters-in-law and brothers-in-law, and children and stepchildren.
After you work for the company for six months, you are entitled to one day of vacation for every month worked.	After you successfully complete your probationary period, you may begin accumulating paid vacation days. For each month you work after the probation period, you will earn one day of paid vacation . You can accumulate a maximum of 20 paid vacation days.
Employees may use their accumulated sick leave for childcare or eldercare.	You can use your sick leave to take care of your sick children or stepchildren. You can also use it to attend to special needs of your elder parents, stepparents, grandparents, or step-grandparents.

Table 1

Thus policies written for middle- and top-level management may be purposefully written to allow for flexibility and different interpretations. Also, some types of policies have so many acceptable interpretations that listing them all is both ridiculous and unmanageable. Other times companies will implement a new policy without fully understanding the level of precision it needs. However, there should be a plan to refine the level during rewrites of the policy.

The elder care example above might exemplify a new policy. Initially, an employer might intend that employees use these days to take their elders to doctor and dentist appointments. However, a perfectly acceptable use of this day may be driving elders around to various nursing retirement homes to choose one for their future living. In any case, employers may decide to build in flexibility at the beginning, recognizing that most of their employees will not abuse this use of their accumulated sick days. However, companies might rewrite this policy later to decrease its flexibility if they find that some employees are testing its reasonable limits.

What technological tools help in policy creation and dissemination? Many technological tools help writers create and disseminate company policies. Most of the full-featured word processors used today include revision features. This tool allows policy writers to share their drafts with others, reviewing changes and suggestions others make and deciding whether or not to accept the change. Companies or groups using intranets can post policy drafts and solicit suggestions directly. Still others prefer to create policies using group software tools that allow users to brainstorm, rank, and create policies anonymously.

Today, many organizations make company policies available on their intranets. In addition to being readily accessible, these policies should be clearly and logically organized. Today's word processors include tools that can generate a table of contents and an index, two components that help make the policies more easily accessible. Another good idea is to create a glossary that includes unfamiliar terms, such as legal definitions, acronyms, and jargon.

Writing or revising policies can be a big project, involving many people and tasks. Project management software is an excellent tool for helping identify the tasks and manage them efficiently.

MAINTENANCE OF POLICY

One final but important aspect of policy development is to review policies periodically and revise them as necessary. Revisions are indicated when companies find they are continually being asked to clarify the statements. Keeping a log of questions as they are asked will help in the revision process. Another indication that updating is needed is frequent employee or customer complaints about a particular policy. While sometimes they do not understand the reason behind the policy, often they are complaining about its fairness or its harshness in comparison with the policy of other businesses.

Other reasons for revising and maintaining policies include both external and internal changes. Changes in the business, work, and social environments often influence needs. Sometimes business mergers, acquisitions, or spin-offs cause companies to revise polices for the new company. Technology such as the Internet, for example, has changed the way many companies do business with both their internal and external customers and suppliers, creating the need to add, delete, and revise policy statements frequently.

Another way to keep current with needed revisions is by keeping up with news items, such as government regulations, health and safety regulations, antitrust laws, morals laws, ethics, etiquette, and much more. Through reading, a company learns what other companies are doing or what problems they have experienced with certain policies. This allows it to take precautionary steps, revising its statements to avoid problems that others have encountered. Of course, keeping up with new laws or interpretations is critical. For example, recently laws have been passed regarding e-mail privacy, and courts have ruled in various ways on the rights of the employer or employee in regard to this issue. Undoubtedly, the courts will be hearing and interpreting more cases on e-mail privacy. Keeping up with current events with an eye to how they might impact your company's policy statements is a good idea.

SUMMARY

Policies are created to help business run more smoothly. Knowing how to develop complete and accurate statements for a specific audience will help organizations succeed in having up-to-date policies that work effectively for them.

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Marie E. Flatley

POWER

(SEE: *Management: Authority and Responsibility*)

PRICE FIXING

Price fixing is the conspiracy by several manufacturers to set prices for goods or services above the normal market rate. The U.S. Justice Department (DOJ) and the Federal Trade Commission (FTC) are the regulatory bodies responsible for determining whether companies are involved in price-fixing tactics. Both bodies have the ability to impose heavy fines on those companies found to be conspiring to fix prices.

The health care industry has been scrutinized many times for price fixing, especially companies that manufacture vitamins. In 1995, the Justice Department fined three vitamin manufacturers a total of $750 million dollars for conspiring to fix vitamin prices. In addition, three vitamin distributors were also found guilty of price fixing that same year; their fines totaled $137 million for fixing the prices for a handful of popular vitamins, and they had to pay just over $1 billion to 1000 corporate buyers of bulk vitamins, an amount reflecting overcharges during the years of the conspiracy.

Roche Holdings AG, which holds forty percent of the global vitamins market, agreed to pay a fined of $500 million and as of 1999 was the object of class-action lawsuits and investigation by the European Commission. Because of the various price-fixing scandals, Roche and other vitamin manufacturers may have trouble raising prices in the future, or even stabilizing them. The price-fixing conspiracy lasted from 1990 through 1999 and affected vitamins A, B2, B5, C, E, and beta carotene. It also included vitamin premixes, which are added to breakfast cereals and other processed foods. The Justice Departments probe of price fixing was expected to continue as the government attempted to build cases against other vitamin manufacturers.

In 1996, the FTC and the DOJ issued a revised Statement of Antitrust Enforcement Policy in Health Care. Under this new enforcement policy, the FTC and the DOJ will not necessarily view joint agreements on price between previously competing providers as unlawful price fixing if the integrated delivery system is sufficiently integrated. The enforcement statement does not, however, provide solid guidance on what constitutes integration sufficient to permit joint negotiations. But, it does offer rules of thumb that will allow those involved in integrated delivery systems to better assess whether their joint pricing activities will raise antitrust concerns.

The securities industry was also closely scrutinized in the 1990s for price-fixing tactics. Investigations of the National Association of Securities Dealers and the NASDAQ market by the Department of Justice and the Securities and Exchange Commission (SEC) during the latter part of the 1990s suggested that market makers colluded to fix prices and widen bid-ask spreads in attempts to increase dealers' profits at investors' expense. At a minimum, market makers appeared to have adopted a quoting convention that could be viewed as anticompetitive behavior.

In understanding the experience of the U.S. securities market, it is important to consider what sorts of behavior are deemed anticompetitive. U.S. law on overt price fixing is clear: Such behavior is illegal. However, in many cases there is no explicit agreement to fix prices. Based on the Sherman Antitrust Act, U.S. courts developed the doctrine of conscious parallelism, which means, according to the Supreme Court, that no formal agreement is necessary to constitute an unlawful conspiracy.

Prior to 1996, market makers were allegedly engaged in many price-fixing scandals. In the late 1990s, the Justice Department found evidence that this practice was still occurring. For example, price quotes on Instinet, a private electronic market, differed from NASDAQ quotes for the same stocks. As of 2000, the SEC was investigating individual traders in connection with price fixing, and there was the possibility that additional civil suits could be filed.

In 1999, a California appeals court unanimously ruled that Arco and eight other oil companies were entitled to summary judgment in a price-fixing suit because there was no evidence of an agreement among them to fix prices or limit the supply of the cleaner-burning gasoline mandated by California. The appeals court agreed with the trial court's original conclusion that the evidence provided by the plaintiffs suggested not a complex tangled web, but nine defendants using all available information sources to determine capacity, supply, and pricing decisions. The court ruled that the companies involved made these pricing decisions because they wanted to maximize their own individual profits and were not concerned about the profits of their competitors.

As of 2000, the Department of Justice was investigating thirty price-fixing cases, many of them involving food additives, feed supplement, and vitamins. Since price fixing occurs when companies conspire to set an artificially high price for a product, the nature of the food additive industry makes it easy to create price-fixing cartels. Because of the small number of companies that are involved in the additive industry, it is easier for them to organize and maintain a price-fixing conspiracy. Price fixing of food additives is also easy because a small number of companies means that prices are negotiated via individual contracts, instead of in an open market.

The establishment in the 1990s of international trade associations, which are facilitated by the European Union, is another major cause of price fixing. These trade associations provide data about their industry to association members, including information on the exact size of the market and the growth rate of the industry. That information can lead to establishment of a cartel, because the companies can extrapolate pricing information.

Archer Daniels Midland was prosecuted in 1996 for illegally fixing the prices of lysine, which is used as a nutritional additive in livestock feed, and citric acid. During the time of the conspiracy, Archer Daniels Midland produced 54 percent of the nation's lysine used in the United States and 95 percent of the world's source. Annual sales of lysine were $330 million in the United States and $600 million worldwide.

The company pleaded guilty to fixing the price of lysine from 1992 to 1996, and the Justice Department fined it $70 million. The higher prices of animal feed resulted in lost income for hog and poultry farmers, as well as feed companies.

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PATRICIA A. SPIROU

PRICING

Price is perhaps the most important of the four Ps of marketing, since it is the only one that generates revenue for a company. Price is most simply described as the amount of money that is paid for a product or service. When establishing a price for a product or service, a company must first assess several factors regarding its potential impact. Commonly reviewed factors include legal and regulatory guidelines, pricing objectives, pricing strategies, and options for increasing sales.

LEGAL AND REGULATORY GUIDELINES

The first major law influencing the price of a company's product was the Sherman Antitrust Act of 1890, passed by Congress to prevent a company from becoming a monopoly. A monopoly occurs when one company has total control in the production and distribution of a product or service. As a monopoly, a company can charge higher than normal prices for its product or service, since no significant competition exists. The Sherman Antitrust Act empowers the U.S. Attorney General's Office to challenge a perceived monopoly and to petition the federal courts to break up a company in order to promote competition. An example of the successful use of Sherman Antitrust Act regulations occurred when the Attorney General's Office used them to break up the telephone giant, AT&T, in the 1980s. As a result of AT&T's breakup, several new telephone companies, such as MCI and Sprint, were created. The formation of these and other new phone companies during the 1980s resulted in the more competitive pricing of telephone services.

Another significant piece of legislation that has a major effect on determining price is the Clayton Act of 1914, passed by Congress in order to prevent practices such as price discrimination and the exclusive or nearly exclusive dealing between and among only a few companies. Like the Sherman Antitrust Act, this act prevented practices that would reduce competition. The Robinson-Patman Act of 1936, which is technically an extension of the Clayton Act, further prohibits a company from selling its product at an unreasonably low price in order to eliminate its competitors. The purpose of this act was to prohibit national chain stores from unfairly using volume discounts to drive smaller firms out of business. To defend against charges of violating the Robinson-Patman Act, a company would have to prove that price differentials were based on the competitive free market, not an attempt to reduce or eliminate competition. Because regulations of the Robinson-Patman Act do not apply to exported products, a company can offer products for sale at significantly lower prices in foreign markets than in U.S. markets.

Another set of laws influencing the price of a company's product are referred to as the unfair trade laws. Passed in the 1930s, these laws were designed to protect special markets, such as the dairy industry, and their main focus is to set minimum retail prices for a product (e.g., milk), allowing for a slight markup. Theoretically, these laws would protect a specialty business from larger businesses that could sell the same products below cost and drive smaller, specialty stores out of business. Fair trade laws are a different set of statutes that were enacted by many state legislatures in the early 1930s. These laws allow a producer to set a minimum price for its product; hence, retailers signing pricing agreements with manufacturers are required to list the minimum price for which a product can be sold. These acts prevent the use of interstate pricing agreements between manufactures and retailers, grounded in the belief that this would promote more competition and, as a result, lower prices. An important aspect of these acts is that it does not apply to intrastate product prices.

PRICING OBJECTIVES

A critical part of a company's overall strategic planning includes the establishment of pricing objectives for the products it sells. A company has several pricing objectives from which to choose, and the objective chosen will depend on the goals and type of product sold by a company. The four most commonly adopted pricing objectives are (1) competitive, (2) prestige, (3) profitability, and (4) volume pricing.

Competitive Pricing The concept behind this frequently used pricing objective is to simply match the price established by an industry leader for a particular product. Since price difference is minimized with this strategy, a company focuses its efforts on other ways to attract new customers. Some examples of what a company might do in order to obtain new customers include producing high-quality and reliable products, providing superior customer service, and/or engaging in creative marketing.

Prestige Pricing A company may chose to promote, maintain, and enhance the image of its product through the use prestige pricing, which involves pricing a product high so as to limit its availability to the higher-end consumer. This limited availability enhances the product's image, causing it to be viewed as prestigious. Although a company that uses this strategy expects to have limited sales, this is not a problem because a profit is still possible due to the higher markup on each item. Examples of companies that use prestige pricing are Mercedes-Benz and Rolls Royce.

Profitability Pricing The basic idea behind profitability pricing is to maximize profit. The basic formula for this objective is that profits equal revenue minus expenses ($P = R - E$). Revenue is determined by a product's selling price and the number of units sold. A company must be careful not to increase the price of the product too much, or the quantity sold will be reduced and total profits may be lower than desired. Therefore, a company is always monitoring the price of its products in order to make sure it is competitive while at the same time providing for an acceptable profit margin.

Volume Pricing When a company uses a volume-pricing objective, it is seeking sales maximization within predetermined profit guidelines. A company using this objective prices a product lower than normal but expects to make up the difference with a higher sales volume. Volume pricing can be beneficial to a company because its products are being purchased on a large scale, and large-scale product distribution helps to reinforce a company's name as well as to increase its customer loyalty. A subset of volume pricing is the market-share objective, the purpose of which is to obtain a specific percentage of sales for a given product. A company can determine an acceptable profit margin by obtaining a specific percentage of the market with a specific price for a product.

PRICING STRATEGIES

Companies can chose from a variety of pricing strategies, some of the most common being penetration, skimming, and competitive strategies. While each strategy is designed to achieve a different goal, each contributes to a company's ability to earn a profit.

Penetration Pricing Strategy A company that wants to build market share quickly and obtain profits from repeat sales generally selects the penetration pricing strategy, which can be very effective when used correctly. For example, a company may provide consumers with free samples of a product and then offer the product at a slightly reduced price. Alternatively, a company may initially offer significant discounts and then slowly remove the discounts until the full price of the product is listed. Both options allow a company to introduce a new product and to start building customer loyalty and appreciation for it. The idea is that once consumers are familiar with and satisfied with a new product, they will begin to purchase the product on a regular basis at the normal retail price.

Price Skimming Strategy A price-skimming strategy uses different pricing phases over time to generate profits. In the first phase, a company launches the product and targets customers who are more willing to pay the item's high retail price. The profit margin during this phase is extremely high and obviously generates the highest revenue for the company. Since a company realizes that only a small percentage of the market was penetrated in the first phase, it will price the product lower in the second phase. This second-phase pricing will appeal to a broader cross-section of customers, resulting in increased product sales. When sales start to level off during this phase, the company will price the product even lower. This third-phase pricing should appeal to those consumers who were price-sensitive in the first two phases and result in increased sales. The company should now have covered the majority of the market that is willing to purchase its product at the high, medium, and low price ranges. The price-skimming strategy provides an excellent opportunity for the company to maximize profits from the beginning and only slowly lower the price when needed because of reduced sales. Price adjustment with this strategy closely follows the product life cycle, that is, how customers accept a new product. Price skimming is a frequently used strategy when maximum revenue is needed to pay off high research and development costs associated with some products.

Competitive Pricing Strategy Competitive pricing is yet another major strategy. A company's competitors may either increase or decrease their prices, depending upon their own objectives. Before a company responds to a competitor's price change with one of its own, a thorough analysis as to why the change occurred needs to be conducted. An investigation of price increases or decreases will usually result in one or more of the following reasons for the change: a rise in the price of raw materials, higher labor costs, increasing tax rates, or rising inflation. To maintain an acceptable profit margin for a particular product, a company will usually increase the price. In addition, strong consumer demand for a particular product may cause a shortage and, therefore, allow a company to increase its price without hurting either demand or profit.

When a competitor increases its price, a company has several options from which to chose. The first is to increase its price to approximately the same as that of the competing firm. The second is to wait before raising its price, a strategy known as *price shadowing*. Price shadowing allows the company to attract new customers—those who are price-sensitive—away from the competing firm. If consumers do switch over in large numbers, a company will make up lost profits through higher sales volume. If consumers do not switch over after a period of time, the company can increase its price. Typically, a company will increase its price to a level slightly below that of its competitors in order to maintain a lower-price tactical advantage. The airline industry uses the competitive pricing strategy frequently.

When competitors decrease their prices, a company has numerous options. The first option is to maintain its price, since the company is confident that consumers are loyal and value its unique product qualities. Depending on the price sensitivity of customers in a given market, this might *not* be an appropriate strategy for a company to use. The second is to analyze why a competitor might have decreased its prices. If price decreases are due to a technological innovation, then a price decrease will probably be necessary because the competitor's price reduction is likely to be permanent. Regardless of its competitor's actions, a company may decrease its price. This price reduction option is called *price covering*. This option is most useful when a company has done a good job of differentiating the qualities of its product from those of a competitor's product. On the flip side, the advantage of price covering is reduced when no noticeable difference can be seen between a company's product and that of a competitor.

OPTIONS FOR INCREASING SALES

Companies have several options available when attempting to increase the sales of a product, including coupons, prepayment, price shading, seasonal pricing, term pricing, segment pricing, and volume discounts.

Coupons Almost all companies offer product coupons, reflecting their numerous advantages. First, a company might want to introduce a new product, enhance its market share, increase sales on a mature product, or revive an old product. Second, coupons can be used to generate new customers by getting customers to buy and try a company's product—in the hope that these trial purchases will result in repeat purchases. A variety of coupon distribution methods are available, such as Sunday newspapers and point-of-purchase dispensers.

Prepayment A prepayment plan is typically used with customers who have no or a poor credit history. This prepayment method does not generally provide customers with a price break. There are, however, prepayment methods that do reduce the price of a product. For example, the prepayment strategy is widely used in the magazine industry. A customer who agrees to purchase a magazine subscription for an extended period of time normally receives a discount as compared to the newsstand price. Purchase of gift certificates is another example of how prepayment can be used to promote sales. For example, a company may offer discounts on a gift certificate whereby the purchaser may only pay 90 to 95 percent of the gift certificate's face value. There are several advantages of using this strategy. First, consumers are encouraged to buy from the company offering the gift certificates rather than from other stores. Second, the revenue is available to a company for reinvestment prior to the product's sale. Finally, receivers will not redeem all gift certificates, and as a result, a company retains all the revenue.

Price Shading One way to increase company sales is to allow salespeople to offer discounts on the product's price. This tactic, known as price shading, is normally used with aggressive buyers in industrial markets who purchase a product on a regular basis and in large volumes. Price shading allows salespeople to offer more favorable terms to preferred industrial buyers in order to encourage repeat sales.

Seasonal Pricing The price for a product can also be adjusted based on seasonal demands. Seasonal pricing will help move products when they are least saleable, such as air conditioners in the winter and snowblowers in the spring. An advantage of seasonal pricing is that the price for a product is set high during periods of high demand and lowered as seasonal demand drops off to clear inventory to make room for the current season's products.

Term Pricing A company has another positive reinforcement strategy for use when establishing product price. For example, a company may offer a discount if the customer pays for the product promptly. The definition of promptly varies depending on company policy, but normally it means the account balance is to be paid in full within a specific period of time; in return, a company may provide a discount to encourage continuation of this early payment behavior by the customer. This term pricing strategy is normally used with large retail or industrial buyers, not with the general public. Occasionally, a company will offer a small discount to customers who pay for a product with cash.

Segment Pricing Segment pricing is another tactic a company can use to modify product price in order to increase sales. Everyday examples of segment pricing discounts are those extended to children, senior citizen, and students. These discounts have several positive benefits. First, the company is appearing to help those individuals who are or are perceived to be economically disadvantaged, a perception that helps create a positive public relations image for a company. Second, members of those groups who ordinarily may not purchase the product are encouraged to do so. Therefore, a company's sales will increase, which will likely result in increased market share and revenue.

Volume Discounts A common method used by a company to price a product is volume discounting. The idea behind this pricing strategy is simple—if a customer purchases a large volume of a product, the product is offered at a lower price. This tactic allows a company to sell large quantities of its product at an acceptable profit margin. Volume pricing is also useful for building customer loyalty.

SUMMARY

Price is an important component of the four Ps of marketing because it generates revenue. Price is often thought of as the money that this paid for a product or service. Several factors need to be examined when setting a product price. Frequently reviewed factors include legal and regulatory guidelines, pricing objectives, pricing strategies, and options for increasing sales, since all of these factors contribute to the price established for a product.

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ALLEN D. TRUELL
MICHAEL MILBIER

PRIVACY AND SECURITY

Personal privacy and security are foundational principles of our society. Yet how much actual privacy do we have? And how secure is the information we believe to be private? The integration of the computer into almost every corner of our lives has greatly affected our personal privacy and security. Databases across the country collect little pieces of data about us every time we use our credit cards, make a telephone call, and send or receive e-mail. In addition, health care records, insurance records, Social Security records, and so forth are all kept in computer files. This computer technology makes records and data easier to compile, combine, and circulate. Therefore, it is important to consider the effects of computerization on individual privacy, corporate security, and legislation.

INDIVIDUAL PRIVACY

Jeffrey Rothfeder's 1992 book, *Privacy for Sale*, illuminates the ways in which computers have changed our lives. Today, most of us depend on technology more than we realize. Although not everyone owns a cellular telephone, global pager, or personal digital assistant (PDA), most people do have credit cards, bank cards, and Social Security numbers. But the piles of files that are maintained when we pay for dinner with a credit card, withdraw cash using an automated teller machine (ATM), and use our Social Security number as identification when cashing a check are just the tip of the iceberg. Health care records, pharmacy databanks, and employment files also provide millions of people with the opportunity to peek into our lives.

Before computerization, most of this information was filed away in dark, musty filing cabinets, never to see the light of day without a

U.S. representative Jay Inslee speaks publicly about banks selling confidential information to telemarketers.

certain amount of physical effort. However, today this information is stored electronically in databases that are interconnected through a wide variety of networks. Your privacy—or the lack thereof—can be just a few mouse clicks away. Privacy advocates assert that electronic record keeping of any information threatens basic American liberties and rights to privacy. Some argue that any machines that have memory—such as answering machines or cellular telephones—are potential privacy concerns.

In addition, computers can be used as vehicles for harassment. The term ‘‘spam’’ was originally used in cyberspace to refer to unrelated or unnecessary (junk) postings to electronic newsgroups and bulletin boards. Eventually, the term was used as a verb to refer to junk e-mail (e.g., "I've been spammed!"). Some states have enacted laws to decrease the amount of on-line harassment. For example, in 1992 Arizona established an antiharassment law that makes it illegal to make threatening or harassing statements via electronic communications. Also in 1992, Michigan passed a stalking law that defined repeated and unwanted electronic messages as harassment. In 1995, Connecticut extended its existing harassment laws to include computer-related communications. Ironically, the corporate and governmental entities that maintain many of the databases that are used to collect information are also vulnerable to their own privacy and security issues.

CORPORATE SECURITY

Today, people in business and industry greatly depend on computer technology for nearly every aspect of their daily activities. From typical desktop applications such as word processing and spreadsheets to fax machines, e-mail, and integrated inventory databases, networks have connected corporations across the world to share information and communicate. It is estimated that 200 million e-mail message are sent each day; that's more than 8 million an hour or nearly 140,000 each second! These messages travel through high-speed Internet connections all across the world, making stops (just for nanoseconds) and leaving a trail of messages along the way. These connections facilitate communication, but they also allow outside access to sensitive computer files.

This vulnerability is expensive; nearly 40 percent of all large corporations and even some governmental agencies have experienced virtual break-ins through network connections. Of these break-ins, 30 percent occurred despite the company's use of a firewall—a software program designed to allow only internal access by authorized personnel. Many corporations and government agencies maintain databases that contain personal information about employees, customers, and clients. Although the legal system has not kept pace with the Information Age, legislation has been passed to help promote both individual and organizational privacy and security in cyberspace.

LEGISLATION

No one organization, agency, institution, or country owns or maintains the entire Internet; it is a series of linked networks. Collectively, they work together to support the massive amounts of information that are available worldwide. There are also no set rules or regulations or even standards by which Internet communications are evaluated. However, several groups have formed to address the social and legal issues involving cyberspace. The Electronic Frontier Foundation (EFF) was established in 1990 to focus on civil liberties (www.eff.org). The purpose of this group is to protect the First Amendment right to freedom of speech. In 1992, the Internet Society (ISOC) began as an international organization to develop and implement standards for the Internet as well as to maintain historical and statistical databases of Internet usage (www.isoc.org).

The laws related to computer technology are still in their infancy. However, several laws have been enacted to protect privacy and security. For example, the Privacy Protection Act of 1996 (42 U.S.C. 2000) imposes controls on the databanks owned by federal agencies. Any database maintaining personal information cannot be distributed to other federal agencies without going through proper legal channels. In addition, the Family Education Rights and Privacy Act (FERPA) protects the dissemination of student information.

In addition to "taking" information through database access, security issues also include deleting information through database access. Improper use and invasion of privacy through harmful access occurs when people knowingly damage or destroy computer programs by deleting information or installing computer viruses (programs designed to run in the background of a computer's memory, silently destroying data). This improper use is addressed under the Computer Fraud and Abuse Act of 1986 (18 U.S.C. 1030), which prohibits the improper use of "federal interest" computers—computers that communicate and share information across state lines or internationally. Today, any computer that is connected to the Internet (even through a local network provider) is considered a federal interest computer and subject to the Computer Fraud and Abuse Act. In addition, the Electronic Communications Privacy Act (18 U.S.C. 2510) makes it a crime to use a computer system to view or tamper with other people's private messages (e-mail, data files, etc.) stored in an on-line system.

Jurisdictional issues—the power of a court to hear a case—are also a concern, considering the lack of boundaries in cyberspace. For example, if a person living in California uses a computer system based in Nebraska to access information owned by a corporation in Chicago to learn more about an individual living in New York, which court will hear the case? This scenario becomes even more convoluted if we modify the story to take place in countries instead of states. These laws by no means provide total privacy and security protection; they merely define criminal acts and set the parameters for prosecuting those who have violated them. New laws are continually proposed; you can access these bills and keep up to date on the related debates in Congress by accessing the Library of Congress web site at http://lcWeb.loc.gov/.

CONCLUSIONS

In summary, it is apparent that cyberspace has become and will continue to be a major concern to both individual and organizational privacy and security. Although legislation is beginning to become more substantial, it severely lags behind the pace of technology, forcing the burden of responsibility on the individual. To maintain your personal privacy and security, experts suggest following certain guidelines when using credit cards and communication devices (including telephones and computers):

- When subscribing to an Internet service provider (ISP), give them only the necessary information to process your account. Optional information will be kept in a database and potentially connected to your account for identification purposes.
- Do not, under any circumstances, share your password or personal identification number (PIN) with anyone. Also, if given the option to create your own passwords, do not use words or numbers that someone could know (home address, phone number, date of birth, anniversary) or find (Social Security number).
- If you want to surf the Web without leaving behind a personal trail, use an anonymous connection such as an open computer lab at a school, university, or library.
- Never use your credit card to purchase goods or services on-line; avoid similar transactions over the telephone (especially cordless phones and cell phones).
- Don't create your own personal Web page that lists everything about yourself unless you really want everyone to know everything about you.

In conclusion, we can never be sure how much actual privacy we have. The extent of the Internet and interconnected databases is far too great to determine who knows what or how much. However, we do have some control over the security of our private information—if we choose not to share it!

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LISA E. GUELDENZOPH

PRIVATE OWNERSHIP

(SEE: *Entrepreneurship*)

PRODUCTION MANAGEMENT

(SEE: *Operations Management*)

PRODUCTIVITY

Productivity is the result or the sum of all effort that it takes to deliver a product or service. Productivity is frequently referred to as output and, to some degree, can be measured. The output generated by a person, organization, or other entity is measured in terms of (the number of) units or items produced and services performed within a specified time frame. Thus, productivity is the economic value of goods and services. It becomes the value or result of the "price" of a product or service minus all "costs" (supplies, materials, human labor, etc., which frequently are monetary) that go into the effort.

PRODUCTIVITY PERFORMANCE MEASURES

Productivity is a performance measure that indicates how effectively an organization converts its resources into its desired products or services. It is a relative measure in that it is used to compare the effectiveness of a country, organization, department, workstation, or individual to itself over time for the same operation, or to other countries, organizations, departments, workstations, or individuals. From a systems perspective, productivity indicates how well an organization transforms its inputs into outputs. In manufacturing, productivity is generally stated as a ratio of output to input. Productivity may be expressed as partial measures, multifactor measures, and total measures. Partial productivity measures are used to analyze activities in terms of a single input (e.g., units produced per worker, units produced per plant, units produced per hour, or units produced per quantity of material). Multifactor productivity measures take into account the utilization of multiple inputs (e.g., units of output per the sum of labor, capital, and energy or units of output per the sum of labor and materials). A total measure of productivity expresses the ratio of all outputs produced to all resources used.

SYSTEM AND SUBSYSTEM PRODUCTIVITY

An important point in seeking productivity improvements in a subsystem of an organization is to link the subsystem improvements to the total system productivity. Optimization of a subsystem operation that does not affect the overall productivity of the organization is a waste of resources. For example, a manufacturer might improve the productivity of its machining operations, as measured by number of units produced per dollar. But if these units cannot be sold and are warehoused, the productivity of the organization has not increased, since the goal of the manufacturer is to generate revenue through the sale of its products. Activities intended to improve productivity must be carefully selected, and the appropriate measures must be developed to ensure that the organization's efforts result in the improvement of its overall productivity.

Numerous specific components are involved in contributing to and measuring productivity. The most important of these are discussed below.

Return on Investment Productivity is closely related to, but not dependent on, profit. It can be measured by return on investment (ROI). ROI is determined after the sale of a product or service minus the deductions for the total amount of effort (resources, etc.) put into its design, development, implementation, evaluation, and marketing. The formula for determining ROI is: "Price" minus "Cost" divided by "Sales."

Productivity Measures for Individuals and Teams An individual's productivity is measured by that person's potential to reach the highest level of productivity possible. That is, a person has certain skills that determine his or her level of capability (an engineer's skills, banker's knowledge, etc.). An individual's experiences and education usually determine his or her skill level regarding a particular job. Other factors, such as a positive environment (working with a good team, having a good boss, liking the physical surroundings in the workplace, being appreciated, etc.) and how motivated one is to do a job, also contribute to productivity. When several individuals come together to work as a team, the team's productivity or the effectiveness of the team is the sum of individual efforts toward achieving a desired goal. Several factors (motivation, expertise, working conditions, team compatibility, potential, etc.) influence the level of productivity achieved.

Productivity Gap A productivity gap (*or capacity gap*) is the difference between what a person can do and what that person actually does. That is, every person has the ability to achieve at a certain level. If a person is not motivated and is not working up to potential, that person's productivity gap is usually quite large. The same principle applies to a work team, organization, and so on. It is desirable to estimate potential (of a person, work unit, company, etc.) to determine where productivity gaps exist (and how large they are) and find ways to close them. By looking at a person's ability in conjunction with other motivational factors, it is possible to estimate a person's (or a group's) potential to achieve desired results. When all factors operate at optimum, the productivity is said to be at its highest level—the productivity gap has been filled or is minimized.

Motivation Productivity is directly related to how motivated a person is to perform a task or activity. Many businesses devote much time and effort to finding ways to motivate employees. Worker enhancement programs (for an individual, team, company, etc.) that are built on ways to motivate workers (toward self-motivation and long-term motivation) can optimize productivity. Organizations that are most successful in motivating workers provide a variety of programs (formal and informal avenues within and outside the organization) to meet the needs of their employees. Some organizations offer employees sports and recreational activities, fitness and leisure activities, and family-oriented programs (*work-/job-augmented incentives*). Incentive programs may be totally separate from or incorporated into work-team meetings, seminars, and education/training programs. Such a comprehensive approach toward enhancing worker performance may capitalize on quality measures (such as value, total quality management [TQM], quality circles, innovation, etc.) and performance standards (such as profitability, efficiency, customer satisfaction, on-time delivery, etc.) and include a wide range of personal and team rewards and incentives.

Mutual Reward Theory Mutual reward theory (MRT) is based on finding ways for all to benefit. That is, if an organization can assist an employee in reaching some of his or her goals while still meeting the company's production goals, a mutual reward has occurred. When the benefits are at an optimum for all persons involved, the greatest rewards are realized. Productivity is usually directly proportional to the degree of MRT success.

Productivity Benchmarks Factors that enter into productivity benchmarking for an organization include overall operations, worker training, technology, continuous quality improvement, and management philosophy and strategy. Management strategy includes how and at what level decision making takes place—usually greater productivity gains are realized when decision making is pushed to its lowest level possible and is still effective. Also, an organization's efficiency may depend just as much on borrowing and lending strategies (e.g., requiring immediate payment on goods sold while practicing delayed payments to creditors) to maximize resource availability as it does on efficient operations and a safe environment. Thus, there are many important factors included in maximizing ROI—most factors depend on making the right decisions at the right time. What is a good decision for one company may be bad or devastating for another.

Productivity Growth and Economics Productivity growth is defined as a measure of the amount of goods and services that are produced during a specified period of time. Once a standard has been determined, the standard (benchmark or identified level of production) becomes the measure against which all future production can be compared. Since 1950, the U.S. ten-year annual growth rates have been as follows: 1950s: 2.17 percent; 1960s: 2.85 percent; 1970s: 1.71 percent; 1980s, 2.17 percent; 1990s: (estimate) 1.31 percent. The annual growth rate is of particular interest to individuals, since the productivity growth rate is directly proportional to a person's wealth. That is, as productivity levels go up, so does an individual's buying power. In turn, the total economy benefits from the boost.

Productivity Value Added While productivity is more easily measured in manufacturing (products produced) than in services, most productivity researchers agree that people are the world's most valuable resources. Many productivity researchers suggest that education and training are the basic foundation for raising productivity levels. The acquisition of expertise through education and training, coupled with the best equipment and resources within an efficient and safe environment, can be maximized by developing employees into people who want to learn, who want to work at their potential, and who want to continuously improve. These factors are best achieved when an employee is motivated to take pride in the work he or she does. A motivated, self-starting employee is one who adds value to an organization and contributes to the overall productivity of him- or herself, a work group, an organization, and the economy.

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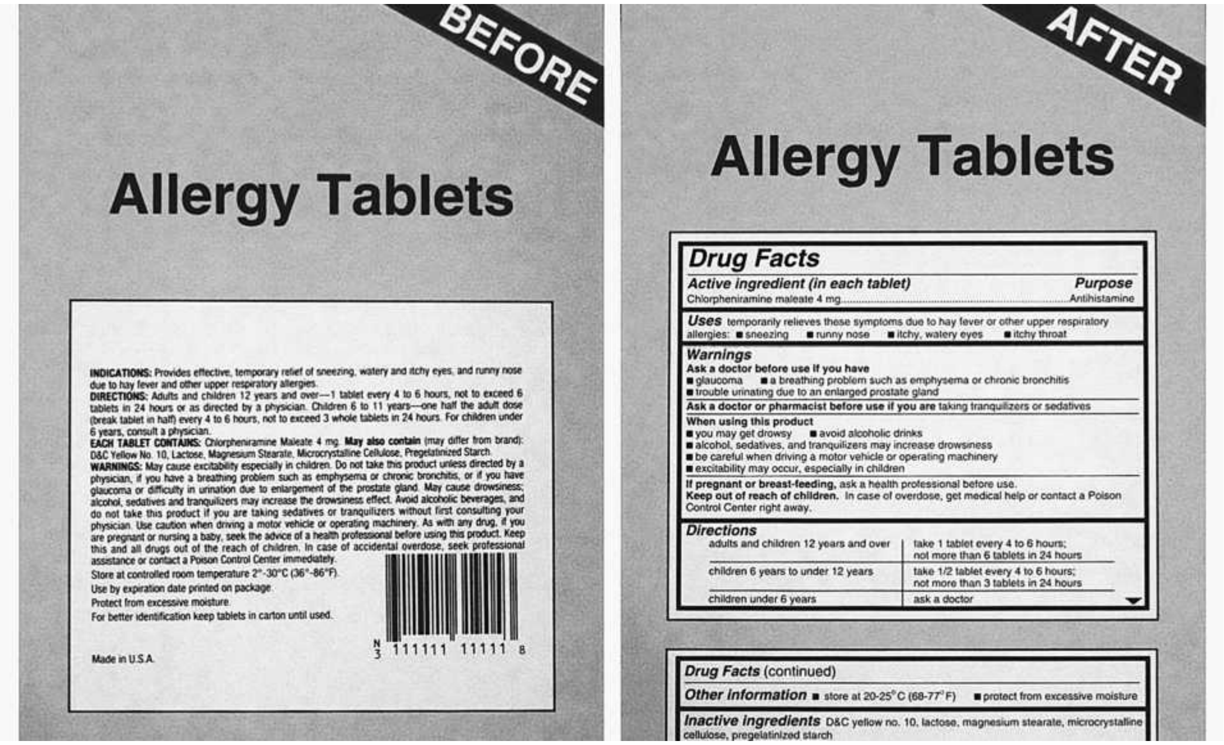
SHARON LUND O'NEIL
JOHN W. HANSEN

PRODUCT LABELING

An important aspect of marketing and selling a company's product is the product label. The product label is very important not only for selling a product but also for communicating to the consumer information, company image, values, and the perceived value of the product. Therefore, when a company designs a label it must take all of these factors into consideration. In addition to the marketing aspect, certain legal requirements must be met in order for the label to be compliant with federal regulations.



Allergy Tablets

INDICATIONS: Provides effective, temporary relief of sneezing, watery and itchy eyes, and runny nose due to hay fever and other upper respiratory allergies.
DIRECTIONS: Adults and children 12 years and over—1 tablet every 4 to 6 hours, not to exceed 6 tablets in 24 hours or as directed by a physician. Children 6 to 11 years—one half the adult dose (break tablet in half) every 4 to 6 hours, not to exceed 3 whole tablets in 24 hours. For children under 6 years, consult a physician.
EACH TABLET CONTAINS: Chlorpheniramine Maleate 4 mg. **May also contain** (may differ from brand): D&C Yellow No. 10, Lactose, Magnesium Stearate, Microcrystalline Cellulose, Pregelatinized Starch.
WARNINGS: May cause excitability especially in children. Do not take this product unless directed by a physician, if you have a breathing problem such as emphysema or chronic bronchitis, or if you have glaucoma or difficulty in urination due to enlargement of the prostate gland. May cause drowsiness; alcohol, sedatives and tranquilizers may increase the drowsiness effect. Avoid alcoholic beverages, and do not take this product if you are taking sedatives or tranquilizers without first consulting your physician. Use caution when driving a motor vehicle or operating machinery. As with any drug, if you are pregnant or nursing a baby, seek the advice of a health professional before using this product. Keep this and all drugs out of the reach of children. In case of accidental overdose, seek professional assistance or contact a Poison Control Center immediately.
Store at controlled room temperature 2°-30°C (36°-86°F).
Use by expiration date printed on package.
Protect from excessive moisture.
For better identification keep tablets in carton until used.

N 3 111111 11111 8

Made in U.S.A.

Allergy Tablets

Drug Facts

Active ingredient (in each tablet) — *Purpose*
Chlorpheniramine maleate 4 mg.......................................Antihistamine

Uses temporarily relieves these symptoms due to hay fever or other upper respiratory allergies: ■ sneezing ■ runny nose ■ itchy, watery eyes ■ itchy throat

Warnings
Ask a doctor before use if you have
■ glaucoma ■ a breathing problem such as emphysema or chronic bronchitis
■ trouble urinating due to an enlarged prostate gland
Ask a doctor or pharmacist before use if you are taking tranquilizers or sedatives
When using this product
■ you may get drowsy ■ avoid alcoholic drinks
■ alcohol, sedatives, and tranquilizers may increase drowsiness
■ be careful when driving a motor vehicle or operating machinery
■ excitability may occur, especially in children
If pregnant or breast-feeding, ask a health professional before use.
Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.

Directions

adults and children 12 years and over	take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours
children 6 years to under 12 years	take 1/2 tablet every 4 to 6 hours; not more than 3 tablets in 24 hours
children under 6 years	ask a doctor

Drug Facts (continued)
Other information ■ store at 20-25°C (68-77°F) ■ protect from excessive moisture
Inactive ingredients D&C yellow no. 10, lactose, magnesium stearate, microcrystalline cellulose, pregelatinized starch

Product labels have changed to meet federal regulations.

SPECIFIC LABEL INFORMATION

Although some products can be identified adequately by brand name alone, many require more complete identification of their nature and use. In short, the purpose of the label is to provide useful and relevant information about the product, as well as to help to market the product. Processed foods, patented drugs, textiles, and numerous other products are required by law to carry a fairly complete list of their ingredients. This specific information is extremely important so that consumers—for example, those who are allergic to certain ingredients—do not use a product that may harm them.

Companies may also provide additional information on their labels that is not legally required. One reason to do so is that consumer groups often publicly protest about the lack of information on labels and request more. A company might decide that it is less expensive to make minor adjustments to its product label than to undergo continued public scrutiny. Furthermore, when a competitor starts including more information or redesigns its label to make it more user-friendly a company might decide to modify its own label to prevent losing sales.

Labels today also include unit pricing, open dating, and nutritional labeling. *Unit pricing* shows the price per unit of standard measure (weight or volume), allowing consumers to compare values among competing products—for example, comparing an expensive brand-name product to a less expensive generic product with similar ingredients. Unit pricing is most often found on the store shelf rather than on the product package. *Open dating* informs consumers about the expected life of the product so they can avoid products that may be spoiled. This information is especially important for such perishable items as milk, eggs, and other products with a short shelf life. *Nutritional labeling* specifies the amount of calories, total fat, cholesterol, dietary fiber, sodium, minerals, vitamins, and protein in processed foods. The label also discloses the percentage daily values per serving for each item based on a 2000-calorie-per-day diet. This information can be useful for consumers who have either special dietary needs or are trying to maintain a healthy balanced daily diet.

Product labels also provide other useful information for consumers. One of the most common features on any label is directions on how the product should be used, or if food, prepared. An example would be directions on clothing indicating how to clean and store the items. Another example would be directions on either prescription or over-the-counter medications that provide information on how many pills should be taken and warn of possible drug interactions. Moreover, most products that could be toxic if ingested have a warning about this on the package as well as instructions on what to do in case of an emergency. This type of label has two main purposes. The first is to help the consumer in case the product is improperly used. The second is to help prevent lawsuits by consumers who misuse products. Generally speaking, more disclosure about the potential hazards of a product provides the company greater legal protection. Nevertheless, no product warning, even a detailed one, can completely prevent all lawsuits.

Most companies also use one or more of three other labels on their products. The first type, known as a *grade label*, identifies the quality of the product by a letter, such as "grade A," or with a word, such as "prime." The second type, an *informative label*, uses phrases such as "Keep refrigerated after opening" to help consumers use the product appropriately. The third type, a *descriptive label*, describes the benefits or positive attributes of the product.

LEGAL ISSUES

The federal government sets forth legal requirements which form a key element of product label design. Federal regulations regarding products and food have become progressively more numerous since the 1960s, due in large part to consumer activism and media attention. The most important of these regulations and laws are discussed here.

At the turn of the twentieth century, responding to consumer pressure, the federal government created two government regulatory bodies: the Food and Drug Administration (FDA), which regulates interstate commerce in foods and drugs, and the Federal Trade Commission (FTC), whose role is to combat deceptive and unfair trade practices. Both agencies have broad powers to interpret and enforce laws and regulations. In addition, each agency has the power to investigate alleged violations of law and to impose significant fines on companies found to be violating the law. The mere publicity that a company is being investigated by either the FDA or FTC for alleged infractions of the law could hurt sales and, in turn, company profits. Therefore, most companies make a strong effort to comply with federal laws that regulate product labels and advertising.

A list of the laws designed to protect consumers follows:

- *Robinson-Patman Act*: This Act prohibits price discrimination.
- *Wheeler-Lea Amendment to the Federal Trade Commission Act*: This amendment controls deceptive and misleading advertising.
- *Federal Hazardous Substance Labeling Act (1960)*: This act requires warnings on the labels of all household-use products that contain potentially hazardous ingredients.
- *Child Protection Act (1966)*: This act strengthens the Federal Hazardous Substance Labeling Act by prohibiting the sale of dangerous toys and other articles that are used by children, especially those items containing electrical, mechanical, or thermal hazards.
- *Fair Packing and Labeling Act (1966)*: The primary purpose of this act is to outlaw deceptive packaging of certain consumer goods. The other intent is to adequately inform consumers of the quantity and composition of product contents and to promote packaging practices that facilitate price comparisons by consumers. In order to comply with the law, companies must include the following information on the label: name of commodity and

manufacturer, net quantity of contents expressed in the appropriate category (ounces/grams, pints, liters), and relevant ingredient information.

- *National Traffic and Motor Vehicle Safety Act (1966)*: This act authorizes the federal government to establish and enforce safety standards for all new and used automobiles and tires.
- *Cigarette Labeling Act (1965)*: This act requires that all cigarette packages and ads contain the statement: "Warning: The Surgeon General has determined that cigarette smoking is dangerous to your health."
- *Consumer Product Safety Act (1972)*: This act established the Consumer Product Safety Commission and gave it broad powers to carry out product tests, set safety standards, ban or seize hazardous products, and issue both civil and criminal complaints against business firms that fail to meet product safety requirements.
- *Federal Trade Commission Improvement Act (1975)*: This act expanded the authority of the FTC in various ways; in particular, it gave the FTC the power to set rules concerning warranties on consumer products and empowered it to provide consumers with redress in the form of class-action lawsuits.
- *Nutrition Labeling and Education Act (1990)*: The purpose of this act is to clarify and strengthen the FDA's legal authority to require nutrition labeling on foods and to establish the circumstances under which claims may be made about the nutrients in foods. The act covers only nutrients or substances in food that "nourish"; it does not in any way regulate non-nutrient substances in foods. Moreover, the act requires that labels disclose the amount of specified nutrients in foods. Every covered food would have a uniform nutrition label disclosing the amount of calories, fat, salt, and other nutrients. In order to make this information meaningful, the act requires the FDA to issue standards providing that uniform servings be noted on the food label. Where the full labeling is impractical, the act provides for an exemption or requires that the information be provided in a modified form. An example of who would qualify for this exemption is a restaurant. It would be extremely difficult and expensive for a restaurant to comply with the act; therefore, restaurants are excluded.

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MICHAEL J. MILBIER

PRODUCT LINES

The product mix of a company is the total composite of products offered by that organization. A product line is a group of products within the product mix that are closely related, either because they function in a similar manner, are sold to the same customer groups, are marketed through the same types of outlets, or fall within given price ranges.

Product-line decisions are concerned with the combination of individual products offered in a given line. The responsibility for a given product line resides with a product-line manager (sometimes called a product-group manager), who supervises several product managers who, in turn, are responsible for individual products within the line. A product is a distinct unit within the product line that is distinguishable by size, price, appearance, or some other attribute. Decisions about a product line are usually incorporated into a divisional-level marketing plan, which specifies changes in the product lines and allocations to products in each line. Product-line managers normally have the following responsibilities: (1) Consider expansion of a given product line; (2) consider products for deletion from the product line; (3) evaluate the effects of product additions and deletions on the profitability of other items in the line; and (4) allocate resources

Tim Allen's line of tools.

to individual products in the line on the basis of marketing strategies recommended by product managers.

One strategy organizations can employ to help sell their products is to use brand-identification strategies. Brand identification is generally defined as creating a brand with positive consumer benefits, resulting in consumer loyalty and repeat purchasing. Other benefits of brand identification include (1) strong in-store recognition, (2) stronger competition against competitors' products, (3) better distribution, and (4) better in-store shelf position. Organizations have four basic types of branding available: individual brand names, family brand names, product-line brand names, and corporate brand names.

Individual brand names can be used to establish brand identification without reference to an integrated product line or to the corporate name. Each brand is sold individually and stands or falls on its own. *Family brand names* involve the opposite strategy—including the firms' total product mix under one family name. The corporate name, rather than the brand name, is emphasized in order to leverage the high-quality name of the organization. This can reduce advertising and marketing costs. *Product-line brand names* involve a strategy midway between an individual brand name and a family brand name strategy. All brands within the product line have a common name. Product-line brand names are used when a company produces diverse product lines that require separate identification. Some companies employ the *corporate brand name* strategy. This strategy associates a strong corporate entity with a brand while maintaining the brand's individuality. If successful, it provides the advantages of both a family brand name and an individual brand name strategy.

An important concept for any product-line manager is the product life cycle, which is defined as the various stages a product goes through (introduction, growth, maturity, and decline). The primary function of the *introduction stage* is to create a solid brand name for the new product. Television, Internet, radio, and print advertisements are coordinated to provide the maximum brand awareness. In the *growth stage*, the company focuses on creating loyalty to the specific product and also attempts to make minor improvements. Advertising emphasizes the benefits of the product, since the name is already known. When the *maturity stage* begins, sales start to level off because of increased competition, changes in consumer behavior, or technological advances that make the product less desirable than that of its competitors. In this stage, a company may decide to put limited resources into an advertising campaign to boost sales or create a new image. In addition, minor adjustments might be made to packaging (e.g., a new label) to reattract consumers. The *decline stage* occurs when sales begin to decline. The company needs to choose between modifying the product to increase sales or discontinuing the product when it finally cannot generate acceptable profits.

The product life cycle is an extremely important element when a company reviews its product line. One of the best ways to extend the life of a product and product line is for a company to use a revitalization strategy. When this tactic is used, the company changes the marketing plan and looks for new markets for the existing product line and the products within it. Here too it is critical that the company is successful in repositioning the product to new market segments. Another method used to extend the life cycle of a product line is a line-modernization strategy, which focuses on either upgrading the entire product line or modernizing specifics products within the line in order to spark new consumer interest in the product or entire product line.

Other general product-line strategies include product-line additions, product-line deletions, and holding strategy. *Product-line additions* involve adding new products to a product line so new market segments can be covered. *Product-line deletions* involve removing a product that has not performed well or is not making enough money. A *holding strategy* involves maintaining the status quo. The product line stays the same and no major modifications or marketing strategy changes are planned. In order to have a profitable product line, the product line manager will need to employ a variety of the strategies.

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MICHAEL J. MILBIER

PRODUCT MIX

The product mix of a company, which is generally defined as the total composite of products offered by a particular organization, consists of both product lines and individual products. A product line is a group of products within the product mix that are closely related, either because they function in a similar manner, are sold to the same customer groups, are marketed through the same types of outlets, or fall within given price ranges. A product is a distinct unit within the product line that is distinguishable by size, price, appearance, or some other attribute. For example, all the courses a university offers constitute its product mix; courses in the marketing department constitute a product line; and the basic marketing course is a product item. Product decisions at these three levels are generally of two types: those that involve width (variety) and depth (assortment) of the product line and those that involve changes in the product mix occur over time.

The depth (assortment) of the product mix refers to the number of product items offered

Hypothetical State University Product Mix

WIDE WIDTH, AVERAGE DEPTH

Political Science	*Education*	*Mathematics*
Political Theory	Elementary Teaching	Calculus I
American Government	Secondary Teaching	Calculus II
International Relations	Teaching Internship	Trigonometry
State Government	Post Secondary Teaching	Math Theory
Nursing	***Engineering***	***English***
Biology	Physics	English Literature
Chemistry	Advanced Math	European Writers
Organic Chemistry	Electrical Concepts	Hemingway Seminar
Statistics	Logic Design	Creative Writing

Table 1

within each line; the width (variety) refers to the number of product lines a company carries. For example, Table 1 illustrates the hypothetical product mix of a major state university.

The product lines are defined in terms of academic departments. The depth of each line is shown by the number of different product items—course offerings—offered within each product line. (The examples represent only a partial listing of what a real university would offer.) The state university has made the strategic decision to offer a diverse market mix. Because the university has numerous academic departments, it can appeal to a large cross-section of potential students. This university has decided to offer a wide product line (academic departments), but the depth of each department (course offerings) is only average.

In order to see the difference in product mix, product line, and products, consider a smaller college that focuses on the sciences represented in Table 2. This college has decided to concentrate its resources in a few departments (again, this is only a partial listing); that is, it has chosen a concentrated market strategy (focus on limited markets). This college offers narrow product line (academic departments) with a large product depth (extensive course offerings within each department). This product mix would most likely appeal to a much narrower group of potential students—those students who are interested in pursuing intensive studies in math and science.

Hypothetical Small College Product Mix

NARROW WIDTH, LARGE DEPTH

Mathematics	*Physics*
Geometric Concepts	Intermediate Physics
Analytic Geometry and Calculus	Advanced Physics
Calculus II	Topics on Physics and Astronomy
Calculus III	Thermodynamics
Numerical Analysis	Condensed Matter Physics II
Differential Equations	Electromagnetic Theory
Matrix Theory	Quantum Mechanics II

Table 2

PRODUCT-MIX MANAGEMENT AND RESPONSIBILITIES

It is extremely important for any organization to have a well-managed product mix. Most organizations break down managing the product mix, product line, and actual product into three different levels.

Product-mix decisions are concerned with the combination of product lines offered by the company. Management of the companies' product mix is the responsibility of top management. Some basic product-mix decisions include: (1) reviewing the mix of existing product lines; (2) adding new lines to and deleting existing lines from the product mix; (3) determining the relative emphasis on new versus existing product lines in the mix; (4) determining the appropriate emphasis on internal development versus external acquisition in the product mix; (5) gauging the effects of adding or deleting a product line in relationship to other lines in the product mix; and (6) forecasting the effects of future external change on the company's product mix.

Product-line decisions are concerned with the combination of individual products offered within a given line. The product-line manager supervises several product managers who are responsible for individual products in the line. Decisions about a product line are usually incorporated into a marketing plan at the divisional level. Such a plan specifies changes in the product lines and allocations to products in each line. Generally, product-line managers have the following responsibilities: (1) considering expansion of a given product line; (2) considering candidates for deletion from the product line; (3) evaluating the effects of product additions and deletions on the profitability of other items in the line; and (4) allocating resources to individual products in the line on the basis of marketing strategies recommended by product managers.

Decisions at the first level of product management involve the marketing mix for an individual brand/product. These decisions are the responsibility of a brand manager (sometimes called a product manager). Decisions regarding the marketing mix for a brand are represented in the product's marketing plan. The plan for a new brand would specify price level, advertising expenditures for the coming year, coupons, trade discounts, distribution facilities, and a five-year statement of projected sales and earnings. The plan for an existing product would focus on any changes in the marketing strategy. Some of these changes might include the product's target market, advertising and promotional expenditures, product characteristics, price level, and recommended distribution strategy.

GENERAL MANAGEMENT WORKFLOW

Top management formulates corporate objectives that become the basis for planning the product line. Product-line managers formulate objectives for their line to guide brand managers in developing the marketing mix for individual brands. Brand strategies are then formulated and incorporated into the product-line plan, which is in turn incorporated into the corporate plan. The corporate plan details changes in the firm's product lines and specifies strategies for growth. Once plans have been formulated, financial allocations flow from top management to product line and then to brand management for implementation. Implementation of the plan requires tracking performance and providing data from brand to product line to top management for evaluation and control. Evaluation of the current plan then becomes the first step in the next planning cycle, since it provides a basis for examining the company's current offerings and recommending modifications as a result of past performance.

PRODUCT-MIX ANALYSIS

Since top management is ultimately responsible for the product mix and the resulting profits or losses, they often analyze the company product mix. The first assessment involves the area of opportunity in a particular industry or market. Opportunity is generally defined in terms of current industry growth or potential attractiveness as an investment. The second criterion is the company's ability to exploit opportunity, which is based on its current or potential position in the industry. The company's position can be measured in terms of market share if it is currently in the market, or in terms of its resources if it is considering entering the market. These two factors—opportunity and the company's ability to exploit it—provide four different options for a company to follow.

1. High opportunity and ability to exploit it result in the firm's introducing new products or expanding markets for existing products to ensure future growth.
2. Low opportunity but a strong current market position will generally result in the company's attempting to maintain its position to ensure current profitability.
3. High opportunity but a lack of ability to exploit it results in either (a) attempting to acquire the necessary resources or (b)

deciding not to further pursue opportunity in these markets.

4. Low opportunity and a weak market position will result in either (a) avoiding these markets or (b) divesting existing products in them.

These options provide a basis for the firm to evaluate new and existing products in an attempt to achieve balance between current and future growth. This analysis may cause the product mix to change, depending on what management decides.

The most widely used approach to product portfolio analysis is the model developed by the Boston Consulting Group (BCG). The BCG analysis emphasizes two main criteria in evaluating the firm's product mix: the market growth rate and the product's relative market share. BCG uses these two criteria because they are closely related to profitability, which is why top management often uses the BCG analysis. Proper analysis and conclusions may lead to significant changes to the company's product mix, product line, and product offerings.

The market growth rate represents the products' category position in the product life cycle. Products in the introductory and growth phases require more investment because of research and development and initial marketing costs for advertising, selling, and distribution. This category is also regarded as a high-growth area (e.g., the Internet). Relative market share represents the company's competitive strength (or estimated strength for a new entry). Market share is compared to that of the leading competitor. Once the analysis has been done using the market growth rate and relative market share, products are placed into one of four categories.

- *Stars*: Products with high growth and market share are know as stars. Because these products have high potential for profitability, they should be given top priority in financing, advertising, product positioning, and distribution. As a result, they need significant amounts of cash to finance rapid growth and frequently show an initial negative cash flow.
- *Cash cows*: Products with a high relative market share but in a low growth position are cash cows. These are profitable products that generate more cash than is required to produce and market them. Excess cash should be used to finance high-opportunity areas (stars or problem children). Strategies for cash cows should be designed to sustain current market share rather than to expand it. An expansion strategy would require additional investment, thus decreasing the existing positive cash flow.
- *Problem children*: These products have low relative market share but are in a high-growth situation. They are called "problem children" because their eventual direction is not yet clear. The firm should invest heavily in those that sales forecasts indicate might have a reasonable chance to become stars. Otherwise divestment is the best course, since problem children may become dogs and thereby candidates for deletion.
- *Dogs*: Products in the category are clearly candidates for deletion. Such products have low market shares and unlike problem children, have no real prospect for growth. Eliminating a dog is not always necessary, since there are strategies for dogs that could make them profitable in the short term. These strategies involve "harvesting" these products by eliminating marketing support and selling the product only to intensely loyal consumers who will buy in the absence of advertising. However, over the long term companies will seek to eliminate dogs.

As can be seen from the description of the four BCG alternatives, products are evaluated as producers or users of cash. Products with a positive cash flow will finance high-opportunity products that need cash. The emphasis on cash flow stems from management's belief that it is better to finance new entries and to support existing products with internally produced funds than to increase debt or equity in the company.

Based on this belief, companies will normally take money from cash cows and divert it to stars and to some problem children. The hope is that the stars will turn into cash cows and the problem children will turn into stars. The dogs will continue to receive lower funding and eventually be dropped.

CONCLUSION

Managing the product mix for a company is very demanding and requires constant attention. Top management must provide accurate and timely analysis (BCG) of their company's product mix so the appropriate adjustments can be made to the product line and individual products.

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MICHAEL J. MILBIER

PROFESSIONAL EDUCATION

Professional education is a formalized approach to specialized training in a professional school through which participants acquire content knowledge and learn to apply techniques. Although content is what the participant is expected to learn by attending professional school, such an education also helps the participant acquire the competencies needed for proper practice and behavior. Some common goals of professional education include incorporating the knowledge and values basic to a professional discipline; understanding the central concepts, principles, and techniques applied in practice; attaining a level of competence necessary for responsible entry into professional practice; and accepting responsibility for the continued development of competence. It is designed to produce responsible professionals and then to ensure their continuing competence in the profession by helping them recognize and understand the significance of advancing professional knowledge and improving standards of practice. It involves the translation of learning to practice and is intended to prevent occupations and professionals from becoming obsolete.

ROLE OF PROFESSIONAL EDUCATION

The essence of professionalism is the delivery of a service in response to a social need. Professional education is a response to society's demands for expert help provided by competent people. The growth and development of a profession is a function of specific needs, and the role of the professional changes because of changes in society. Professional education both responds to changing demands and provides impetus to changing the field itself, balancing a forward look with the realities of the present. Professional education is thus both reactive and initiatating. Most problem solving on the job is reactive because decisions need to be made and little time is available for research or consultation with peers.

Special knowledge and skills were once passed on from one professional to others through apprenticeships, were experiential, and came from nonacademic sources. This method became inadequate for preparing competent professionals. Schools were established with the purpose of supplying financial resources and human resources beneficial to society and training the next generation of people. The curriculum attempts to develop discipline and self-awareness in the professional. These schools are charged with planning and delivering a full range of educational services that allow knowledge-based learning through the integration of instruction, research, and technology.

ONGOING AND LIFELONG LEARNING

Professional education determines the quality of services provided. As changes in both practice and theory occur, knowledge increases and beginning levels of competence become insufficient for effective practice. It is not enough merely to collaborate or work closely with peers to find ways to develop new practices and new talents.

One way to improve practices and talents is through formal learning opportunities that allow reflection about what is learned with peers. No profession can effectively deal with the pressing changes of standards and ethics surrounding practice without discussing changes and modifying tasks. Pursuing additional education to satisfy the need for additional information is called lifelong learning.

Lifelong learning is a continuous, seamless effort of training for professionals. Learning occurs through efforts on the part of workers in conjunction with professional schools. It builds on one's current knowledge and understanding and is tailored to reflect interests and goals. Continuing development results in strengthening practices and the development of professionals who assume responsibility for maintaining high standards. Many professionals are self-motivated to learn new competencies required on the job because it enables them to acquire higher degrees of skill and commitment. Training and development creates confident, expert professionals who are motivated to learn and committed to fostering personal growth.

THE INTEGRATION OF TECHNOLOGY EDUCATION

Society has witnessed an explosion in knowledge and technological ability. Changes in job responsibilities and new technologies require specialization in both the profession and the technology. The Internet has changed the nature of professional education by offering an alternative to traditional classroom instruction that delivers the same services as a regular classroom environment.

The Internet is an asset to professional development because of the diversity of resources and ideas it has to offer. In addition, it is readily accessible to most people and user-friendly. The Internet offers a variety of Web-based instructional options, including e-mail, listservs, mailing lists, newsgroups, Web pages, and course management systems.

E-mail is a simple, easy-to-use communication tool used for delivering letters and memos. It usually involves only text and is a fast way to facilitate class interaction and discussion. It allows information such as assignments and announcements to be sent back and forth between instructor and student. Listservs, mailing lists, and newsgroups are simple, convenient, and flexible to use. A listserv is a special-interest discussion group that distributes messages to many users on a mailing list. Users post messages and the listserv software sends the messages to the members. Mailing lists are discussions that allow users to send messages to groups of people as easily as to a single person. Newsgroups are discussion groups organized by topic. Messages are not sent to an e-mail account but are posted to a central location on a network. When users are ready, they select the topics they are interested in and the messages they want to read. Web pages are also an effective tool for exchanging ideas on the Internet. They allow participants to progress through instructional materials to achieve learning outcomes and to participate in electronic discussions during times that are convenient for them, at their own pace, at any time, and from any location. Course management systems are commercially developed software that are designed for classroom management, instructional management, and performance assessment. They allow on-line access, either directly or through Web page links, to course content. These systems monitor participant progress by managing files of participants as they navigate through course content.

Professional development courses on the Internet offer new challenges and new opportunities for professional education. The Internet addresses most professional development needs today. Other innovative opportunities continue to develop that will offer more services to help with research and keep us informed about topics of special interest. By making use of this technology, instruction is extended beyond the physical limitations of traditional classrooms. Internet technology offers an unlimited database of new knowledge that is available at little or no cost. Attention is directed to professional development at all levels. This new vision of professional development requires a new vision of preparation that includes the ability to relate technology to particular professions and to related fields. It is essential that programs access and integrate technology to facilitate participant learning. This type of cooperation continues to build a new educational system that is based on the traditional concept of lifelong learning.

SUMMARY

Professional education educates the new generation of professionals, expanding the frontiers of knowledge and reaching out in service to society. Professional education is increasingly being called upon to play a significant role in the administration of new programs within continuing and new structures. The rapidly changing society in which professionals exist demands that they attempt to maximize work performance. There is no single model that serves as a prototype program. There are many programs that serve the diverse needs of today's professional who are assuming different roles and greater responsibilities. Professional education is a lifelong process and continues to improve, tailoring programs to help shape competent workers for the twenty-first century.

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Connie Anderson

PROFIT SHARING

(SEE: *Employee Compensation*)

PROGRAMMING

Within the context of information systems, the term *programming* is understood to mean computer programming, which is the process of writing computer programs. A computer program is a detailed, step-by-step set of instructions that is executed by a computer in order to perform a specific task or solve a specific problem. A computer can perform a wide variety of tasks, including arithmetic calculations, text formatting, and submission of documents to the printer to be printed. However, the computer *hardware* does not perform these tasks by itself. It needs specific instructions on how to go about performing each specific task. It is these task-specific sets of instructions that are referred to as programs.

PROGRAMMING LANGUAGES

Computer programs are written in a variety of programming languages. These languages fall into two broad categories: low-level programming languages and high-level programming languages. *Low-level programming languages* are so named because they are closer to machine language than to human language; that is, it is easier for the machine (computer) to understand them than it is for humans. *Machine language* is made up of a series of 0's and 1's. Each 0 or 1 is known as a *bit* (short for *b*inary dig*it*). A group of eight bits, known as a *byte*, represents one character (i.e., a number or a letter). For example, the number 2 is represented as 00000010 and the letter B as 01000010 in the American National Standards Institute (ANSI) code for character representation inside a computer. There are other coding schemes besides the ANSI standard, such as the American Standard Code for Information Interchange (ASCII) and IBM's Extended Binary Coded Decimal Interchange Code (EBCDIC). Each of these standards represents characters in a slightly different way. Such binary representation of characters is the *only* thing that the computer can directly "understand" and execute.

In the early days of computer programming, programmers wrote their programs directly in machine language. The time-consuming and painstaking nature of this process led to the development of *assembly language*, which uses alphabetic mnemonics (rather than binary digits) to write programs. For example, an assembly-language instruction to load the number 5 into a computer's accumulator is: LDA 5. This is more readable than a string of 0's and 1's. A special program called an *assembler* translates assembly-language instructions into machine-language instructions. Assembly language is machine-specific and is used to directly manipulate activity at the hardware level. Therefore, it is still considered low-level.

Further technological advances led to the development of *high-level programming languages* such as COBOL (*CO*mmon *B*usiness *O*riented *L*anguage), FORTRAN (*FOR*mula *TRAN*slator). BASIC (*B*eginners' *A*ll-purpose *S*ymbolic *I*nstruction *C*ode), PASCAL, PL/1, and C. These languages are described high-level because they are closer to human language than to machine language. In these languages, the number 2 and the letter B are coded in the program exactly as they are written. Similarly, the following is a valid line of program code in some high-level languages: SUM = NUM1 + NUM2. A special program, known as a *compiler* or an *interpreter* (depending on the programming language) translates the high-level program code into machine language before it is executed.

CATEGORIES OF PROGRAMMING

There are two main categories of programming, *systems programming* and *applications programming*. Systems programs are more likely to be written in low-level programming languages, while applications programs are written almost exclusively in high-level languages.

Systems Programming Systems programming involves writing programs that enable a computer to carry out its basic internal functions as well as some other specialized functions. Examples of systems programs include operating systems, device drivers, and utility programs.

An *operating system*, which comes as an essential and necessary component of any computer system, is a complex set of programs that coordinates activities inside a computer and ensures the proper and efficient use of all the computer's resources. Among its basic functions are scheduling and running multiple jobs inside the computer, managing storage space, enforcing security (e.g., through password verification), and detecting equipment failure. Through its actions, the operating system enables a user to access the computer's hardware and software components. Examples of operating systems include DOS, Windows 95, Windows 98, Windows NT, Macintosh System 8, UNIX, OS/2, and VAX VMS.

Device drivers are those programs that identify particular devices to a computer and enable the computer to correctly use those devices. For example, a mouse driver program helps a computer identify the mouse attached to it.

Utility programs (or *utilities*) are programs that perform such specialized tasks as reorganizing data on disks, recovering lost data, recovering from system crashes, and detecting and removing computer viruses.

Applications Programming Applications programming refers to the process of developing programs to be used for specific applications, such as a business application (e.g., computing benefits to be paid to different employee classifications) or an academic application (e.g., determining who qualifies for which scholarship, based on specified eligibility criteria). Programming such applications usually requires the programmer to specify the precise logic that would be required to solve the given problem. There are a number of stages in the applications programming process, including problem statement, algorithm development, program coding, program testing, and program documentation.

Problem statement: The programming process begins with a clear, written statement of the problem to be solved by the computer. The im-

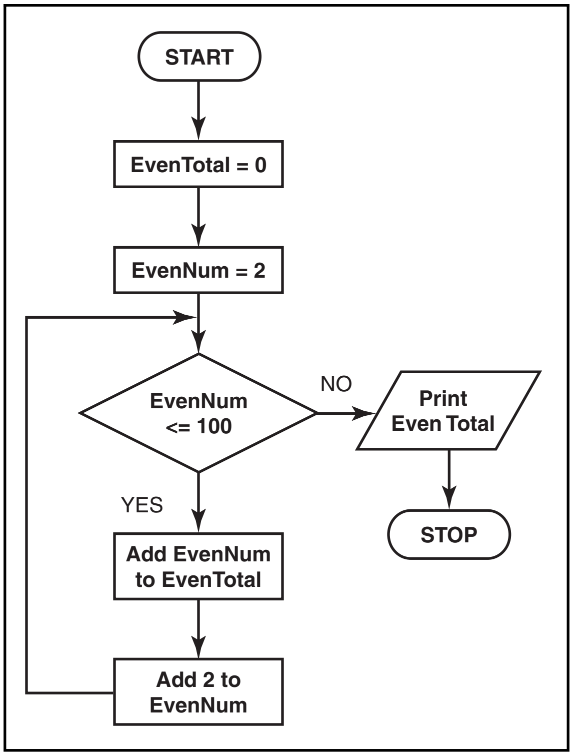


Figure 1
Flowchart to compute the sum of all even numbers from 2 to 100.

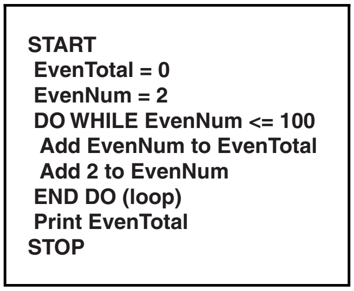
portance of this step cannot be overemphasized. A poorly articulated or poorly understood problem statement will result in the wrong solution being developed for the problem at hand. There should also be a statement of the conditions that would determine when the problem has been solved. All known and relevant facts should also be stated at this stage, as well as any necessary assumptions to be made in the program.

Algorithm development: Once the problem has been clearly stated and all the requirements have been understood, the next step is to develop the program logic necessary for accomplishing the task. An algorithm is defined as a logical sequence of steps that must be performed in order to accomplish a given task. There are some tools available to help the programmer develop the algorithm for a given problem. The two best-known and most widely used ones are the *flowchart* and *pseudocode*. Both of these are language-independent, focusing primarily on logic flow rather than the syntax of any particular language. A flowchart uses standard flowcharting symbols to visually represent the flow of program logic. Pseudocode, on the other hand, often looks like actual program code, but it is not, since it does not follow any particular language's syntax. The term pseudocode means "false code." Unlike flowcharting, in which standard, universally accepted symbols are used, there are no set standards for writing pseudocode. Figures 1 and 2 illustrate the use of a flowchart and pseudocode, respectively, to depict the logic needed to add up all the even numbers between 2 and 100, inclusive, and print the resulting total.

Program coding: When the programmer is satisfied with the efficacy of the logic developed in the preceding step, it is time to convert that logic (in either flowchart or pseudocode form) to the specific syntax of the programming language that will be used. At this stage, the programmer adheres strictly to all of the syntax requirements for coding the logic as well as other aspects of the program.

Program testing: The coded program is next checked for errors. At least two types of programming errors must be checked for, namely, *syntax errors* and *logic errors*. The presence of *syntax errors* indicates that some syntactic rule(s) of the programming language has (have) been violated. Syntax errors are detected when the program is compiled (the compiler identifies all such errors within the program). They must be corrected before the program can be successfully executed. Even when all the syntax errors have been corrected, there is the possibility of logic errors. *Logic errors* arise when the desired logic is incorrectly specified in the program, thereby resulting in an erroneous output. An example is a program that makes students with failing grades eligible for academic scholarships when, in fact, they should not be. In computer terminology, any error in a program—syntax or logic—is known as a *bug*. The process of correcting these errors is known as *debugging*.

Program documentation: The programming process is complete when the program has been



```
START
 EvenTotal = 0
 EvenNum = 2
 DO WHILE EvenNum <= 100
  Add EvenNum to EvenTotal
  Add 2 to EvenNum
 END DO (loop)
 Print EvenTotal
STOP
```

Figure 2
Pseudocode to compute the sum of all even numbers from 2 to 100.

fully documented. The documentation can be either incorporated into the body of the program itself (*in-line documentation*) or it can be a completely separate document (*external documentation*). Frequently, it is both. Good documentation typically includes the following: a statement of the program's objective(s); descriptions of any input or output records or files needed to run the program; a complete definition of all data names used; and an explanation of the underlying logic, preferably with an accompanying flowchart. Program documentation greatly facilitates *program maintenance*, which is the periodic modification to, or update of, the program in order to keep it current. This is especially important if the person maintaining the program is not the same one who wrote it.

APPLICATIONS PROGRAMS ON THE MARKET

There is a wide array of programs and compilers on the market today, in the form of various software packages. Compilers for all the major programming languages mentioned above are available on virtually all computing platforms. Most of these commercial packages, such as Visual Basic, Visual C++, and Microfocus COBOL, have "visual" front-ends to their programming environments, which makes it easy for programmers to design user-friendly programs for their clients.

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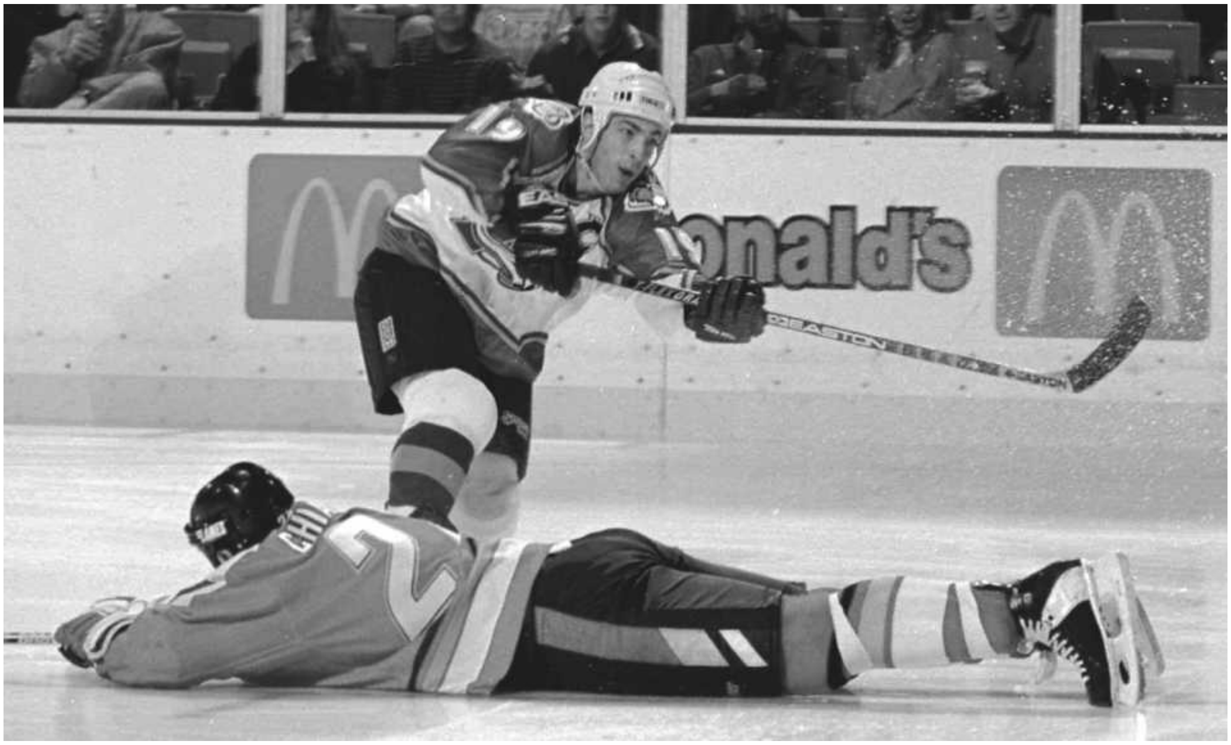
THEOPHILUS B. A. ADDO

PROMOTION

It would be safe to say that most companies engage in some form of promotional activity every day of the year. Promotion is one of the four Ps of marketing—price, product, place, and promotion. Promotion is generally thought of as a sequence of activities designed to inform and convince individuals to purchase a product, subscribe to a belief, or support a cause. All of the various tools available to marketing managers for promotional activities constitute what is known as the promotional mix.

PROMOTIONAL MIX

Marketing managers use different components of the promotional mix as tools for achieving company objectives—advertising, personal selling, public relations, and sales promotion. Each of these elements can be further divided into additional subcomponents or strategies. The majority of a company's promotional resources are usually spent on these four elements for a simple reason: Companies perceive these methods as the most



Sports games are a popular venue for advertising.

effective means to promote their products. Other specialized promotional techniques, however, are also used to enhance promotional objectives.

Advertising Advertising is often thought of as the paid, nonpersonal communication used in the promotion of a cause, idea, product, or service by an identified sponsor. The various advertising delivery methods include banners at sporting events, billboards, Internet Web sites, logos on clothing, magazines, newspapers, radio spots, and television commercials. Among the common forms of advertising are advocacy, comparative, cooperative, informational, institutional, persuasive, product, reminder, point-of-purchase, and specialty.

Personal Selling Personal selling is considered one of the most effective promotional techniques because it facilitates interaction between consumer and seller. With personal selling, a salesperson can listen to and determine a consumer's needs by asking questions and receiving feedback from the consumer. Furthermore, personal selling activities can generate long-lasting friendships between consumers and sellers that typically generate many repeat purchases. Personal selling can also occur by means of interactive computers, telephone conferences, and interactive videoconferencing. A drawback of personal selling, however, is its high cost. Examples of products promoted through personal selling include automobiles, life insurance, real estate, and many industrial products.

Public Relations Public relations has been described as building goodwill with a company's various publics, including consumers, employees, government officials, stockholders, and suppliers. The overall goal of any public relations effort is to project a positive company image when dealing with such issues as community and government relations, employment practices, and environmental issues.

Consumers. Public relations efforts are extremely important for maintaining a company's consumer base. Consumers must believe that they are buying from a caring, honest, and trustworthy company. Negative media stories about, for example, exploiting workers or producing substandard products can do enormous damage to a company in the eyes of consumers. Erosion of a company's client base is likely to result in both lost sales and lost market share.

Employees. The most valuable asset a company has is its employees. Therefore, it is essential that employees believe in their company. Public relations communications are extremely important in ensuring that employees receive information about the company before outside media receive and report the information. A good example of providing superior public relations would be to inform company employees that a small reduction in the work force is required but that a full severance package will be provided for laid-off employees. Although this news is not positive, the employees are hearing about it first from the company and are also aware that they will be receiving assistance from the company. If employees read or see negative reports about the employer without a credible public relations explanations, they may find other work or reduce their productivity because of low morale.

Government officials. Maintaining a positive public image is also important because government agencies and offices (e.g., Federal Trade Commission, Federal Communication Commission) monitor the media and have regulatory oversight over company activities. Positive stories in the media obviously help promote a positive image to government regulators, which reduces the chance of being investigated and possibly fined. The opposite is also true: Stories about client complaints or other dishonest practices or potentially illegal actions will draw the government's attention and probably some sort of investigation—something that no company wants. An investigation can drag on for months, even years, providing even more negative publicity. Even if the government regulators find no wrongdoing, the public is still likely to be skeptical because the company was investigated. Therefore, every company must make its best effort to answer any questions that regulators have regarding negative media stories or consumer complaints. A strong, well-organized public relations department will ward off potential trouble by being honest, friendly, positive, and helpful to government regulators and members of the news media.

Stockholders. Another key interest group for any company that offers publicly traded securities are the stockholders. If company stockholders generally receive positive news about a company, they are more likely to maintain investment, which helps keep the stock price up. Negative news that is not countered with positive public relations can create uncertainty about how the company is running and encourage stockholders to sell and to invest in other companies. This action can cause the stock value to decrease, making it difficult to attract new investors.

Suppliers. Positive public relations are essential for a company's relation with its suppliers. Suppliers are most concerned about being paid for the product they are selling to a company. Since most suppliers are generally not paid until ten to twenty days after delivery of their product, they must have faith in the ability of a company to pay its bills. Any negative news regarding a company's financial position in the absence of a full and complete explanation from the public relations department may result in a damaged reputation with suppliers. Suppliers could stop shipping their products or demand that payment is made at the time of delivery. Neither option is appealing to a company, and both could cause critical delays in getting its products to market.

Sales Promotion Sales promotions are marketing practices designed to facilitate the purchase of a product that do not include advertising, personal selling, or public relations. Companies use sales promotion for a variety of reasons; (1) to attract new product users who will hopefully turn into loyal consumers who keep buying the product; (2) to reward existing consumers with a price reduction, thereby maintaining their loyalty; and (3) to encourage repeat sales from occasional consumers.

SPECIAL PROMOTIONAL ACTIVITIES

Companies use a variety of sales promotion tactics to increase sales, including advertising specialties, cash refund offers/rebates, contests and sweepstakes, coupons, patronage rewards, point-of-purchase displays, premiums, price packs/cents-off deals, samples, and trade shows.

Advertising specialties. Companies frequently create and give away everyday items with their names and logos printed on the items such as bottle/can openers, caps, coffee mugs, key rings, and pencils. Companies prefer to use inexpensive handouts that will yield constant free advertising when used by the recipient.

Cash refund offers/rebates. A cash refund or rebate is similar to a coupon except that the price reduction comes after the product is already purchased. In order to receive the cash refund/rebate, the consumer must send in a "proof of purchase" with the company offer in order to obtain the refund. Rebates are often an excellent form of sales promotion for a company to use because a high percentage of consumers will not send in the forms for the refund.

Contests and sweepstakes. Many companies use contests and sweepstakes to increase the sales of a product. As a reward for participating, consumers might win cash, free products, or vacations. With a contest, participants are required to demonstrate a skill; for example, entrants might be asked to suggest a name for a new product, design a company logo, or even suggest a company name change. Contest entries are then reviewed by a panel of judges; the originator of the winning entry receives a prize, usually in the form of cash or a vacation. In contrast to the skill required with contests, a sweepstakes winner is determined by chance. For example, consumers maybe given a scratch card in a fast-food restaurants; if three-of-a-kind or another predetermined criterion is achieved, the consumer would be given a free hamburger or some other selected prize.

Coupons. Coupons are certificates that give consumers a price savings when they purchase a specified product. Coupons are frequently mailed, placed in newspapers, or dispensed at the point of purchase. In addition, some companies have coupons generated when an item is scanned at the register. Companies can promote both new and mature products through the use of coupons.

Patronage rewards. Awards provided by companies to promote and encourage the purchasing of their products are called patronage rewards. Airlines use this strategy by awarding frequent-flyer miles to consumers who use their services often. When a consumer has earned enough frequent-flyer miles, he or she can redeem a free ticket. Credit card companies also use patronage rewards by providing a list of free products a person can order based on the number dollars charged in a specified time period.

Point-of-purchase displays. Point-of-purchase promotions can include displays and demonstrations that take place at the point of purchase. The cardboard cutouts of popular movie stars that are put next to merchandise are excellent examples of this method. One drawback to point-of-purchase displays is that stores do not have time to set up all the ones that are offered, so only a handful of them are used. Companies frequently offer assistance in assembling and removing promotional displays to encourages storeowners to use their point-of-purchase displays.

Premiums. A premium is a good offered free or at a low cost to encourage consumers to buy a particular product. Companies can also offer premiums in the form of reusable containers bearing names and logos in order to help promote other products. In addition, a company may also decide to use a self-liquidating premium. The costs associated with self-liquidating premiums are passed along to consumers through the cost of product.

Price packs/cents-off deals. Price packs provide consumers with a reduced price that is marked directly on the package by the manufacture. Companies can offer price packs in the format of two for the price of one or offer products such as a tube of toothpaste and a toothbrush in one package for a lower price than that of the two items purchased separately. Consumers generally react favorably to price packs because they are perceived as a real bargain.

Samples. Some companies offer free samples of their products. The rationale for offering a free product sample is to achieve immediate consumer introduction to the product. Companies have several ways to introduce potential consumers to product samples. Commonly used delivery methods include mailing the product, passing the product out in stores, or door-to-door delivery of the product. The largest drawback of free samples is their high cost. However, it is expected that the associated sales will offset the initial cost of the free samples.

Trade shows. Most industries hold conventions and trade shows each year to show off new technology, assess consumer trends, and review other issues important to the industry. Trade shows provide firms that sell to a particular industry an excellent opportunity to promote new products, make new contacts, renew existing business relationships, maintain or build a reputation, and distribute promotional materials.

PROMOTIONAL OBJECTIVES

There are a number of promotional objectives, some of the most common being information dissemination, product demand, product differentiation, product highlights, and sales stabilization. Regardless of the promotional objective selected, the company's goal is to inform and convince consumers to buy the product.

Information Dissemination One of the most basic desires of a company is to provide information about a product to potential consumers. Tools available to an organization for informing potential consumers about a product include billboards, flyers, Internet Web sites, magazines, newspapers, radio spots, and television commercials. Normally a variety of these promotional tools are used to communicate a single, coordinated message to potential consumers. These different promotional tools can provide potential consumers with an array of information about a product, such as features, quality, and/or price. The informational focus depends on the makeup of the target audience that the company is trying to reach with its message.

Product Demand Another organizational goal of promotional activities is to create product demand. A company has several promotional options for fostering product demand. For example, a company may focus on using a primary demand strategy that concentrates on trying to increase demand for a general product or service line. Large companies or cooperatives that have well-known and large product lines normally use the primary demand strategy. Advertisements for these companies carry over to all product categories and, as a result, may improve sales in several product areas. Companies also use another marketing strategy, known as selective demand, which concentrates on promoting a specific brand within a company's product line. Selective demand is often used to help promote a new product so that consumers are aware of the new addition to a large company's product line. A company may also utilize a selective demand strategy when it wants to sell a product that has a high profit margin. A good example of this strategy is the active promotion of sport utility vehicles by major automobile companies.

Product Differentiation A common challenge faced by companies is increased competition, which often results in the market being flooded with similar products. Consumers may conclude that no substantial difference exists between the products (homogeneous demand) and, therefore, look for the lowest-priced product to purchase. An industry that has experienced the problem of homogeneous demand is the soft-drink industry. With few exceptions, most consumers do not make a distinction among the numerous beverages that are offered. A company that excels at product differentiation can normally demand a higher price for a product because of its perceived higher quality.

Product Highlights Companies have another tool to employ in order to justify a higher-priced product: A firm can accentuate the product's exceptional quality in detail to convince consumers that the extra cost is worthwhile. Highlighting a product's quality might sound easy, but a company must first develop superior advertisements to promote the product. Moreover, the firm must develop a reputation for making a superior product that is well known to the average consumer. Volvo is one company that has done an excellent job of creating the image of producing only high-quality, safe cars. Thus. Volvo can charge an extra premium for its cars. Caterpillar has also nurtured and promoted a reputation for producing only the best heavy earth-moving equipment in the world. It, too, charges an increased price for its products.

Sales Stabilization A challenge that companies face is inconsistent demand for their products throughout the year. Reasons for this fluctuation can range from seasonal demand to changing economic conditions. Most companies would rather have a consistent demand for their products throughout the year, since this would allow them to have steady production and distribution facility operations. Ice cream manufacturers often face this dilemma because in the summer months demand for ice cream normally reaches its highest levels while sales decrease substantially in the winter. In order to combat these shifts in product demand, ice cream companies might offer coupons to encourage the purchase of their products during slow sales seasons.

SUMMARY

Companies engage in promotional activities virtually every day of the year. The various tools available to marketing managers for such activities are know as the promotional mix. Elements of the promotional mix include advertising, personal selling, public relations, and sales promotion. Each of these promotional mix elements can be further divided into subelements depending upon company objectives.

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Allen D. Truell
Michael Milbier

PSYCHOGRAPHICS

(SEE: *Lifestyles*)

PSYCHOLOGICAL PRICING

(SEE: *Pricing*)

PUBLICITY

Many definitions of *publicity* exist. For example, the *Publicity Handbook* (Yale, 1991), states that "publicity involves supplying information that is factual, interesting, and newsworthy to media not controlled by you, such as radio, television, magazines, newspapers, and trade journals" (p. 2). According to *Effective Public Relations* (Broom et al., 2000), "publicity is information from an outside source that is used by the media because the information has news value. It is an uncontrolled method of placing messages in the media because the source does not pay the media for placement" (p. 10). Finally, *The Random House Handbook of Business Terms* (Nisberg, 1988) defines publicity as "information designed to appear in any medium of communication for the purpose of keeping the name of a person or company before the public or of creating public interest in their activities" (p. 229).

Publicity is typically generated from an organization's public relations department and its goal is to gain media coverage. Examples of newsworthy events that may receive media coverage, or publicity, include ground-breaking ceremonies, press conferences, organized protests, or ceremonial appointments. Successful publicity occurs when an organization has a carefully designed publicity plan, which includes crisis control methods, and when events have real news value. Media gatekeepers (producers, editors, and reporters) favor publicity events that provide opportunities for photos, video or sound recordings, and effectively communicate the source's intended message.

Attempts to gain publicity have typically originated in an organization's public relations department. The goal was, and still is, to gain media coverage, or publicity, including ground-breaking ceremonies, press conferences, organized protests, and ceremonial appointments. Attempts to gain publicity are most often successful when an organization makes the media aware of events that have real news value from the media's point of view.

Ethical performance will help a company prevent or counteract negative publicity and will give a company, organization, or individual a competitive edge in gaining airtime or space in publications. In order to gain publicity, a company or individual must have clearly defined and specific goals. Publicity can help a company accomplish many of its goals. For example, effective publicity can persuade customers to buy a product or service, bring more customers into a store, increase attendance at a special event, and help clarify misconceptions.

A company must carefully pick and choose which events deserve media coverage in order to avoid "overkill." Not everything needs full-scale media attention—only those events that are most newsworthy and important. Advertising, or paid placement, can complement publicity efforts for items that are not truly newsworthy.

CRISIS PREVENTION AND RESPONSE

Negative publicity can be the result of a mishandled crisis. However, anticipating crises and having a solid crisis plan in place can save a company from potentially disastrous situations and enhance its image. A company must first understand the different types of potential crises that exist, avoid common mistakes when handling crises, and act proactively when dealing with a crisis. In the next section we examine four companies that were faced with crises and the way each company dealt with its crisis.

Three major types of potential crises exist. A sudden and unexpected event is an *immediate crisis*. Immediate crises do not allow for research and planning. A fire, bomb scare, or plane crash is an example of immediate crisis. There should be a general consensus among key management on how to react in these situations in order to avoid confusion, delay, or argument. More time for research and planning can be devoted to *emerging crises*, examples of which are employee dissatisfaction, low morale, and sexual harassment in the workplace. Management should take corrective action before these issues become critical. Despite the best efforts by management. *sustained crises* can persist for months or even years. These types of crises can result from media rumors or speculation. An ongoing rumor of company downsizing is an example of a sustained crisis. Once a company or organization has identified the type of crisis, there are specific things that should and should not be done to control unfavorable publicity.

With effective damage-control methods, any type of publicity can be an advantage for an organization. All organizations should have a crisis management team (CMT) whose job is to anticipate crises and be ready to respond to the worst by upholding the image and reputation of the company in times of crisis. Companies can hire external CMTs or develop and train in-house CMTs.

When a crisis arises, certain things should *not* be done. A company or organization should avoid *hesitation* in speaking with the press. Any type of hesitation may be perceived as callousness, incompetence, or a lack of preparation. *Obfuscation*, or being unclear, leads the public to believe that the company is insensitive or is not being honest. *Retaliation* can increase tension and heighten emotions, rather than reduce them. *Prevarication*, or making false statements, is the biggest mistake a company can make because nothing should substitute for the truth. *Pontification*, the use of inflated language, simply avoids the issue at hand. *Confrontation* will keep the issue alive, and *litigation* (a lawsuit) eliminates all other viable solutions to the crisis.

Alternatively, there are certain actions a company *should* take in the event a crisis emerges. First and foremost, communication lines must be opened. Next. a company spokesperson should be selected. All employees should be instructed to send any crisis inquiries directly to the company's spokesperson. The media should be supplied with information as quickly as possible. The company must be open to the media and tell the full story so that reporters do not look to outsiders to fill in the gaps.

The company must express its concern about the crisis and should show empathy for all the people being affected by the problem. Most importantly, the company should tell the public what it is going to do to resolve the crisis and should have a company representative available twenty-four hours a day so long as media interest exists.

Finally, once the crisis is over, the CMT should meet again to summarize the crisis situation, review and evaluate how the plan was implemented, and give open feedback and appropriate recommendations in order to determine where improvements can be made in the crisis-management plan. Now, let's examine the crisis management methods used by four companies: Source Perrier, Exxon, TWA, and Johnson & Johnson.

FOUR CRISES

Source Perrier was unable to overcome negative publicity when top management hesitated in the crisis-solving process. Traces of benzene were found in the company's bottled water in 1990, but top management reassured the public that it was necessary to recall contaminated bottles only in North America. The crisis continued when scientists found benzene in bottled water being sold in Europe. Again, management responded incorrectly by attributing the contamination to a filtering-system problem. The final blow to the company came when the media discovered, and reported, that benzene-tainted products had been sold all over the world for months. The media questioned Perrier's integrity and concern for public safety, and the company lost its dominant position in the marketplace; it has been unable to rebuild its reputation.

Similar to the mistakes Perrier made, Exxon's CEO did not visit Alaska after the tanker *Exxon Valdez* dumped millions of gallons of oil into Prince William Sound in 1989, and TWA's CEO resigned three months after 230 people died in the crash of Flight 800. Arriving to the crash site thirteen hours after the accident, he was criticized for not showing immediate sympathy for the crash victims and their families. Neither Exxon nor TWA has been able to reclaim its market position.

Conversely, Johnson & Johnson handled a disastrous crisis amazingly well in 1982 and the company's reaction remains as a model for effective media relations. After cyanide was discovered in some capsules of Tylenol, a product used by an estimated 100 million people, Johnson & Johnson decided to cooperate fully with the media. It immediately announced a recall of all Tylenol packages in both U.S. and foreign markets. These decisions, which were based on the business principle of being socially responsible, earned Johnson & Johnson praise from the media. The company received additional positive press coverage when it subsequently introduced its new tamper-resistant packaging. Despite not being able to control media coverage of the situation, Johnson & Johnson was able to gain positive publicity because the company had a plan and knew what to do during a crisis.

Publicity is not advertising, public relations, or promotions, because it is not controlled or paid for, but it has many advantages. If used correctly, companies can benefit greatly from publicity. Careful planning, research, and training can reduce negative publicity and can help companies control crises.

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JENNIFER L. JENNESS

PUBLIC OVERSIGHT BOARD

The accounting profession has a unique responsibility in the United States. Regulators, investors, and the general public rely on certified public accountants to assure the integrity and credibility of corporate financial statements. At the same time, the accounting profession has considerable autonomy in regulating itself. To maintain self-regulation, the American Institute of Certified Public Accountants has developed a multilevel system of self-regulation based on exacting quality control standards. The Public Oversight Board plays a critical role within this system. The role of the Public Oversight Board is closely related to the Securities and Exchange Commission Practice Section.

THE SECURITIES AND EXCHANGE COMMISSION PRACTICE SECTION

On September 17, 1977, the American Institute of Certified Public Accountants (AICPA) established the Securities and Exchange Commission Practice Section as a voluntary organization of certified public accountant firms striving for professional excellence in the auditing services they provide to Securities and Exchange Commission registrants. The objectives of the section are (1) to improve the quality of practice by certified public accountant firms, and (2) to establish and maintain mandatory peer reviews for member firms. An executive committee manages the activities of the section. The Public Oversight Board oversees all activities of the section and reports on these activities.

There are three key elements of the self-regulatory program for certified public accountant firms: (1) peer review for the firm's quality control system once every three years, (2) inquiries to determine whether alleged audit failures indicate breakdowns in a firm's quality control system, and (3) oversight of the process by the Public Oversight Board.

The self-regulatory process answers to legislators, regulators, and the general public. Oversight of the process, by the Public Oversight Board and the Security and Exchange Commission, makes the section's self-regulatory system both more effective and more credible.

THE PUBLIC OVERSIGHT BOARD

In 1977, the AICPA created the Public Oversight Board. The board is an independent, private-sector body that monitors and reports on the accounting profession's self-regulatory programs for independent auditors of entities registered with the Securities and Exchange Commission. The board recommends improvements to strengthen the system.

The board's independence is evidenced by its power to select the successors of its members, hire and compensate its staff, set the compensation of its members, and choose its chair. The board consists of five members, primarily nonaccountants, who represent a broad spectrum of business, professional, regulatory, and legislative experience. The board, which meets about eight times a year, had its first meeting in March 1978.

Mission and Functions of the Public Oversight Board The primary mission of the Public Oversight Board is to represent the public interest when the Securities and Exchange Commission Practice Section sets, revises, or enforces standards, membership requirements, or rules of procedure. In addition, the board represents the public interest regarding the results of individual peer reviews or the possible quality control implications of litigation alleging audit failure.

The board's main functions are to (1) monitor and evaluate the regulatory and sanction activities of the peer review and executive committees to assure their effectiveness, (2) determine that the peer review committee is ascertaining that firms are taking appropriate action as a result of peer reviews, (3) conduct continuing oversight of all other activities of the section, (4) make recommendations to the executive committee for improvements in the operation of the section, (5) publish an annual report and such other reports as may be deemed necessary with respect to its activities, and (6) attend all meetings of the executive committee.

The Peer Review Program The objectives of the peer review are to determine (1) whether a reviewed firm's system of quality control for its accounting and auditing practice is appropriately comprehensive and suitably designed for the firm, (2) whether its quality control policies and procedures are adequately documented and communicated to professional personnel, and (3) whether such policies and procedures are being complied with so as to provide the firm with reasonable assurance of conforming with professional standards and the membership requirements of the Section.

The board's staff oversees each peer review by evaluating the review teams' qualifications and experience, and by reading the peer review report, letter of comment, and reviewed firm's response letter.

The Quality Control Inquiry Committee In November 1979, the Securities and Exchange Commission Practice Section established the Quality Control Inquiry Committee to consider the implications of allegations of audit failure on a firm's quality control system. Member firms of the section must report to the committee all litigation or regulatory proceeding involving audits of public companies or regulated financial institutions within thirty days of receiving a complaint. The Public Oversight Board oversees the Quality Control Inquiry Committee by reviewing both the plaintiff's allegations and the committee's analysis of them. The board routinely makes recommendations for improvement in the peer review and Quality Control Inquiry Committee programs.

ACTIVITIES OF THE PUBLIC OVERSIGHT BOARD

Since the Public Oversight Board was a brand-new layer in the self-regulatory structure, the first year activities were devoted principally to (1) organizing, defining its role, and recruiting its staff; (2) advising on policy matters during the development of the section's peer review program; (3) monitoring initial peer review; (4) studying the question of the scope of services provided by certified public accountant firms and preparing and publishing a report containing recommendations on the subject; and (5) considering the question of what action should be taken by the section in the event of an alleged or possible audit failure involving one of its member firms.

The board or one or more of its members or staff met on numerous occasions with the members of the Securities and Exchange Commission Practice Section. The board also held public hearings, conferences, and educational sessions on the self-regulatory programs, and received written comments from firms and individuals interested in the scope of service. From the initial efforts, the role of the board became clear.

The board's oversight and monitoring program now consists of (1) post-review of working papers prepared by reviewers, including panels; (2) observation of reviews in process, with emphasis on attendance at exit conferences; and (3) other selected procedures. The board publishes an annual report and other reports as may be deemed necessary with respect to its activities. In addition, the board and its members give speeches, write articles, testify before congressional committees, and conduct special studies on matters bearing directly on the integrity of the audit process. From time to time, special initiatives are undertaken.

In September 1994, the Public Oversight Board formed an Advisory Panel on Auditor Independence to determine whether the Securities and Exchange Practice Section, the accounting profession, or the Securities and Exchange Commission should take steps to better assure the independence of auditors and the integrity and objectivity of their judgments on the appropriate application of generally accepted accounting principles to financial statements. A report was issued, which is discussed later.

In 1998, the board appointed a panel on audit effectiveness, which includes investors, auditors, regulators, audit committee members, and corporate executives, to examine whether audit processes of large-firm members of the Securities and Exchange Commission Practice Section adequately serve and protect the interests of investors.

PUBLICATIONS OF THE PUBLIC OVERSIGHT BOARD

The board publishes an annual report as well as special reports. In 1991, the board published *Evaluation of the Quality Control Inquiry Committee* by Robert K. Mautz and Charles J. Evers. The booklet describes how the profession reconciled two conflicting forces: the protection of the public interest on the one hand and, on the other, the right of a firm to mount a vigorous defense against audit failure litigation.

In 1993, the board published *In the Public Interest: Issues Confronting the Accounting Profession: Litigation, Self-Regulation, Standards, Public Confidence, and Professional Practice.* The report was a result of the board's concerns with the impact of litigation and the influence of publicized allegations on the public perception of the accounting profession's performance.

In 1994, the board published *Strengthening the Professionalism of the Independent Auditor.* The board asked for a more accountable board of directors to strengthen the professionalism of the outside auditor. In 1995, the board published *Directors, Management, and Auditors: Allies in Protecting Shareholder Interest.* In that report the board urged directors to play an active role in the financial reporting process and urged the auditing profession to look at directors—the shareholders' representatives—as its client.

THE BOARD'S RELATIONSHIP TO THE SECURITIES AND EXCHANGE COMMISSION

The staff of the chief accountant of the Securities and Exchange Commission regularly reviews the Public Oversight Board's files to determine whether the peer review and the Quality Control Inquiry Committee programs are being properly conducted and properly overseen by the board. The commission staff's conclusions are reflected in the commission's annual reports. These reports have stated that the Securities and Exchange Commission Practice Section's programs have increased the reliability of audits.

In addition, the board itself meets from time to time with the Securities and Exchange Commission's staff and commissioner.

(SEE ALSO: *American Institute of Certified Public Accountants*; *Securities and Exchange Commission*)

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NASHWA GEORGE

PURE CAPITALISM

(SEE: *Economic Systems)*

Q

QUALITY MANAGEMENT

Quality management (QM), also called total quality management (TQM), evolved from many different management practices and improvement processes. Quality management is not specific to managing people, but rather is related to improving the quality of goods and services that are produced in order to satisfy customer demands. Quality management permeates the entire organization as it is being implemented.

TQM has its roots in the quality movement that has made Japan such a strong force in the world economy. The Japanese philosophy of quality initially emphasized product and performance and only later shifted concern to customer satisfaction.

The quality improvement movement began in both the United States and Japan before World War II. Throughout the war, Americans continued to improve concepts related to manufacturing productivity. After the war, the Japanese pursued the idea of quality improvement. It was W. Edwards Deming, an American, who helped the Japanese focus on their fixation with quality.

Rather than trying to inspect the quality of products and services after they have been completed, TQM instills a philosophy of doing the job correctly the first time. It all sounds simple, but implementing the process requires an organizational culture and climate that are often alien and intimidating. Changes that must occur in the organization are so significant that it takes time and patience to complete the process. Just as the process does not occur overnight, the results may not be seen for a long period of time. Some experts say that it takes up to ten years to fully realize the results of implementing quality management.

THE PROCESS

There are several steps that must be taken in the process of shifting to quality management in an organization:

1. *Provide a QM environment.* A QM environment is one in which the management-driven culture disappears and a participative culture takes its place. The basic tenets of QM are that employees must be involved and that there must be teamwork. Managers must be willing to involve workers in the decision-making process. Workers who function as a team have much more to offer collectively than do individual workers. Pooled resources are more valuable than just one person's contribution.
2. *Modify reward systems.* Reward systems need to be overhauled so as to recognize and encourage teamwork and innovation. The team, not the individual, is the foundation for TQM companies. If a company continues to use traditional compensation plans that create competition between

W. Edwards Deming.

workers, the team concept cannot be implemented. Traditional pay plans are often based on seniority, not on quality and performance. With QM, pay systems focus on team incentives. Each person is paid based on the team's performance. If one person on the team doesn't perform at the level expected, the team members will normally handle the situation. In some cases, payment is based on the performance of the entire company, which requires an even greater team effort.

3. *Prepare workers for TQM.* Workers must constantly be trained with the tools that are needed to upgrade the company's quality. Workers must understand the philosophy of QM before the tools can be used effectively. Managers must be dedicated to transforming their companies into "learning organizations" in which workers want to upgrade their skills and take advantage of the opportunities and incentives to do so. Companies that are successful with TQM allocate up to about 5 percent of their employees' time on training. Some of this training time might include cross-training, that is, schooling workers in the skills to do a different job in the organization.
4. *Prepare employees to measure quality.* To ensure gains in quality, the results must be measured objectively as the company progresses toward its quality objectives. This requires that employees be trained to use statistical process control techniques. Without knowledgeable workers using quantitative tools, the organization cannot achieve the intended TQM results.
5. *Identify the appropriate starting place.* One of the most difficult tasks in the beginning phases of implementing QM is to determine where to start. One approach to this beginning is to assume that 80 percent of all the company's problems stem from 20 percent of the company's processes (Pareto's Law). By identifying the problematic processes that fall in this 20 percent category, one can begin to focus on what needs attention first. Focusing attention on these problems first will return bigger payoffs and build momentum for the future.
6. *Share information with everyone.* If a team approach is to be used and if employees are expected to be involved in the decision-making process, it is imperative that information be shared with everyone. The decision-making process requires that workers be fully informed.
7. *Include quality as an element of design.* From beginning to end, customer satisfaction should be the focus of the quality management system. That means that the goal of customer satisfaction must be included in the planning processes and then maintained day in and day out.
8. *Make error prevention the norm.* One approach to producing quality products is

to have a group of inspectors who will find the defective items and get rid of them. This is not the QM approach. With QM, the approach is continuous improvement of quality to assure that there are no products that are defective. The quality is built into the manufacturing process, and workers are continually improving products and processes. This approach is more cost-effective for the organization because it eliminates the waste of materials and workers' time.

9. *Encourage cooperation and teamwork.* If mistakes are made, it is the fault of a team of workers, not just one worker. In many organizations that do not use TQM, managers are often on the hunt for someone to blame for problems that are found. This type of environment creates unhealthy stress and discourages innovative thought and practices by workers. The combination of a team approach and QM means seeking to improve the system when problems arise.
10. *Make continuous improvement the goal.* Processes and products should continually be improved. There is no end to the improvement process. This is true for even the best of the best companies. Total quality management never ends.

W. Edwards Deming created fourteen points for management, which are condensed on the Web site of the Deming Institute (http://www.deming.org/deminghtml/teachings/html) and adapted here:

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive, to stay in business, and to provide jobs.
2. Adopt a new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and must take on leadership for change.
3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.
4. End the practice of awarding business on the basis of the price tag. Instead, minimize total cost. Move toward a single supplier for any one item, based on a long-term relationship of loyalty and trust.
5. Improve constantly and forever the system of production and service, in order to improve quality and productivity, and thus constantly decrease costs.
6. Institute training on the job.
7. Institute leadership. The aim of supervision should be to help people, machines, and gadgets to do a better job. Supervision of management is in need of overhaul, as is supervision of production workers.
8. Drive out fear, so that everyone may work effectively for the company.
9. Break down barriers between departments. People in research, design, sales, and production must work as a team, in order to foresee problems in production and in use that may be encountered with the product or service.
10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, since the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force. Eliminate work standards (quotas) on the factory floor, substituting leadership. Eliminate management by objective, by numbers, and by numeric goals, also substituting leadership.
11. Remove barriers that rob hourly workers of their right to pride of workmanship.

The goals of supervisors must be changed from sheer numbers to quality.

12. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management by objective.
13. Institute a vigorous program of education and self-improvement.
14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.

It is readily apparent that the process of implementing a quality management system in an organization is closely aligned with the thinking of Deming. A more detailed description of the Deming approach is found in his publication *Out of Crisis* (1986).

RECOGNITION

The importance of quality is emphasized with the awards that are presented to companies that achieve high standards of quality. The Malcolm Baldridge National Quality Award was one of the first given. The 1991 award application identified several categories that companies must address to receive the award. It must be noted that very few awards are presented. Companies are rated on leadership, information and analysis, strategic quality planning, human resources utilization, quality assurance of products and services, quality results, and customer satisfaction. It is a very prestigious honor for a company to be recognized with this award.

Other awards and certifications are also presented. However, they constantly change and new ones are added regularly, so they will not be discussed here. Quality management has become an important philosophy in businesses around the world, and this approach to building better products and services will continue.

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ROGER LUFT

QUANTITY DISCOUNTS

(SEE: *Pricing*)

R

READING SKILLS IN BUSINESS

In the business world, workers use special skills to complete their reading tasks. Traditionally, however, business educators have relied on others to develop the job-related reading skills of their students. In 1975, Sticht noted that the overwhelming majority of time in schools is allocated to teaching the reading and interpreting of novels, short stories, dramas, and poetry as opposed to teaching technical reading skills needed in the workplace. More recently, the SCANS (Secretary's Commission on Achieving Necessary Skills) report released in 1991 included the reading of technical material as a foundation skill needed by all workers. Workplace reading includes the ability to understand and interpret various documents including diagrams, directories, correspondence, manuals, records, charts, graphs, tables, and specifications.

In the 1970s, two researchers, Ross and Salzman, studied the reading tasks of randomly selected office workers in the Columbus, Ohio area. Ross completed one-hour observations of one hundred beginning office workers, and Salzman collected 2659 samples of reading, writing, and mathematical activities from thirty-five beginning and thirty-five experienced office workers. Outcomes of these two studies identified three unique reading skills office workers use: proofreading, verifying, and comprehending detail.

Building on the research that Ross and Salzman completed, Schmidt reported, in 1987, the reading levels of office documents collected for the purpose of developing reading materials aimed at building technical reading skills. One hundred and twenty-one documents collected from ten businesses were analyzed for reading level using the FORCAST formula. The FORCAST formula developed in 1975 by Caylor, Sticht, Fox, and Ford uses the percentage of one-syllable words as the basis for determining reading level; hence it eliminates consideration of recurring technical terms, which can artificially raise the reading level of technical materials.

The average reading grade levels for the documents ranged from 11.3 for those collected from a bank to 13.4 for those collected from a university continuing education center office. Other businesses that provided documents and their average reading grade levels included a space industry manufacturer, 11.4; a town administration office, 11.8; a hospital, 12.0; an insurance company, 12.0; a chemical industry manufacturer, 12.1; a railroad, 12.8; a country administration office, 13.1; and a school division office, 13.1. Thus, the reading grade level of typical office documents is considerably higher than general interest reading materials. Further, most reading done by adults is technical, job-related reading and not the type of reading emphasized in schools.

Based on a study of two groups of high school students, in which one group was enrolled in courses required to complete a business program and the other group enrolled in selected elective business courses, Schmidt reported in 1982 that the first group, comprised of 279 students, performed better on a proofreading skills test than the second group, comprised of 1058 students. However, on tests measuring the skills of verifying and comprehending detail, the first group did not score better than the second group. The tests were constructed from actual business documents. From this outcome, Schmidt concluded that reading exercises for developing the skills of verifying and comprehending detail were needed.

The National Business Education Association published the exercises that evolved. In the introduction to the *Office Reading Exercises*, Schmidt describes trial use of the exercises prior to their publication. They were used with experimental and control groups, each with more than two hundred and fifty high school students. After completing a pretest, the experimental group completed the ten exercises, using 15-20 minutes to complete one exercise per day. The students were simply given the exercises and informed of expected outcomes. This group not only scored significantly higher on a post-test administered at the completion of the exercises, but also on a post-test administered after a lapse of three to five weeks. They also scored significantly higher on the post-test than the control group. Thus a research base exists to justify the use of the exercises.

The ten exercises were all developed from actual office documents including a catalog page, a price list, an insurance claim, an enrollment report, a budget allocation form, a meal price schedule, a program confirmation, zoning ordinance information, concentration banking information, and an expense account. Schmidt provides two approaches that can be used for teaching the exercises. One is a holistic approach where the students are simply given the exercises, one day at a time, and told the outcomes desired. This was the approach used in the study described above. They devise, along with their classmates, their own methods for achieving the outcomes. The other approach is instructor-directed and is called a "Guided Approach." It allows the instructor to emphasize the 13 component skills that are subsets of the two main skills, verifying and comprehending detail.

Verifying requires comparing technical information that has been transferred from one place to another to be sure that it has been transferred accurately. *Comprehending detail* is reading printed technical information, then determining if statements about it are accurate. The component skills or sub-skills emphasized in the "Guided Approach" are:

- Following directions
- Perceiving document structure
- Perceiving relationships
- Identifying relevant information
- Locating facts or specifics
- Recognizing comparison/contrasting information
- Interpreting symbols, graphics, or acronyms
- Recognizing sequence of information
- Summarizing or making generalizations
- Selecting relevant information
- Recognizing main idea
- Reading with partner to detect errors
- Recognizing errors: transpositions, typographical and mechanical, additions and omissions

Taylor and Hancock, in a 1993 publication titled "Strategies That Reinforce Academics Across the Business Curriculum," discussed strategies to help introduce, reinforce, and extend students' comprehension, vocabulary, and writing in three reading stages. An overview of the three stages follows.

Pre-Reading Stage. Before students are assigned technical reading, they need to engage in pre-reading strategies to help them in understanding the material. The reading can be broken into smaller segments with a variety of activities that promote student involvement. These might include a graphic organizer, an analogical study guide, or an anticipation/reaction guide. This guide helps focus pre-reading discussion and can also serve for post-reading review.

Reading Stage. At the reading stage, the students need to focus on garnering major ideas as well as important details from the material. A study guide or selective reading guide can help the students achieve this objective. The study guide used should, unlike the text-explicit questions generally supplied by textbook authors, extend the students' thinking beyond mere "parroting" of the text-explicit concepts.

Post-Reading Stage. Once the students have read the material, they need to engage in post-reading activities to assure long-term retention of what they have read. The pre-reading strategies can again be used or students can undertake other activities. These might include vocabulary reinforcement activities, journal writing, or other writing activities that allow the students to apply information from what they have read.

Thus, the reading of technical materials requires the development of unique skills—ones that are not addressed by most teachers. The *Office Reading Exercises* developed by Schmidt and the strategies recommended by Taylor and Hancock provide some approaches that can be used to teach technical reading skills. However, before these approaches are used, instructors should also be concerned with the extent that their students' reading abilities match those required for technical materials. Two methods are available for this purpose: (a) the Cloze procedure developed by Taylor in 1953, which permits the instructor to measure the compatibility of printed materials with the reading ability of students, and (b) a pretest developed from technical terms the material contains.

For classroom use, the following adaptation of the Cloze technique is recommended by Popham, Schrag, and Blockhus.

1. Randomly select reading material in six to nine passages and delete every fifth word in each passage. Stop when 20 words have been deleted.
2. In place of each word deleted, substitute an underscore.
3. Have the material typed, and instruct students to place in each blank a word that makes sense. No guessing or time restrictions permitted.
4. Analyze the answers and give credit for each substitution that approximates the original meaning. Determine a raw score for each student and convert that raw score to a percent by dividing the actual number of correct answers by the possible number of correct answers.
5. Determine the level at which the students comprehend the material by using the following scale. A score of 0-30 percent equals the "Frustration" reading level, a score of 3l-49 percent equals the "Instructional" reading level, and a score of 50-100 percent equals the "Independent" reading level.

Some technical materials do not lend themselves to the use of the Cloze test. For these materials a pretest based on technical terms from the material can be developed to provide insight into the extent that students can understand the material. If a student answers less than half of the items on the test correctly, the instructor may assume that the student will have difficulty reading the material.

Students need technical reading skills for the business world. Furthermore, all teachers are expected to reinforce academic competencies in their instruction. The procedures discussed here can help teachers meet the challenge of teaching technical reading skills, those essential for reading in business.

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B. June Schmidt

RECESSION

(SEE: *Economic Cycles*)

RECORDS MANAGEMENT

Although records and information management is a crucial function of most companies today, records management at one time was not recognized as being important in the organization. Advancements in technology and the reproduction of electronic documents are steadily causing organizations to change the way they think about records management.

Marcel Robles and Mark Langemo (1999) define records management as:

> *The professional management of information in the physical form of records from the time records are received or created through their processing, distribution, and placement in a storage and retrieval system until either eventual elimination or identification for permanent archival retention.* (p. 30)

This definition is all-inclusive because it notes the significance of the records manager's role in the management of information from the time it is received to either its elimination or its permanent archival retention in the organization. The Emerging Technologies Advisory Group of the Association for Information and Image Management (AIIM) identified the top five emerging technologies as we move into the twenty-first century (Dale, 1999). These technologies have become management concerns and, therefore, concerns of records managers:

1. e-mail management
2. e-mail
3. Knowledge management
4. Records migration
5. Customer relationship management

Hence, as records management takes on a more strategic role in organizations, a very knowledgeable and proficient professional is required in the managerial position.

DEVELOPING AN EFFICIENT SYSTEM

The existence of an increasingly competitive environment along with the rapid pace of business make it essential to have an efficient, economical, and orderly way to collect, process, store, analyze, retrieve, and distribute information (Griffith, 1996). Theodore Vander Noot (1998) suggests ten characteristics of an "ideal information system" that should apply whether the system is a computerized database or a file system or library. (See Table 1)

There are two basic reasons for the increase in information over the years (Hutchens, 1998). The first, *modernity*, has seen the decline in small businesses as larger and more complex businesses begin to dominate. A more *modern democratic government* is seen as the second reason for the growth in information. Both public and private organizations tend to collect more information

Characteristics of an Ideal Information System

1. The information system should minimize elapsed time between a user's query and the response from the system.
2. The more complete the information stored, the more useful the data can be to the end user.
3. The more completely an information system can prevent "lost" files, the more generally useful the system is to users.
4. An information system should provide access to the same document or file by more than one user at one time (multi-user, multi-tasking).
5. The more a retrieval system maximizes pertinence while minimizing redundancy, the more the system services the needs of the user.
6. Retrieval queries should be possible in the official language(s).
7. The information system should make provision for selective security.
8. The simpler a retrieval system is, and the less training required using it, the more acceptable it is to the users.
9. Additions, deletions, and updating of files should be made as efficient as possible.
10. Since work hours, particularly of managers, extend beyond prime shift hours, the ideal system should be able to operate in non-regular hours at reasonable cost.

Table 1

than needed regarding their programs when providing the requested records for the government.

METHODS OF STORING INFORMATION

Four methods are often used for storing information in business and government (Hutchens, 1998):

- a person's brain
- paper
- microfilm
- a computer

Management is relying less and less on intellectual ability and more and more on paper, microfilm, and computers. Electronic document management (EDM) technologies allow for storing, retrieving, and transmitting documents electronically.

Three basic questions should be asked when ridding an organization of outdated files. The guidelines are (Hancock, 1998):

1. Why were the documents created?
2. Why should they be kept?
3. When can they be destroyed?

A records retention schedule should be developed for organizations so as to avoid retention of unnecessary documents. Although we have moved into a digital world, office workers continue to be unable to let go of paper files. The "paperless office" is still a phrase that has not been made reality.

Outsourcing Off-site storage of inactive records is the most common type of records outsourcing (Dykeman, 1996). Records management outsourcing often depends on the quality and cost of the outsourcer. Decision making involves whether to store inactive records off-site or bring in an outsourcing firm to run the entire records management operation.

Electronic Imaging As the growth in documents continues, electronic imaging becomes one preferred means of managing information. Two major advantages of electronic imaging are ease of use and flexibility. Imaging can capture, retrieve, and transmit documents no matter what the form, handwritten or machine-created (Avedon, 1997).

There are three types of documents or images:

- Analog documents—human-readable information on paper or microfilm
- ASCII (American Standard Code for Information Interchange) documents—binary digital-coded representations of information stored on magnetic tape or disks and used with computer, word processing, and OCR (optical character recognition) systems
- Bit-mapped/raster documents—documents scanned via a technique called bit mapping

A computer with a CD-ROM drive is the only equipment needed to benefit from electronic imaging document systems. Most systems convert paper documents or microfilm images to digital form using scanners and electronic images that require a large amount of memory. There are three types of CDs: CD-ROM, DC-R, and CD-RW. In order to determine which type of recorder to use for a particular application, three factors must be considered: speed, buffer, and software.

Bar-Code Technology. More sophisticated automation systems are the driving force behind bar-code technology in records management. Both the quantity and quality of the data input and the use of bar-code labels as miniature data-storage media can enhance the information processed. Enhanced technology, such as high-resolution laser printers and more complex two- and three-dimensional data-recording methodologies, make it possible to store entire pages of information in bar-code format. In turn, these bar codes can be faxed or transmitted electronically between locations. It is imperative that records managers keep abreast of the latest in technology to meet the challenge of storing and retrieving information in the twenty-first century.

Intranets. The computer has opened up multiple possibilities for managing records. The computer with Internet, Web, and e-mail capabilities is now accessible to most, and soon will be accessible to all, employees. Since the Internet and the Web are present in most organizations, the link between people and information is already established, providing a less expensive choice when communicating. An open, information-sharing work environment is provided through an intranet.

Six examples of how an intranet can help achieve the objectives of the records manager are: (1) controlling creation and growth of documents, (2) reducing operating costs, (3) minimizing litigation risks, (4) safeguarding vital information, (5) supporting better management decision-making, and (6) fostering professionalism in business (Motz, 1998). The global nature of multinational corporations demands easy sharing of information, a demand that has encouraged adoption of the Internet and intranets. All three components of intranets—technical, systemic, and organizational—must be considered in order to be successful.

THE RECORDS MANAGEMENT PROFESSION

The role of the records manager is constantly changing. Advances in technology raise the question of whether the records manager's functions will become automated. It will be important to distinguish between records management business activities that can be: (1) easily automated, (2) partially automated, and (3) never automated (Phillips, 1998). Of course, for job security, records managers should concentrate on technological knowledge and skills required for those activities in the "never automated" category.

Establishing the social relevance of records managers is necessary in order to gain respect as a profession. The Association of Records Managers and Administrators (ARMA) International has provided the foundation for communication with society in general through its Code of Professional Responsibility. The prevailing challenge for records managers involves all of the following: legality, technology awareness, quality assurance, and contingency planning issues (Jones, 1998). In order to meet the challenges, records managers must address potential technology solutions proactively. A major dilemma for records managers is to decide whether to give the organization/customer what they want or what the records manager knows they need.

With the increasing use of technology in the records and information system, it is important for records managers to take a leadership role in organizations and gain a stronger voice in management. ARMA International continues to be a source of help in this area.

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CAROLYN H. ASHE

REINFORCEMENT THEORIES

(SEE: *Motivation*)

RESPONSIBILITY

(SEE: *Management: Authority and Responsibility*)

RETAILERS

Retailing is a type of business that sells products and services to consumers for their personal or family use. A retailer is the final business in a distribution channel that links manufacturers with consumers. Although a retailer can also be a manufacturer or a wholesaler in the distribution chain, most retailers direct their efforts to satisfying needs of ultimate consumers.

Retailing had its raw beginnings in early America with peddlers, a word that comes from the Old English "ped," which was a pack in which articles to be traded in the streets were stored. One of the earliest records of peddlers in the American colonies is of an itinerant hawker named Richard Graves, who in 1642 shouted his wares from house to house in an attempt to make a deal with whoever would listen to him.

Peddlers traveled throughout America selling their wares, and in the course of this adventure, American peddlers played a part in settling the South and Middle West because of their ability to carry materials to these sparsely populated areas. Although some peddlers had circular routes near home that they serviced each week, most were wanderers, and trips of fifteen hundred miles were not uncommon, often with fifty-pound loads strapped to their back.

Peddlers sold everything from specialized goods to specialized services. Native Americans in New York, for example, hung carved souvenir plates from their horses and traded them from settlement to settlement. Other specialist peddlers were carpenters, preachers, dentists, artists, and even breeders, who offered farmers the services of stallions and bulls for their mares and cows. But the true peddler tended to pack his back or wagon with many items, because it was more profitable to carry a large assortment of goods in anticipation of what people might want or need. Somewhere among all these items would be the famous Yankee notions, which were pins and needles, buttons, razors, brooms, books, window glass, and novelties. Most housewives put aside their "pin money" from the sale of eggs and other products in order to buy these notions, but the peddler would often offer credit or barter

WAL★MART
2
WRANGLER

WAL-MART—the largest retailer in the world.

for furs and other valuable goods with those who didn't.

Peddling was a way out of poverty from colonial days onwards, and it is surprising how many notable Americans began their careers as peddlers. Like many other frontiersmen in the nineteenth century, Abe Lincoln's father was a part-time peddler. When he moved his family from Kentucky to Illinois, he took a trunk full of notions to sell from his wagon to help offset the expense of the trip. Inventors John Fitch—inventor of the steamboat—and Thomas Edison both began as peddlers.

Countless American fortunes were amassed by men who started their business on the road across America. B.T. Babbitt, America's first soap millionaire, began by peddling his soap in upstate New York, and the company Stanley Tools was founded by a peddler.

Peddlers probably founded the first real American country stores, which are often described as primitive department stores, in remote backwoods areas during the late 1600s. American country stores enjoyed their heyday between 1820 and 1860, at a time when personal income was rising and the population was growing rapidly. Usually located in the middle of town, the country store was the hub of community activity, and it was characterized by its informality, including bare wood shelves, a hodgepodge of goods, and a porch with rocking chairs where the townspeople could sit and socialize. It has been said that the country storekeeper was all things to all men, and he was usually highly respected and self-educated. His store, with the inevitable flour, cracker. and cookie barrels near the counter, carried what was a wonderland of goods to the civilization-starved settlers; and he usually extended credit liberally. For the kids, penny candy ranging from licorice whips to all-day suckers were prominently displayed in jars atop the counter.

Country stores were far from fashionable. For more than twenty years after paper bags were invented in 1850, clerks were still wrapping most packages in brown wrapping paper, folded over and tied with a string. Trading in the stores was often conducted by barter, or "country pay" as it was called, with customers exchanging corn, wheat, rye, and flax, or articles of household manufacture such as blankets and baskets, for goods on the merchant's shelves. Homemade Indian brooms, maple syrup, barrel staves, skeins of wood, dried apples, blackberries and blueberries, churned butter, potash, and charcoal were usually used as cash crops to barter at the country store.

Abraham Lincoln clerked in a country store as a youth, and the story of young Abe walking several miles to return a penny to a customer is part of American folklore. As for P.T. Barnum, he ran a general store in Bethel, Connecticut, where he claimed he learned many a trick from country people who cheated him as adeptly as any city slicker could.

Among the founders of great modern-day American department store who operated and clerked in country stores Adam Gimbel, L.L. Hudson, Charles A. Stevens, Aaron Montgomery Ward, and Herbert Marcus should be mentioned. Some of the old country stores became grocery stores, and a few evolved into department stores.

As far as anyone knows, the first true department store arose in France in the mid-nineteenth century. The best evidence ascribes its beginnings to Bon Marche of Paris. Founded as a small shop in 1838, Bon Marche had begun to assume the proportions of a department store by the early 1850s. Even at that time, Paris had a long history as a retail and fashion center dating back to 1300, and the city was known for large stores, with up to one hundred people working in stores called The Lame Devil, The Little Sailor, and The Beautiful Farmer's Wife. Aristide Boucicaut is credited with starting Bon Marche as well as the retail concept of allowing people to come into the store and browse, with no obligation to buy. He was also the originator of the money-back guarantee, which at the time was a new concept that built up his trade substantially. In addition, he clearly marked all his goods with fixed prices and permitted no haggling between customers and clerks.

Although Bon Marche and native country stores provided American merchants with the inspiration for creating department stores, the great majority of these department stores began as dry goods stores. Neither Bon Marche nor any of the world's early department stores would have evolved if economic conditions hadn't been favorable at the time. The American department store is largely a product of the years 1860 to 1910. More available capital during the Industrial Revolution, low taxes, and cheap labor to build and staff stores contributed to the rise of the department store in America. By the late 1860s or early 1870s, the department store had a firm foothold in America. Although the term *department store* isn't recorded in the language until 1887, the idea of separate departments in stores can be found in print at least forty years earlier.

It was also during this time that mail-order retailing began. The earliest colonists, with no manufacturers of their own, first used mail-orders to obtain supplies from the mother country. George Washington ordered goods from England and France, as did Thomas Jefferson. Benjamin Franklin has been called the father of the mail-order catalogue because in 1744 he issued a list of six hundred books he would sell by mail. Aaron Montgomery Ward thought he could eliminate the middleman by selling direct to country people by mail from offices in Chicago. In August 1872 Montgomery Ward, with capital of $1600 in savings, founded what was to become the world's first great mail-order business, soon to be challenged by Sears.

MODERN-DAY RETAILING

Over time, different types of retailers have emerged and prospered because they have attracted and maintained a significant customer base. A retail institution is a group of retailers that provide a similar retail mix designed to satisfy the needs of a specific segment of customers.

The most basic characteristic of a retailer is its retail mix, which include decisions and strategies regarding the type of merchandise sold, the price of the merchandise, the assortment of the merchandise, and the level of customer service.

The traditional general-merchandise retail stores are specialty stores, department stores, and discount stores. Since about 1970, a number of new types of general merchandise retailers have emerged and are becoming increasingly important to consumers. These include category specialists, home-improvement centers, off-price retailers, catalogue showrooms, warehouse clubs, and hypermarkets. A traditional specialty store concentrates on a limited number of complementary merchandise categories and provides a high level of service in an area typically smaller than 8000 square feet.

Department stores are retailers that carry a broad variety and deep assortment, offer considerable customer service, and are organized into separate departments for displaying merchandise. A home-improvement center is a category specialist that combines the traditional hardware store and lumberyard. It focuses on providing material and information that enable do-it-yourselvers to maintain and improve their homes. A warehouse club is a general-merchandise retailer that offers a limited merchandise assortment with little service at low prices to ultimate consumers and small businesses; stores are large and located in low-rent districts, and the goods usually include food and general merchandise. Off-price retailers offer an inconsistent assortment of brand-name, fashion-oriented soft goods at low prices, in exchange for not utilizing the manufacturer's promotional allowances, return privileges, and delayed-payment options.

A catalogue showroom is a retailer whose showroom is adjacent to its warehouse. These retailers typically specialize in hard goods such as housewares, jewelry, sporting goods, garden equipment, and consumer electronics. Catalogue showrooms can offer low prices because they minimize the cost of displaying merchandise, provide minimal service, and are located in lower-rent areas rather than regional malls.

A retail chain is a company operating multiple retail units under common ownership and usually having some centralization of decision making in defining and implementing its strategy. Some retail chains are divisions of larger corporations or holding companies. Due to scale economies and an efficient distribution system, the corporate chains can sell at lower prices. Since about 1990, there has been considerable restructuring of corporate retail chains. These restructuring activities include consolidation and focus, with consolidation of existing retail chains leaving fewer large chains and focus referring to the expertise in managing a specific retail format rather than operating as a holding company for a diverse set of retail formats.

Franchising is a contractual agreement between a franchiser and a franchisee that allows the franchisee to operate a retail outlet using a name and format developed and supported by the franchiser. Approximately one-third of all U.S. retail sales are made by franchisees. Some of the most well known franchises in America are McDonald's, Subway, and Dunkin Donuts.

The mail-order retailing of the late 1800s has developed into two types of nonstore retailing: general-merchandise and specialty catalogue retailers and direct-mail retailers. General-merchandise catalogue retailers offer a broader variety of merchandise in catalogues that are periodically mailed to their customers, while specialty catalogue retailers focus on specific categories of merchandise. Direct-mail retailers typically mail brochures and pamphlets to sell a specific product or service to customers at one point in time. Direct-mail and catalogue retailing are attractive business opportunities because a business can be started with minimal inventory and can use existing mailing lists to tailor its mailings to a targeted market.

U.S. retail sales from 1995 to 2000 exceeded $3 trillion. The total expenditure on goods sold by retailers was greater than expenditures on medical care, housing, and recreation combined. Retailing is also one of the nation's largest industries in terms of employment. More than 20 million people are employed in retailing, which is approximately 20 percent of the U.S. work force.

Wal-Mart is the largest U.S. retailer in terms of merchandise sold through stores. The list of the top twenty-five retailers includes Toys R Us, McDonald's, J.C. Penney, and Dayton Hudson. Many retail entrepreneurs are among the Forbes four hundred wealthiest people in the United States. Examples include Leslie Warner of The Limited; David Thomas, founder and owner of Wendy's; Donald Fisher of The Gap; Gary Comer of Land's End; and Thomas Monaghan of Domino's Pizza.

Currently, retailing is experiencing international expansion, with many retail organizations opening stores and expanding beyond the borders of the United States. The most commonly targeted regions are Mexico, Europe, China, and Japan. U.S. retailers have strong incentives to expand globally, because U.S. markets are saturated in terms of the number of stores, available locations, and competition. Experts believe that some American retailers have a natural advantage when competing globally due to factors including technology and the emulation of American culture abroad. However, like foreign companies entering the United States, American companies entering into these countries face specific government regulations, different cultural traditions, and a variety of languages.

Today, the success of small retailers or major retail corporations depends on how much they embrace the retailing concept. The retailing concept is a management orientation that focuses a retailer on determining its target-market needs and satisfying those needs more effectively and efficiently than its competitors. Three critical environmental factors affect retailing today:

- Competition, because each department store, specialty store, or other type of retail outlet is competing against all others for the consumer's dollar.
- Consumer demographic and lifestyle trends and the impact they will have on retail strategies.
- Needs, wants, and decision-making processes that retail consumers utilize.

Among the list of consumer trends that are greatly affecting retail sales today are the growth of the elderly population, as the baby-boomers age; the rapidly growing minority segments of the U.S. population; the importance of shopping convenience, with consumers wanting one-stop shopping; and the rising number of two-income families.

Examples of retailers using a competitive advantage to maintain their position in the marketplace at the start of the twenty-first century include Autozone, which has convenient neighborhood locations and excellent customer service. Talbot's uses unique synergies between its stores and its catalogue operation and offers private brand clothing. Starbucks, a highly regarded brand name in the coffee industry, has maintained strength and customer loyalty through providing excellent service. Gymboree offers stores with a unique ambiance to enhance their customer's shopping experience, and also offers private label merchandise with strong appeal. Finally, Speigal has developed its competitive advantage and a strong retail hold on consumers through its sophisticated information and distribution system.

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PATRICIA A. SPIROU

RETIREMENT PLANNING

(SEE: *Personal Financial Planning*)

REWARD SYSTEMS

(SEE ALSO: *Employee Benefits*; *Employee Compensation*)

ROBINSON-PATMAN ACT (1936)

The Robinson-Patman Act of 1936 is antitrust legislation that amends Section 2 of the Clayton Act of 1914, which was designed to prevent monopolies by catching early-stage practices leading to corporate mergers. Another provision of the Clayton Act prohibits price discrimination by a seller where the effect is to injure the competition. The Clayton Act was directed at firms that sold goods at higher prices in some areas and at lower prices in others to the detriment of a smaller local seller; it confined the prohibition on price discrimination to the impact on the seller. Thus, competition among buyers could be affected adversely when certain buyers received lower prices. The Robinson-Patman Act is not limited to just price discrimination. It also covers discrimination in the areas of advertising and other promotional programs, as well as in the area of providing services to competing customers.

Price discrimination occurs when a firm charges more than one price for good or services sold to customers and businesses where all other material aspects of the sales are the same (*Encyclopedia Dictionary of Economics*, 1986). The Robinson-Patman Act is commonly referred to as the "chain store act" because it prohibits price cutting of commodities for large buyers (chain stores, department stores, and discount houses) designed to eliminate competition from small buyers (Garman, 1997). The act makes it unlawful for any seller engaged in commerce to discriminate, directly or indirectly, in regard to the price charged to buyers of commodities of like grade and quality sold in interstate commerce for the purpose of resale.

Small businesses implied that their larger competition used their size or market power to gain lower prices from suppliers. This practice enabled the larger competitors to profitably outsell their smaller competitors. The result of this act is that smaller local buyers have restitution against a favored competitor that, because of size, efficiency, or bargaining power, could obtain lower prices from a supplier and, thus, sell products for lower prices. It became illegal for companies engaged in interstate commerce to grant discounts for the same products to large firms without granting similar discounts to smaller independent stores when the selling costs do not vary between the two. The law does permit selling at different prices when costs are based on different methods or quantities involved in the manufacture, sale, or delivery of products (Garman, 1997). The Robinson-Patman Act was intended to protect competitors as well as competition.

According to Meier and colleagues (1998), enforcing the act is a complex task. To prove a price-discrimination case, a market analysis must be conducted which shows that actual competitive injury has occurred or that the seller engaged in significant and sustained price discrimination with the intention of punishing a competitor. However, according to Garman (1997), a discriminatory price may be lawful when it is charged in good faith to meet an equally low price of a competitor.

(SEE ALSO: *Antitrust Legislation*)

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PHYLLIS BUNN

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SALES DISCOUNTS

(SEE: *Pricing*)

SCARCITY

(SEE: *Supply and Demand*)

SCHOOL TO CAREER MOVEMENT

One of the purposes of education is to prepare students to become productive workers. Job skills have increased in importance as technology continues to advance. Education and other forms of training have become lifelong enterprises (Straszheim, 1997). The challenge for all levels of education is how to prepare students for a future workplace with technological requirements that may be far different from those that have been predicted. Consideration of school-to-career issues can be found at all levels of education, from elementary through undergraduate and graduate levels. Federal, state, and local governments have been actively involved in identifying and promoting the integration of occupational skills with curricula.

HISTORICAL PERSPECTIVE

The Secretary's Commission on Achieving Necessary Skills (SCANS) was formed in 1990 by the U.S. secretary of labor to investigate the skills needed by young people to succeed in the world of work. Thirty representatives of from the areas education, business, labor, and state government worked for two years to arrive at a definition of workplace know-how. The commission's initial 1991 report, *What Work Requires of Schools*, identified three foundation areas (basic skills, thinking skills, and personal qualities) and five workplace competencies (resources, interpersonal, information, systems, and technology). Successful workers need to be able to acquire and interpret all forms of data. Rote learning is inadequate in a rapidly changing information society. An overabundance of data indicates a need for workers who can efficiently locate and analyze requisite information, determine patterns, and communicate in appropriate formats to the necessary recipients. They will be required to understand and improve social, organizational, and technological systems. Successful workers need to be able to select, apply, and maintain technology. SCANS also found that a high-performance workplace requires workers with solid literacy and computational skills. Successful workers need thinking skills to apply their knowledge as well as such personal qualities as responsibility, self-management, and integrity. The SCANS foundation skills and workplace competencies provide a basis for the development of educational programs designed to foster the development of requisite workplace skills.

Legislators have considered the issue of connecting school-based learning to work-based learning. The objectives of the School-to-Work Opportunities Act of 1994 addressed the following congressional concerns:

- High school students' lack of academic and entry-level occupational skills necessary to succeed in a changing U.S. workplace
- A substantial high school dropout rate
- High youth unemployment

Of necessity, academic standards need to be connected to occupational standards in order to meet the intent of this legislation (Packer and Kane, 1994).

Since the School-to-Work Opportunities Act of 1994 became law, state and local partnerships across the country have worked with the National School-to-Work Office to refine the eight core elements essential to creating school-to-work systems in order to provide guidance to states and local partnerships as they plan and implement school-to-work systems. The eight elements, including opportunities for all youth and a core curriculum that provides a continuum of school-to-work elements, are examined in "Eight Key School-to-Work System Building Elements," (1997).

North Lake College, located in Irving, Texas, addressed curriculum applications of seven of the SCANS workplace skill areas under a grant from a 1994 partnership of the Texas Education Agency, the Texas Department of Commerce, and the Texas Higher Education Coordinating Board. One of the objectives was the application of national occupational standards to the development of technical and occupational programs. This project resulted in a model for instilling workplace skills into academic and occupational programs at the secondary, post-secondary, and apprenticeship levels. The four-phase process included occupational profiling, curriculum enhancement, faculty development, and testing and certification (The National School-To-Work Learning and Information Center, 1997).

David Douglas High School, in Portland, Oregon, has a comprehensive school-to-work system known as STARS (Students Taking Authentic Routes to Success). One of ten schools selected in 1996 to be showcased by the U.S. Department of Education as a New American High School, David Douglas is a recognized leader in Oregon. The school has worked in partnership with the Oregon Business Council to redesign its high school program to meet the expectations of the Oregon Education Act for the 21st Century.

INITIATIVES AT ALL LEVELS

In 1993 the SCANS/2000 Program at Johns Hopkins University recognized teachers in grades 4 through 8 who taught workplace know-how through innovative projects that captured the imagination of students. The winning projects reflected five categories: microsocieties (students held jobs and paid bills while participating in a fictional community); school stores (students sold goods and services for profit); media publications (students created multimedia publications, newspapers, or stories); construction and manufacturing enterprises (students designed and assembled a product while learning academic content and work skills); and workplace-based activities (students had contact with employers and the public in actual work environments).

One of these, the Parkland School District University (PSDU) project, grew out of a fifth-grade exploration of geometry and architecture. After students learned about Thomas Jefferson's role as an architect, they designed and built a model university. Students interacted with professionals in numerous fields (architecture, landscaping, real estate, banking, engineering, drafting, law, investment, entrepreneurship, and education), eventually "assuming" these roles. Their initial sketches progressed to scale drawings, blueprints, and the final product—a 400-square-foot model of the university (PSDU). Students successfully accomplished a long-term goal while performing tasks and utilizing skills valued in the work force.

Education cones, school articulation structures to foster the development of career education in grades K-12, are used to group Utah schools. The County School District initiated the school-to-work curriculum with career awareness activities in the cone's seven elementary schools. For instance, second-grade students studying weights and measures visit local grocery stores to experience real-world applications of their learning. Junior high students examine career options and participate in shadowing and mentoring activities. High school students participate in work-based experiences, including internships and apprenticeships. These experiences are integrated with the students' school-based learning.

A growing pool of resources supports the school-to-career movement. For example, the Bureau of Labor Statistics (BLS) has dedicated a portion of the Department of Labor Educational Resources Web Site to career guidance information for elementary students http://stats.bls.gov/k12/html/edu_tch.htm. The information presented—in the format "Jobs for Kids Who Like . . ."—has been culled from *Occupational Outlook Handbook*, the bureau's publication that serves as a resource for high school juniors, seniors, and graduates.

APPRENTICESHIP

The federal government began overseeing apprenticeships after passing the National Apprenticeship Act in 1937. A Michigan program—School to Registred Apprenticeships (STRA)—connects high school students with licensed apprenticeships in skilled trades (Moorlehem, 1998). In its first year, STRA trained individuals in fifty-four schools to set up apprenticeships. The program allows students to begin working in their chosen career while still in high school. Employers pay for college courses and oversee students for four years. Local high school vocational-technical centers provide additional information on apprenticeship programs.

JUNIOR ACHIEVEMENT

Junior Achievement is a nonprofit economic education organization with K-12 programs taught by classroom volunteers from the business community. More than 2.6 million U.S. students are involved each year. Through seven curricula targeted for grades K-6, Junior Achievement programs teach basic business and economic concepts. The middle school programs build on the elementary programs, while the high school programs help students make informed decisions regarding their future ("Junior Achievement," 1998).

JOB SHADOWING

Job shadowing is a way to provide students with an understanding of career requirements and the relationship between school and careers. The Boston Private Industry Council instituted the first Groundhog Job Shadow Day in 1996 as part of its school-to-work initiatives ("Groundhog Shadow Day," 1998). In 1997 it spread throughout the Southeast when sponsored by BellSouth as part of its school-to-work efforts. More than 125,000 students participated in 1998 when national participation was promoted by a coalition of America's Promise, the National School-to-Work Opportunities Office, Junior Achievement, and the American Society of Association Executives. Students have an opportunity to visit a job site, shadow an employee, and become involved in some workplace activities.

The Lehigh Valley [Pennsylvania] Business/Education Partnership (LVBEP), one of whose goals is to promote and facilitate school-to-work learning opportunities, has worked with schools and businesses to arrange hundreds of "Shadow Days" each year ("Student Shadow Program," 1999). These experiences allow students to discuss careers with practicing professionals. It is expected that increased interest in school-to-career activities in area schools will result in shadow days numbering in the thousands. The LVBEP, in collaboration with other organizations, also sponsors an annual Senior High School Leadership Conference. Workshops at the conference address issues pertaining to becoming leaders in the twenty-first century. Other programs offered by LVBEP include:

- Koalaty Kid—students learn about total quality management principles
- Teacher internship programs

- Take N.O.T.E.S.—students learn first-hand about medical careers
- Pathways—business expertise is shared with students

Hamilton and Hamilton (1997) include job shadowing as one of eight major types of work-based learning. They divided job shadowing into three categories: (1) visits to workplaces, which include field trips and actual job shadowing; (2) work-like experiences, which include service learning, unpaid internships, and youth-run enterprises; and (3) employment, which includes youth jobs, subsidized employment training, cooperative education and paid internships, and apprenticeships. Their article. "When Is Learning Work-Based?," offers a range of options for educators to consider in developing school-to-career programs.

MENTORING

Mentoring involves an ongoing relationship between a student and an adult. Project Turn Around, developed by Progressive Learning, is an educational and mentoring program for students who do not perform well in traditional classroom situations ("Inaugural Celebration," 1999). Inaugurated in California in December 1998, this program will provide the computer technology for students in grades 7 through 12 to learn competitive job skills under the supervision of on-line mentors recruited from across the nation.

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WINNIFRED G. BOLINSKY

SCIENTIFIC MANAGEMENT

Early attempts to study behavior in organizations came from a desire by industrial efficiency experts to answer this question: What can be done to get workers to do more work in less time? It is not surprising that attempts to answer this question were made at the beginning of the twentieth century, since this was a period of rapid industrialization and technological change in the United States. As engineers attempted to make machines more efficient, it was natural to focus efforts on the human side—making people more productive, too.

Frederick Taylor.

The scientific method of management and job design, which originated with Frederick Winslow Taylor (1856–1915), entails analyzing jobs to determine what the worker does and what the requirements are for the job. After this analysis, the job is designed to ensure that employees will not be asked to perform work beyond their abilities. Another aspect of the scientific method is that jobs are divided into small segments for the worker to perform, a method that works well in establishing expected levels of worker performance. While not as popular as in the past, this method of job design is still used today.

To Taylor, it was obvious that workers were producing below their capacities in the industrial shops of his day. As a foreman in a steel mill, Taylor noticed, for example, that laborers wasted movement when moving pig iron. Believing that productivity could be increased substantially, Taylor carefully analyzed the workers' motions and steps and studied the proper distribution of work and rest. Based on this analysis, he determined a more appropriate method for performing each aspect of the job. He then carefully selected employees and gave them detailed instructions on how to perform the job using the new method. He required that employees follow the instructions precisely. As an incentive, all workers were told that they would receive a substantial pay increase provided they followed instructions. As a result, worker productivity increased substantially.

However, most of the short-sighted management of that time would set certain standards, often paying by piece-rate for the work. Then, when a worker discovered how to produce more, management cut the rate. In turn, the workers deliberately cut down on output, but management could do nothing about this. Taylor came to realize that the concept of division of labor had to be revamped if greater productivity and efficiency were to be realized. His vision included a superefficient assembly line as part of a management system of operations. He, more than anyone else at the time, understood the inability of management to increase individual productivity, and he understood the reluctance of workers to produce at a high rate.

For more than twenty-five years, Taylor and his associates explored ways to increase productivity. Scientific management has often been described as a series of techniques for increasing production rates by means of better cost-accounting procedures, premium and incentive payments, and time and motion studies (which are designed to classify and streamline the individual movement needed to perform jobs with the intent of finding "the one best way" to do them). But Taylor himself protested this interpretation. In his view, using these techniques did not in itself constitute scientific management, because, as he put it, the main objective of scientific management was "to remove the causes for antagonism between the boss and the men who were under him." Ironically, at times during his experimentation, Taylor achieved the opposite effect by creating antagonism.

As Taylor made his techniques known, others began to contribute to the body of knowledge of scientific management. These theorists included Carl G. L. Barth, a mathematician and statistician who assisted Taylor in analytical work, and Henry L. Gantt, who invented the slide rule and created the Gantt chart. Another associate, Sanford E. Thompson, developed the first decimal stopwatch. Walter Shewhart eventually transformed industry with his statistical concepts and his ability to bridge technical tools with a management system. Frank G. and Lillian Gilbreth, aware of Taylor's work in measurement and analysis, chose the ancient craft of bricklaying for analysis. It was assumed that productivity in bricklaying certainly should have reached its peak thousands of years ago and nothing could be done to increase worker productivity. Yet the Gilbreths were able to show that, by following Taylor's techniques and using proper management planning, productivity could be raised significantly and workers would be less tired than they were under the old system.

By 1912, the efficiency movement had gained momentum. Taylor was even called before a special committee of the House of Representatives that was investigating scientific management and its impact on the railroad industry, whose members regarded it as a way to "speed up" work. Little did Taylor realize how workers would perceive his effort at producing more efficiently. Taylor found out the importance of the cooperative spirit the hard way. He was strictly the engineer at first; only after painful experiences did he realize that the human factor, the social system, and the mental attitude of people in both management and labor had to be adjusted and changed completely before greater productivity could result. He referred to his early experiences in seeking greater output and described the strained feelings between himself and his workers as "miserable." Yet he was determined to improve production. He continued his experiments until three years before his death in 1915, when he found that human motivation, not just engineered improvement, could alone increase output.

Unfortunately, the human factor was ignored by many. Shortly after the railroad hearings, self-proclaimed "efficiency experts" damaged the intent of scientific management. Time studies and the new efficiency techniques were used by incompetent "consultants" who sold managers on the idea of increasing profit by "speeding up" employees. Consequently, many labor unions, just beginning to feel their strength, worked against the new science and all efficiency approaches. With the death of Taylor in 1915, the scientific management movement lost, for the moment, any chance of reaching its true potential as the catalyst for the future total quality management system that was to evolve as a key ingredient of organizations of the future.

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MARCIA ANDERSON

SEASONAL DISCOUNTS

(SEE: *Pricing*)

SECURITIES ACTS: REQUIREMENTS FOR ACCOUNTING

Companies issuing securities to the public are required to file registration reports and statements with the U.S. Securities and Exchange Commission (SEC) in accordance with the 1933 and 1934 Securities Acts. Such reports and statements are intended to provide accounting disclosure to the prospective investors. A company's first offering of securities to the public market is called an Initial Public Offering (IPO).

Registrants rely on specialists in accounting to meet the criteria of the Securities Acts. The chief accountant of the SEC is the principal accounting adviser with respect to difficult or controversial accounting issues. The office of The Chief Accountant is in charge of establishing, coordinating, and expressing SEC policy regarding Accounting and Auditing Standards. Communication is provided through the SEC Accounting Series Releases (Financial Reporting Releases).

The 1933 Securities Act requires that the registration statement be filed and accepted by the SEC before securities are initially offered for sale. The SEC does not evaluate the merit of the securities; it merely determines whether the disclosures provide sufficient information to the investment community.

The registration statement for an IPO consists of two principal components: Part I is the prospectus, an offering document to be distributed to prospective buyers; Part II contains supplemental information that is available for public inspection at the office of the SEC.

The SEC has adopted a revised framework for registration as part of the integrated disclosure system, whereby the form to be used by the registrant depends on the periodic reporting history and the nature of specific transaction events. In the case of an IPO, for example, Form S-L becomes the forepart of the registration statement and outside front cover page of the prospectus.

Disclosures on the inside front and outside back cover pages of the prospectus must provide the following information: summary of the securities offering, risk factors and the ratio of earnings to fixed charges, the use of proceeds, determination of offering price, dilution, plan of securities distribution, description of securities to be registered, and interests of named experts and counsel. The prospectus must also provide information related to the registrant, such as a description of business and property, legal proceedings, market price of equity and dividends, financial statements, supplementary financial information, executive compensation, and Management's Discussion and Analysis (MD&A).

Part II of the IPO covers other information not required in the prospectus, such as issuance- and distribution-related expenses, indemnification of directors and officers, recent sales of unregistered securities, exhibits, and financial statement schedules. An accountant's consent is required for financial information to be included in this part.

The 1934 Securities Act regulates and controls the secondary securities markets and related matters and practices. This legislation also regulates the reporting and registration forms for the financial statements and audit requirements. The principal annual report to be filed by commercial and industrial companies is Form 10-K, which covers financial statements and supplementary data.

Form 10-K also includes information about the business, properties, legal proceedings, security holder voting, Management's Discussion and Analysis regarding financial conditions and operations results, and information about the elective officers of the corporation, their compensation, and their security ownership.

The requirements for Form 10-K are set forth by SEC Regulation S-X. Under this regulation, the balance sheets at the end of each of the two latest fiscal periods, as well as the income statements and cash-flow statements for each of the three latest fiscal years, should be filed within ninety days after the end of the fiscal year. The principal executive officer, the principal financial officer, the principal accounting officer (the controller), and a majority of the board of directors must sign the Form 10-K.

Issuers of securities registered under the 1933 and 1934 Securities Acts are required to file Form 10-Q for each of the first three quarters of the fiscal year within forty-five days after the end of each of the first three fiscal quarters of each year. Form 10-Q calls for financial information, such as a condensed financial statement, and also covers the following: Management's Discussion and Analysis, financial condition and results of operations as required in Regulations S-K and S-X; and special event reports occurring during the quarter, such as legal proceedings, defaults upon senior securities, and matters to be voted by security holders. Form 10-Q may be integrated with the quarterly stockholders' report if the combined report contains full and complete answers to all items required by Part I of Form 10-Q.

The SEC Division of Corporation Finance is in charge of reviewing registration statements as well as annual and periodic reports. It establishes standards for economic and financial disclosure by determining the nature of information required in the registration statements, reports, and other documents to be filed with the SEC. In addition, it enforces provisions with respect to securities offered for sale to the public, listed for trading on securities exchanges, or traded in the over-the-counter market. The Division of Corporation Finance is organized into twelve branches of corporate analysis and examination, covering approximately forty industry groups based on standard classification codes.

Preparation of the registration statements as well as related reports and documents may take three to four months. The lengthy timetable is governed by legal considerations. All parties involved in the preparation, such as the accounting firm, attorneys, and other professionals, may be subject to civil and criminal penalties under the 1933 Securities Act for any misstatements or omissions.

The completed registration statement is submitted to the Division of Corporation Finance, where the statements are reviewed to determine whether the disclosures comply with the 1933 and 1934 Securities Acts. In cases where deficiencies are identified, the Division requests that the registrants complete or explain.

SUMMARY OF INFORMATION DISCLOSURE FORMS

The principal forms identified in this section are intended to provide a convenient point of reference when only a general understanding of their purpose is required. Accountants, after consulting the registrants, should consider whether the company meets the criteria for the use of a particular form.

The forms required by the 1933 Securities Act include: S-1 through S-3, the general forms for registration; S-4, for business combinations; S-11, for estate entities; and SB-1 and SB-2, for small businesses. Form N-1 is used for open-ended investment companies; N-2, for closed-ended investment companies; N-3 and N-4, for insurance companies offering annuity contracts; and N-5 and N-SAR, for registered international investment companies.

Under the 1934 Securities Act, the principal forms required of most registrants are 10-K and 10-KSB, with the latter appropriate for small businesses. Other forms include 11-K, for employee stock purchase or employee option plans; 10-Q, for quarterly reports; 8-K, for certain significant corporate events reported immediately after the month in which event occurred; and 15, to terminate registration.

DISCLOSURES BY FOREIGN CORPORATIONS

As a general rule, a foreign company intending to offer securities in the United States qualifies as a foreign private issuer, unless (1) more than 50 percent of its outstanding voting securities are held by U.S. residents and (2) either the majority of its executive officers are U.S. citizens or residents, or its business is administered or located in the United States.

Under Regulation S-X, foreign issuers are required to provide disclosures under U.S. generally accepted accounting principles (GAAPs). SEC Accounting Bulletin 88 (SAB 88) allows the foreign issuer to include U.S. GAAP disclosures in Management's Discussion and Analysis for information that is not required under its home-country GAAPs.

Form 20-F is the form most commonly used for the registration statement and for annual reporting. Foreign issuers are also required to furnish reports on Form 6-K instead of Forms 10-Q and 8-K, which are applicable to U.S. issuers.

For Canadian companies, Form 40-F has been adapted as part of the Multijurisdictional Disclosure System. Canadian firms may qualify to use Forms F-1, F-2, or F-3 for registering securities under the 1933 Securities Act, instead of the S-1, S-2, and S-3 forms applicable to U.S. companies. The SEC staff allows Canadian issuers to file on U.S. domestic forms (e.g., Form 10-K or 10-Q) prepared in accordance with Canadian GAAP's, as long as the requirements of Form 20-F are satisfied.

All forms described here are subject to change, so be certain to check with the SEC to keep current on reporting requirements.

(SEE ALSO: *Securities and Exchange Commision*)

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SAMIR FAHMY
LAURENCE MAUER

SECURITIES AND EXCHANGE COMMISSION

The Securities and Exchange Commission (SEC) is a regulatory agency responsible for administering the U.S. laws regarding securities. The purpose of these laws is to ensure fair markets and to provide accurate information to investors. The major securities laws were enacted in the 1930s after the 1929 stock market crash and the anemic performance of the market in the early 1930s.

Congress passed the Securities Act of 1933 to regulate the primary market—the market for new securities. Sometimes called the "truth in issuance act," the 1933 act required a company to submit independently verified financial information, a registration statement, and a prospectus to the Federal Trade Commission.

The Securities and Exchange Act of 1934 created the Securities Exchange Commission, giving it the power to regulate the stock exchanges and the trading practices of the secondary market (a market for currently traded shares). In 1935 the Public Utility Holding Company Act was enacted to regulate all interstate holding companies (a holding company controls other companies by owning their stock) in the utility business.

In 1940 Congress passed two laws covering the people working in the security business. The Investment Company Act of 1940 provided for the regulation of investment companies, including those involved with mutual funds. The Investment Advisers Act of 1940 established regulation of investment advisers and their activities. In 1974 the Employee Retirement Income Security Act gave the SEC jurisdiction over pension funds. Other legislation addressed foreign activities, insider trading, and further clarification of existing legislation.

The SEC consists of five commissioners who are appointed by the president, only three of whom can be from the same political party. Terms are staggered; thus, each June 5, a person rotates off the Commission. To accomplish their duties, the commissioners have office staffs of accountants and lawyers and regional offices in eleven cities.

The organizational structure of the SEC includes eight divisions. The Division of Corporate Finance is responsible for reviewing registration statements, tender offers, and mergers and acquisitions. Overseeing the markets and the market participants is the duty of the Division of Market Regulation. The Division of Investment Management is responsible for the enforcement of three statutes: the Investment Company Act of 1940, the Investment Advisers Act of 1940, and the Public Utility Holding Company Act of 1935. The Division of Enforcement is the investigating arm of the SEC. The Office of Compliance, Inspections, and Examinations determines whether all investment organizations are in compliance with federal securities laws. The remaining divisions' duties are defined by their titles: the Office of General Counsel, the Office of Municipal Securities, and the Office of Investor Education and Assistance.

In enforcing the securities laws, the SEC acts as a guide and adviser whose actions are largely remedial. One common activity of each division is rulemaking. New rules and rule modifications are usually accomplished in open meetings. Those industries or parties affected by rule changes are allowed to present their positions and make comments in an open meeting. Any SEC investigations are conducted by the Division of Enforcement and the field offices. If the evidence indicates a violation, the SEC can take administrative action (such as suspension) or instigate a civil action in an U.S. District Court. If evidence indicates a criminal action, the SEC turns the case over to the Justice Department.

More information is available from the U.S. Securities and Exchange Commission, 450 Fifth St. NW, Washington, D.C. 20549; (202) 942-7114; or www.sec.gov.

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MARY JEAN LUSH
VAL HINTON

SELF-SERVICE SELLING

(SEE: *Promotion*)

SERVICE INDUSTRIES

From cutting the grass to providing health care to delivering packages, service industries in the United States play an integral part in the daily activities of millions of people and businesses. These services may offer an improved standard of living, professional and technical expertise, or other essential services. The providers of such services involve all sectors of the economy including for-profit private businesses, non-profit organizations and various levels of government.

WHAT ARE SERVICE INDUSTRIES?

The U.S. Department of Commerce's Bureau of Economic Analysis (BEA) measures total national output in terms of Gross National Product (GNP). In measuring output, the BEA also identifies the industry sources of GNP. The BEA broadly defines service industries as those providing products that cannot be stored and are consumed at the place and time of purchase. Generally, these services involve only the performance of actions on behalf of the customer and have little, if any, tangible substance. For example, a theater company staging a play or musical sells customers tickets allowing them to view the theatrical event. Upon completion of the performance, the customers leave with little more than their memory of the actors performing their roles. In some instances, however, the services provided may involve the receipt of a tangible product by the customer. In this instance, the BEA requires that such products contribute minimally to the total cost of the service. An example of this is an automobile service station performing a routine oil change on a car. As part of this service, new oil and an oil filter are provided to the customer.

While some service industry companies such as housekeeping and landscaping contractors sell convenience to their customers, other service industry companies sell professional and technical expertise. Such is the case with tax accountants, who annually complete millions of federal and state tax forms on behalf of their clients. Their clients do not pay for the tax forms that are

U.S. Gross National Product and Service Industry Product

BILLIONS OF DOLLARS

Year	GNP	Service Industry	Service Industry as a Percentage of GNP
1960	$529.8	$206.8	39.0%
1970	$1,042.0	$458.5	44.0%
1980	$2,819.5	$1,274.1	45.2%
1990	$5,764.9	$3,016.9	52.3%
1997	$8,102.9	$4,414.1	54.4%

Table 1

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

available at no extra cost from the taxing authorities but for the correct completion of such forms. The tax accountant uses client provided information to complete the forms and to determine the client's taxes, applying knowledge of the ever-changing tax laws.

ECONOMIC IMPORTANCE

The service industries have and continue to play an important role in the U.S. economy. In terms of productivity, the proportion of the U.S. GNP attributed to service industries has consistently trended upward. As illustrated in Table 1, service industries in 1960 accounted for 39 percent of the U.S. GNP. By 1980, this percentage increased to over 45 percent. In 1997, more than 55 percent of the $8.1 trillion U.S. GNP was attributed to productivity in the service industries.

While the vital role of the service industries to the U.S. economy is evident in their proportion of GNP, their importance is magnified by their contribution to the total employment in the U.S. labor market. As illustrated in Table 2, according to data published in 1997 by the U.S. Department of Labor's Bureau of Labor Statistics (BLS). service industries in 1986 were responsible for two-thirds of total U.S. employment. By 1996, the proportion of the total U.S. employment attributed to service industries rose to more than 70 percent. In 1997, the BLS forecasted service industries would be responsible for virtually all job growth between 1996 and 2006 and would account for nearly 75 percent of total U.S. employment by 2006.

Total U.S. Employment, Service Industry Employment, 1986, 1996, and Projections for 2006

THOUSANDS OF JOBS

Year	Total Employment	Service Industry Employment	Service Industry as a Percentage of Total
1986	111,374	74,189	66.6%
1996	132,352	94,300	71.2%
2006	150,927	111,867	74.1%

Table 2

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

As illustrated in Table 3, the BLS projected that between 1996 and 2006 the ten U.S. industries with the greatest percentage increase in employment would be service industries.

SERVICE INDUSTRY PROVIDERS

Services available within the United States are provided by all three sectors of the economy: for-profit businesses; non-profit organizations; and the government. For-profit businesses provide the largest proportion of all services and account for the greatest number of jobs. The government provides the second largest proportion of services and jobs followed by non-profit organizations.

The profitability of the service and the issue of whether the service benefits non-paying third parties or the community are factors that determine which of the three sectors of the economy provide a particular service. By their very nature, for-profit businesses offer those services that can be profitably produced and avoid services that benefit non-paying third parties. The types of services for-profit businesses provide are numerous and cover a broad array of service categories.

The 10 Industries having Highest Projected Employment Growth, 1996 – 2006

EMPLOYMENT IN THOUSANDS OF JOBS

Industry	Employment		Percentage Change, 1996–2006
	1996	2006	
Computer and Data Processing Service	1,208	2,509	108%
Health Services	1,172	1,968	68%
Management and Public Relations	873	1,400	60%
Miscellaneous Transportation Services	204	327	60%
Residential Care	672	1,070	59%
Personnel Supply Services	2,626	4,039	53%
Water and Sanitation	231	349	51%
Individual and Miscellaneous Social Services	846	1,266	50%
Offices of Health Practitioners	2,751	4,046	47%
Amusement and Recreation Services	1,109	1,565	41%

Table 3

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

Some examples include residential, amusement and recreational, financial, and professional consulting services.

The government provides services that offer both tax paying and non-tax paying members of society substantial benefits such as national defense and public education. Another example is governmental regulatory agencies such as the Food and Drug Administration, which ensures the quality of products to be consumed by the public. Society has chosen the government to provide such vitally important services rather than risk inadequate provision by businesses or other organizations. In other service areas, for-profit businesses may not always be self-policing.

Non-profit organizations provide services that improve the overall well-being of society that businesses cannot profitably produce or the government cannot adequately supply. Examples of this are non-profit organizations that offer educational and recreational programs for inner city youth and non-profit hospitals that provide health-related services to all persons regardless of their ability to pay.

SERVICE INDUSTRY CATEGORIES

Services industries in the United States vary substantially based upon the nature of the service they provide and the customers they serve. In general, the classifications of service industries include business and office, health care, residential care, amusement and recreation, financial, automotive, and educational services.

Within the broad classification of the business and office services industry are those offering services designed to enhance the productivity and profitability of their business clientele. For example, computer and data processing services offer products that improve their clients' processing of paperwork. Management services advise clients on the best management practices. Employment and personnel services assist clients in locating qualified job candidates and provide flexibility without altering their work force. As illustrated in Table 3, several business and office service industries are projected to be among the fastest growing industries beyond the year 2000.

As the life expectancy of Americans continues to grow, so too does the need for health professionals such as physicians and nurses as well as health related services such as nursing homes or in-home health care. During the 1990s, the health care service industry experienced substantial growth, and as Table 3 indicates, the industry is projected to experience substantial growth through the year 2006.

The residential care industry is another area that has experienced substantial growth and is expected, as illustrated in Table 3, to continue to do so beyond the year 2000. The expansion in the residential care industry is caused in part by the growing number of two-income families having limited leisure time. As a result, they employ residential care services to take care of tasks such as lawn-care and house-cleaning.

Amusement and recreation is another service industry that continues to grow at a rapid pace. With disposable income on the rise, Americans are increasing their spending on various forms of amusement such as movies, live theatre, and theme parks. Furthermore, recreational services are expanding as Americans enjoy more active lifestyles, joining health clubs and other sports-related clubs.

The financial services industry includes investment banks, security brokerages, insurance companies, and banking institutions. They provide a broad array of products such as investment counseling. During the 1990s, the financial service industry experienced substantial consolidation as many banks merged with other traditional banks, investment banks, and insurance companies to form multi-function financial institutions.

The automobile service industry maintains and repairs automobiles. It has become increasingly important as the rising cost of new automobiles necessitates maintaining presently owned vehicles for longer periods of time. Furthermore, given the increasing level of technology built into automobiles, even the most basic vehicle maintenance requires work by skilled automotive service technicians.

The educational service industry consists primarily of school based education offered by both public and private institutions. However, increasingly important are also educational institutions that cater to the needs of corporate clientele. These institutions offer corporate training in a variety of areas such as computer technology and foreign languages.

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ALAN G. KRABBENHOFT

SEXUAL HARASSMENT

Sexual harassment is a form of sex discrimination that violates Title VII of the Civil Rights Act of 1964, as amended. It is defined by the Equal Employment Opportunity Commission as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when submission to or rejection of this conduct (1) explicitly or implicitly affects an individual's employment, (2) unreasonably interferes with an individual's work performance, or (3) creates an intimidating, hostile, or offensive work environment. U.S. law recognizes two types of sexual harassment. The first is termed *quid pro quo*, Latin for "this for that," implying a trade involving sex (e.g., a supervisor offering a subordinate a promotion in exchange for sexual favors or denying a job benefit because of refusal of the supervisor's advances). The second type is "hostile environment" harassment, which is less blatant and harder to define. This occurs when an employee is placed in an uncomfortable or threatening environment due to unwelcome sexual behavior in the workplace. Examples of hostile environment situations include telling jokes or stories of a sexual nature; unwelcome touching, such as patting or hugging; displaying suggestive or sexually explicit photographs, posters, or calendars; or making suggestive facial expressions or gestures.

HISTORY

As a practice, sexual harassment is certainly not new; accounts of women and men placing their

Anita Hill testifies before the Senate.

livelihoods at risk if they did not submit to some sort of sexual activity—from the playful to the criminal—can be found throughout history. However, the term itself is relatively new in American culture, entering the language as recently as 1975. The legal foundation for objecting to sexual harassment was laid in 1964 in Title VII of the Civil Rights Act, which prohibited employment discrimination because of an individual's sex as well as race, color, religion, or national origin. Still, although sex discrimination was illegal, there was no real guidance in existence with regard to sexual harassment. It was not mentioned specifically anywhere in the Civil Rights Act, nor was it found in the fair employment practices statutes enacted in most of the states. When the courts ruled on the issue, they typically saw it as a sort of personal dispute between employee and harasser not covered by law. Largely as a result of the issue's being raised and publicized by women's groups during the early 1970s, the Office of Personnel Management issued guidance in 1980 defining sexual harassment and warning that such conduct was unacceptable in the federal workplace. Still, the new guidelines had no legal enforcement avenues available. Action by the Equal Employment Opportunity Commission in 1980 attempted to remedy this by declaring that it was illegal to sexually harass someone on the job. By this time, sexual harassment had been the subject of several court cases but had not drawn national attention.

KEY EVENTS

The Supreme Court decided its first sexual harassment case in 1986 in *Meritor Savings Bank v. Vinson* with a unanimous landmark ruling that did three important things: confirmed that Title VII outlawed sexual harassment; defined *quid pro quo* harassment; and, finally, added the concept of hostile environmental abuse. The ruling also cautioned that employers have a responsibility for guarding against harassment. *Vinson* was significant in that this was the first time the Court recognized a cause of action for sexual harassment based on creation of the ''hostile work environment,'' in contrast to earlier *quid pro quo* cases in which the demand for sexual favors was at issue. *Vinson* caused employers nationwide to relook at personnel policies and practices with regard to sexual harassment as newly defined.

Many felt that *Vinson* did not go far enough with regard to employer liability, while others felt it criminalized what they saw as harmless humor and friendly flirtation. As this debate continued, largely in the workplaces and courtrooms of the nation, two events occurred: one involving the U.S. military and the other the confirmation of a Supreme Court justice. These events brought the topic of sexual harassment into the national spotlight. In 1991, the Navy's Tailhook scandal captured the nation's attention with reports that female naval officers had been assaulted in a hallway ''gauntlet'' by their fellow officers during the annual convention of naval aviators held in Las Vegas. Lieutenant Paula Coughlin complained officially to her superiors of her fellow officers' behavior, only to see her complaints initially ignored. She then went public with her story, prompting other female naval officers to do the same. The Tailhook scandal resulted in a number of administrative actions against naval officers, early retirements of some of the Navy's highest officials, and the forced resignation of the Secretary of Navy.

Perhaps the most significant event to make sexual harassment the topic of national debate was the revelation in 1992 that Supreme Court nominee Clarence Thomas had, a decade earlier, allegedly sexually harassed a former employee of his at the Equal Employment Opportunity Commission (EEOC). Anita Hill, a professor at the University of Oklahoma's Law School at the time of Thomas's nomination, had been contacted by Senate staffers regarding a rumor regarding such allegations. Hill indicated that Thomas had repeatedly discussed sexual matters with her in a suggestive and humiliating manner while he was her superior at the EEOC. When the majority of the U.S. Senate appeared ready to confirm Thomas without an airing of the charges, American women protested and effectively stopped the proceedings until the accusations could be examined. The ensuing testimony in Senate hearings by both Hill and Thomas started a firestorm of controversy throughout the nation. Many working women began to speak out of their own experiences and, within days of the hearings, the number of sexual harassment complaints filed with government agencies quadrupled. Ultimately, Thomas was confirmed for the Supreme Court; however, the controversy had the lasting effect of bringing the issue of sexual harassment out of the dark into the light of legal and political debate.

AMENDMENTS TO THE LAW AND COURT DECISIONS

The Civil Rights Act of 1991 expanded the rights of the complainant, allowing individuals who file actions under the law to collect up to $300,000 in compensatory and punitive damages. Also, in the years following the passing of this law, many states tightened sexual harassment laws and added measures to protect victims from reprisal.

In recent years, Supreme Court decisions on sexual harassment have focused more and more on the application of common sense to the particular situation (i.e., looking at the situation as a "reasonable" person would). In 1993, in its decision in *Harris v. Forklift Systems, Inc.*, the Court established the standard and perspective for evaluating whether or not a particular conduct is unlawful harassment. The Court ruled unanimously that while psychological harm may be taken in account in evaluating whether sexual harassment occurred, it is not a requirement in a claim. Conversely, the decision also held that the mere utterance of an offensive statement would not normally constitute a violation of the law.

The following Supreme Court decisions, all issued in 1998, are considered among the most significant in defining sexual harassment law: First, in *Burlington Industries, Inc. v. Ellerth*, the complainant showed that although she was subjected to offensive, vulgar behavior, she had not suffered in any manner relating to her employment situation. In fact, she had been promoted at the company prior to her resignation. The Court ruled that harassment is defined by the behavior of the harasser, not by what subsequently happens to a worker. Another key portion of this decision and that of another case, *Faragher v. Boca Raton*, addressed employer liability with regard to hostile environment harassment and the employee's responsibility to report the offense to someone with decision-making authority. *Faragher* involved a female lifeguard who had claimed she had endured repeated sexual harassment from her male supervisors yet had not formally complained due to her fear of retaliation. During the course of the litigation, it was shown that although Faragher's employer, the city of Boca Raton, Florida, had a sexual harassment policy, it was unknown to both the complainant and her supervisors. The Court indicated that an employer could defend itself successfully if it could prove that it had a known, effective policy against harassment and that the employee had failed to take advantage of it.

In another ruling, *Oncale v. Sundowner Offshore Services, Inc.*, employer liability for sexual harassment between members of the same sex was clearly defined. The case arose out of a suit filed by an oil platform worker who had been subjected to humiliating, sex-related acts by two supervisors and a fellow crew member. The Court unanimously declared that sexual harassment is actionable (i.e., liability can be found) even when the people involved are of the same sex. A key point articulated in the decision was that what mattered was the conduct at issue rather than the sex of the individuals involved or the presence or absence of sexual desire.

POSSIBLE SOLUTIONS

Prior to the *Farragher* and *Ellerth* decisions, the courts decided liability of employers by focusing their attention chiefly on actions taken after an employee complained of harassment. In more recent decisions, the courts are also taking into consideration the steps that employers have taken before claims are filed, including whether or not they have a good sexual harassment policy in place. Such actions by the courts clearly show that prevention remains the best remedy for sexual harassment. The following strategies are recommended by various legal and human resources experts for employers who wish to make their workplaces sexual harassment-free: (1) Have a written state-of-the-art policy on sexual harassment that explains, in easy-to-understand terms, the types of prohibited behavior. Prior to issuance, get a legal review of the policy. Assure that the policy is posted as well as disseminated to all supervisors and employees, preferably at least on an annual basis. (2) Commit to the policy at the highest levels. Assure that employees see this issue as a matter of importance to the company's top managers and all levels of supervision. (3) Develop an internal complaint process that assures confidentiality and has multiple points of access, not just the employee's supervisor. Assure that there are management-level personnel of both sexes available to those who wish to complain. While the Supreme Court did not mandate that employers provide complaint procedures, it did hold that employers may escape liability if they have a complaint process in place and employees fail to use it. (4) Investigate complaints promptly and thoroughly, maintaining confidentiality as much as possible. Assure swift action to investigate; courts have found companies liable for sexual harassment in part because they took too long to conduct the investigation. Assure that employees complaining or providing information in an investigation are not retaliated against. (5) Conduct high-quality training, including refresher training, for employees, managers, and supervisors on anti-discrimination and anti-sexual harassment policies and practices. Assure that the training covers responsibilities of members of each of these groups regarding the company's sexual harassment policy and complaint procedures. Keep records of such training as tangible evidence of the company's good faith efforts to eliminate sexual harassment. (6) Conduct physical assessments of work areas such as factory floors, warehouses, and remote offices. Often potential problems such as inappropriate posters or cartoon clippings can be identified. (7) Take deliberate, decisive action when the sexual harassment policy is violated. Assure that there is a solid legal basis for the actions proposed. The unjustly accused harasser, as well as the accuser, is a potential plaintiff.

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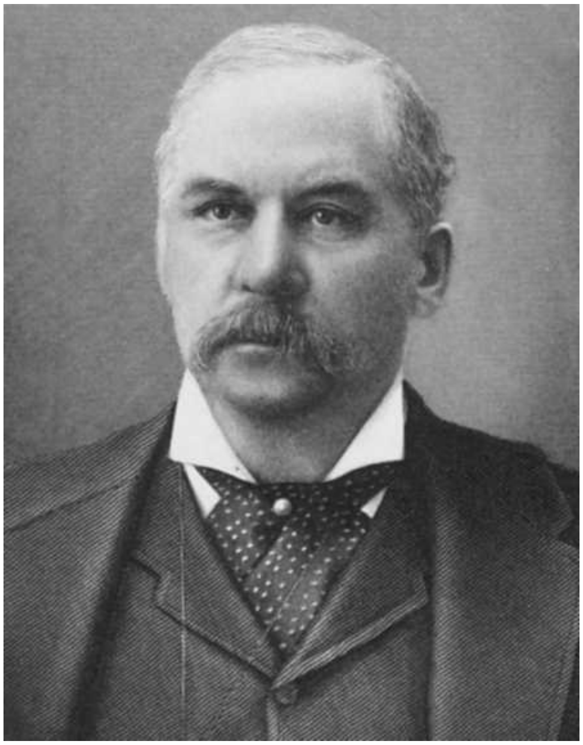
Clarice P. Brantley
Rita Shaw Rone

SHERMAN ANTITRUST ACT OF 1890

The Sherman Antitrust Act of 1890, the first and most significant of the U.S. antitrust laws, outlawed trusts and prohibited "illegal" monopolies. The act applies to both domestic companies and foreign companies doing business in the United States. A trust is a relationship between businesses that collaborate through anticompetitive agreements to gain market dominance. Trusts cut prices to drive competitors out of business. "Illegal" monopolies are those that can be shown to use their power to suppress competition. A monopolist has the power to dominate markets—the ability to set the price by altering supply. Anticompetitive techniques include:

- Buying out competitors
- Forcing customers to sign long-term agreements
- Forcing customers to buy unwanted products in order to receive other goods ("Understanding Antritrust Law," 1999)



J.P. Morgan.

Through the passage of the Sherman Antitrust Act, Congress provided safeguards to prevent firms from merging with other firms if the effect was to substantially lessen competition and create monopolies.

The Federal Trade Commission (FTC) and the Antitrust Division of the Department of Justice enforce antitrust laws. The FTC has the power to temporarily stop companies from employing suspected anticompetitive practices, while the Justice Department probes and prosecutes businesses. Blake (1984) wrote that the Supreme Court, as ultimate judicial arbiter of the Sherman Antitrust Act, has interpreted the act as "a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as a rule of trade." It is based on the premise that "the unrestrained interaction of competitive forces will yield the best allocation of our economic resources . . . while at the same time providing an environment conducive to the preservation of our democratic political and social institutions" (p. 253).

The act was passed in response to strong and widespread political pressure to deal with "the trust problem" that reached a peak during the presidential election campaign of 1888. The trusts were corporate holding companies that, by 1888, had consolidated a very large share of U.S. manufacturing and mining industries into nationwide monopolies. Some of the most notorious corporate holding companies were the sugar trust, John D. Rockefeller's oil trust, and J. P. Morgan's steel trust. The original legal form of these organizations had been as business trusts. The Sherman Act made trusts and those who violated the act subject to civil remedies and criminal penalties in actions by the Department of Justice and to treble damages in private suits. The act was broad, providing few standards, which meant the executive branch and federal courts had to resolve the trust issues. The Sherman Antitrust Act of 1890 was revised by the Clayton Antitrust Act of 1914, which was designed to catch early-stage practices that were thought to lead to monopolies, such as corporate mergers and acquisitions, price discrimination, typing agreements, and interlocking directorships. Other antitrust acts followed, including the Federal Trade Commission Act of 1914, the Robinson-Patman Act of 1936, and the Celler-Kefauver Act of 1950.

Consequences of being found guilty of antitrust activity and being a monopoly are a fine not exceeding $10 million if a corporation or $350,000 if person or by imprisonment not exceeding three years, or by both punishments, at the discretion of the court. Furthermore, the court can require breakup of the company and other consequences based on individual cases.

Today in the United States monopolistic power means that a business has the power to raise prices above competitive levels. This typically occurs when an organization has exclusive control over a commercial activity, such as the production or selling of a commodity or service, and thus has the power to fix prices unilaterally because it has no effective competition. Significant antitrust litigation has included the following:

- 1911, American Tobacco—broken up into separate companies
- 1911, Standard Oil—broken up into separate oil-refining and pipeline companies
- 1920, U.S. Steel—no illegal monopoly found
- 1982, IBM—accused of being an illegal monopoly; case dropped
- 1983, AT&T—accused of being an illegal monopoly; broken up into one long-distance and seven "Baby Bell" local phone companies
- 1998, Microsoft—accused of using monopoly power to sell other products; as of February, 2000, penalties had not been set
- 1999, Intel—accused of severing business ties with customers who sue it; penalties varied depending on customers bringing litigation

(SEE ALSO: *Antitrust Legislation*)

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PHYLLIS BUNN

SHOPLIFTING

(SEE: *Crime and Fraud*)

SHOPPING

Shopping involves the purchasing of products by consumers, all of which fall into various shopping product categories that are based on the way consumers think of them and purchase them. The two main categories are convenience goods and shopping goods; two lesser categories are specialty items and unsought goods. Although most shopping products are sold in stores, such as retail, grocery, and specialty stores, some consumer purchases are made through other means, such as catalogue shopping, telemarketing and on-line purchasing (also known as cybershopping). Cybershopping on the Internet is the latest trend in consumer shopping; it is estimated that $300 billion worth of on-line purchases will be made in the first decade of the twenty-first century.

CONVENIENCE GOODS

Convenience goods are goods that consumers purchase frequently, immediately, and with minimal effort. People do not spend a large amount of time shopping for convenience items. They are usually purchases made routinely, such as buying groceries on a weekly basis, or habitually, such as purchasing a daily newspaper. Convenience products include common staples, such as milk and bread. Some convenience goods, however, are not purchased routinely or habitually; they are bought on impulse, such as an ice cream cone on a summer day. Many impulse items are displayed in a manner that encourages quick choice and purchase, such as the candy, magazines, and batteries that are routinely placed near the cash register at check-out counters. Other convenience products may be purchased as emergency items, when the consumers feel there is an urgent need—such as buying candles, water, or shovels when preparing for a storm. Convenience products can be found in stores such as supermarkets, convenience stores, and department stores.

SHOPPING GOODS

Shopping goods are items consumers will conduct a search for in order to find the one that best suits their needs. They usually require an involved selection process. When purchasing a shopping product, consumers will compare a variety of attributes, such as suitability, quality, price, and style. Automobiles are often bought this way. Consumers may also visit a number of shopping places, such as retail stores, before they make a decision. Because of the importance of these types of purchases, consumers usually invest considerable time and energy before making such a purchase.

Shopping products are broken down into two categories: homogeneous and heterogeneous. Homogeneous shopping goods are those that are similar in quality but different in other characteristics. This difference in characteristics is sufficient for the customer to justify a search for the item. Items that are thought of as homogeneous, or the same, would include television sets, various home appliances, or automobiles. Homogeneous shopping goods are also often evaluated on price. After the consumer has decided on desired characteristics, he or she then looks for the most favorable price.

Heterogeneous shopping goods have product features that are often more important to consumers than price; examples include clothing, high-tech equipment, and furniture. The item purchased must meet certain consumer-set criteria, such as size, color, or specific functions performed. When buying heterogeneous shopping goods, consumers often seek out information and advice from salespeople and other experts before purchasing the item. The seller or retailer of heterogeneous shopping goods needs to carry a sufficient variety of the products to suit individual tastes and also needs well-trained salespeople to inform and advise consumers.

SPECIALTY ITEMS

Specialty items have characteristics that impel consumers to make special efforts to find them. Consumers often do not consider price at all when shopping for specialty products, which can include almost any kind of shopping product: Particular types of food, expensive imported cars, or items from a well-known fashion designer or manufacturer can all be considered specialty goods. Usually, specialty goods have a brand name or other type of distinguishing characteristic. Shopping goods are often classified as specialty products based on the location and need of the consumer; for example, some olive oils or wines may be a convenience product in Italy but a specialty product in the United States. Consumers who favor specialty products may travel considerable distances to purchase a particular item. These types of shopping products can often be found in specialty stores, which carry a large assortment within a small line of goods. An example would be a store that carries only candy, but many different types of candy. Other types of specialty stores include bookstores and sporting goods stores.

Unsought Goods. Unsought goods are products that consumers do not want, use, or even think about purchasing. An unsought shopping good could be a product that a consumer may not even know about—or knows about but has never considered purchasing. In addition, consumers often put off purchasing unsought shopping goods because they do not consider them to be important. Unsought shopping goods are frequently brought to customers' attention through advertising, promotions, or chance. Sometimes they are something new on the market, such as digital telephones. At other times they are fairly standard services that some consumers would not bother shopping for, such as life insurance.

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AUDREY E. LANGILL

SHORTAGES

(SEE: *Supply and Demand*)

SHRINKAGE

(SEE: *Inventory Control*)

SILENT SPRING

(SEE: *Social Responsibility and Organizational Ethics*)

SINGLE AUDIT ACT

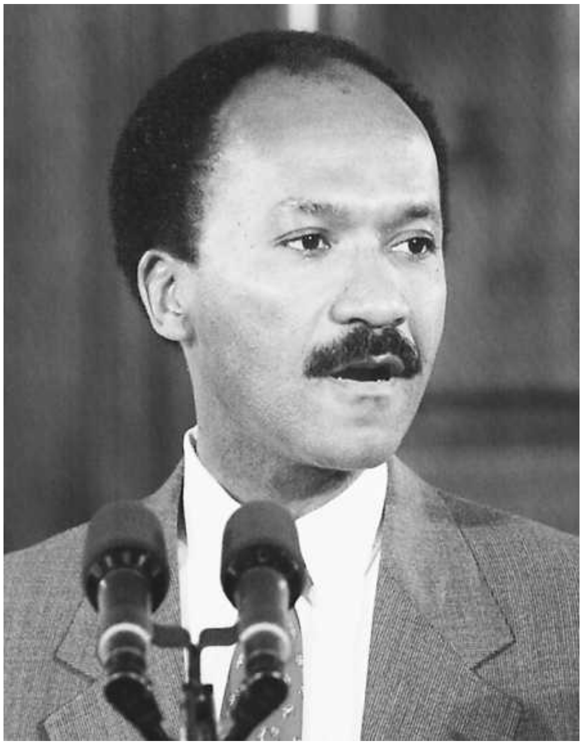
The Single Audit Act of 1984 (Public Law 98-502) was passed by Congress to improve auditing and management for federal funds provided to state and local governments. These funds may include grants, contracts, loans, loan guarantees, property, cooperative agreements, interest subsidies, insurance, and direct appropriations from a number of federal agencies. Before the act, each federal agency had the authority to require an audit of each federally funded program or activity; there was no coordination among them, causing audit overlaps and organizational inefficiencies. For example, a state receiving funds from five different federal agencies could have been subjected to five different audits, performed by five different auditors consecutively or simultaneously.

The act created a single organization-wide financial and compliance audit for state and local governments receiving federal funds equal to or greater than $100,000 in any fiscal year (a fiscal year is any twelve-month period). There are four major purposes of the act.

1. To promote the efficient and effective use of audit resources
2. To establish uniform requirements for audits of federal funds provided to state and local governments
3. To ensure that federal funds, to the greatest extent practicable, are audited in accordance with the requirements of the Single Audit Act
4. To improve state and local government's financial management of federally funded programs through more effective auditing

IMPLEMENTATION

The director of the Office of Management and Budget (OMB), a federal agency, is responsible for dictating policies, procedures, and guidelines to carry out the act. These policies, procedures, and guidelines are contained in OMB Circular No. A-128, "Audits of State and Local Govern-



Franklin Raines, Office of Management and Budget director.

ments" (1995). Circular No. A-128 and the act require the following annually.

1. An audit of the state or local government's (entity's) general-purpose or basic financial statements made in accordance with generally accepted government auditing standards covering financial and compliance audits
2. Tests of internal accounting and other control systems to provide reasonable assurance that the entity is managing federal-assisted programs in compliance with applicable laws, regulations, and the specific provisions of contracts or grants

During the course of the audit, the auditor must determine whether the entity's financial statements fairly present its financial position and the results of its financial operations in accordance with generally accepted accounting principles. The auditor must also specifically review transactions (expenditures) to determine whether the amounts were used for allowable services and recipients were eligible to receive them. In addition, the auditor must determine whether the organization has complied with laws and regulations that may have a material effect on its financial statements and on each "major federal-assisted program." ("Major federal assisted program" for state and local governments having federal-assisted expenditures between $100,000 and $100,000,000 is defined in Public Law 98-502 as any program for which federal expenditures during the year exceed the larger of $300,000 or 3 percent of such total expenditures.) Upon completion of the audit, the auditor must prepare a report that includes:

1. Reports on financial statements and schedule of federal funds, the financial statements, and the schedule of total expenditures of federal funds
2. A report on the study and evaluation of internal control systems that identifies the controls evaluated and material weaknesses, if any
3. A report on compliance stating positive assurance for items tested, negative assurance for items not tested, a summary of cases of noncompliance, and identification of the total amount of expenditures questioned

If the auditor discovers fraud or illegal acts, a separate report is required. The state or local government audited must also provide a report containing comments on the findings and recommendations in the auditor's report and details of corrective actions taken or planned if necessary.

The Single Audit Act of 1984 did not include colleges, universities, and other not-for-profit organizations receiving federal funds. These organizations continued to be subjected to audit overlaps and inefficiencies until 1990, when the Office of Management and Budget issued Circular A-133, "Audits of Institutes of Higher Education and Other Non-Profit Institutions," to extend requirements similar to those in the Act and

Circular A-128 to colleges, universities, and other not-for-profit organizations.

SINGLE AUDIT ACT AMENDMENTS OF 1996 (PUBLIC LAW 104-156)

In 1996, Congress amended the Single Audit Act to streamline and improve its effectiveness. The amended act applies to state and local governments, colleges, universities, and not-for-profit organizations that expend (spend) Federal funds equal to or greater than $300,000 in any fiscal year. Major changes to the 1984 act include the following:

1. All state and local governments, colleges, universities, public hospitals, and not-for-profit organizations receiving federal funds are covered under the act.
2. Thousands of entities were exempted from the federally mandated single audit by raising the dollar threshold from $100,000 to $300,000. The Office of Management and Budget is authorized to adjust the threshold amount every two years.
3. Audit requirements are triggered by federal funds "expended" rather than merely "received."
4. The audit report due date is shortened from thirteen months to nine months.
5. Auditors are required to identify major programs for compliance audits based on risk assessment rather than solely on the basis of the total dollar amount of expenditures.
6. The auditor is required to prepare and sign a data-collection form, which is submitted to the federal clearinghouse, instead of sending the full single audit report.
7. A provision is made for pilot projects to test alternative ways of achieving the objectives of the single audit process. For example, the act specifically authorized one creative approach to consider multiple local government entities that operate the same federal programs as a single entity for a single audit.

The Single Audit Act Amendments of 1996 addressed a number of issues that emerged during and after the implementation of the Single Audit Act of 1984. The amendments exempted entities receiving relatively small amount of federal funds, enacted guidelines to ensure that high-risk programs are subject to audit, and simplified reporting requirements.

(SEE ALSO: *Government Accounting*)

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MARGARET HICKS

SITUATIONAL MANAGEMENT

(SEE: *Management/Leadership Styles*)

SKIMMING PRICES

(SEE: *Pricing*)

SMALL BUSINESS ADMINISTRATION

Today, small businesses generate more than one-third of the gross national product, create the majority of new jobs, and provide arenas for technological innovation. During the early 1950s, the value of small businesses in providing stability for the American economy was realized.

Prior to that time, big business/industry promises of career success too often proved to be empty, and many disillusioned American workers began to embrace the concept of self-employment. As the number of business entrepreneurs increased, it quickly became apparent that such entrepreneurial endeavors needed a protective umbrella if they were to survive normal start-up difficulties common to small business, not to mention competitive pressures generated by larger organizations. In 1953, to address the problem, Congress approved the Small Business Administration Act, which created the Small Business Administration (SBA).

The SBA's administrator directs the delivery of a comprehensive set of financial and business development programs that provide financing worth about $11 billion a year to small businesses across the nation. SBA has 70 district offices across the country and program offices in every state, as well as the District of Columbia, the Virgin Islands, and Puerto Rico.

As an independent federal agency, the SBA aids, counsels, assists, and protects small-business interests based on two principles: quality-focused management and customer-driven outreach.

The SBA provides financial assistance in the form of loan guarantees, rather than direct loans, through 14 specialized programs to help entrepreneurs attain the appropriate financial position to initiate their business and overcome the first few lean years of infancy. It also provides counseling and training assistance to female, minority, veteran, and socially and/or economically disadvantaged business owners. For instance, the Office of Women's Business Ownership has established a women's business owner representative network in every district office, an Online Women's Business Center accessible through the Internet, and nearly 70 women's business centers in 40 states; and the Minority Prequalification Loan Program assists qualified minority-owned, for-profit companies to obtain pre-approval for a 7(a) loan guaranty. The 7(a) Loan Guaranty Program assists small businesses unable to secure reasonable funding terms through normal lending channels to obtain funding through private-sector lenders on loans guaranteed by the SBA.

While the SBA does not provide grants to start or expand a business, it does coordinate and disseminate information about resources to facilitate awareness of business initiatives, about consulting or mentoring opportunities for managerial novices, and about entrepreneurial success strategies. Further, it provides disaster assistance and has established a unit to coordinate and facilitate technology transfer conferences for small businesses. In an effort to centralize access to a full range of technical and financial assistance for small business owners located in empowerment zones and enterprise communities, in 1994 the SBA developed One-Stop Capital Shops. These partnerships between the SBA and a local community offer comprehensive small-business assistance from a unique, easy-to-access, retail site located in a distressed area, and they generally target underserved communities or the SBA's new markets.

More information is available from the U.S. Small Business Administration Office of Marketing and Customer Service, 409 Third Street SW, Suite 600, Washington, D.C. 20414; (202) 205-6744 or 1-800-8ASK-SBA; or http://www.sba.gov.

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Mary Jean Lush
Val Hinton

SOCIALISM

(SEE: *Economic Systems*)

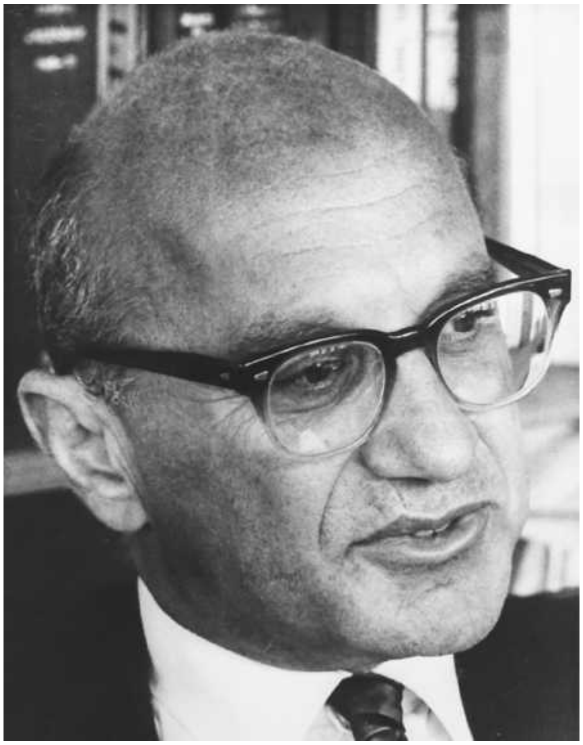
SOCIAL RESPONSIBILITY AND ORGANIZATIONAL ETHICS

BUSINESS ETHICS

Perhaps the most practical approach is to view ethics as a catalyst that causes managers to take socially responsible actions. The movement toward including ethics as a critical part of management education began in the 1970s, grew significantly in the 1980s, and is expected to continue growing. Hence, business ethics is a critical component of business leadership. Ethics can be defined as our concern for good behavior. We feel an obligation to consider not only our own personal well-being but also that of other human beings. This is similar to the precept of the Golden Rule: Do unto others as you would have them do unto you. In business, ethics can be defined as the ability and willingness to reflect on values in the course of the organization's decision-making process, to determine how values and decisions affect the various stakeholder groups, and to establish how managers can use these precepts in day-to-day company operations. Ethical business leaders strive for fairness and justice within the confines of sound management practices.

Many people ask why ethics is such a vital component of management practice. It has been said that it makes good business sense for managers to be ethical. Without being ethical, companies cannot be competitive at either the national or international levels. While ethical management practices may not necessarily be linked to specific indicators of financial profitability, there is no inevitable conflict between ethical practices and a firm's emphasis on making a profit; our system of competition presumes underlying values of truthfulness and fair dealing.

The employment of ethical business practices can enhance overall corporate health in three important areas. The first area is productivity. The employees of a corporation are stakeholders who are affected by management practices. When management considers ethics in its actions toward stakeholders, employees can be positively affected. For example, a corporation may decide that business ethics requires a special effort to ensure the health and welfare of employees. Many corporations have established employee advisory programs (EAPs), to help employees with family, work, financial, or legal problems, or with mental illness or chemical dependency. These programs can be a source of enhanced productivity for a corporation.



Milton Friedman.

A second area in which ethical management practices can enhance corporate health is by positively affecting ''outside'' stakeholders, such as suppliers and customers. A positive public image can attract customers. For example, a manufacturer of baby products carefully guards its public image as a company that puts customer health and well-being ahead of corporate profits, as exemplified in its code of ethics.

The third area in which ethical management practices can enhance corporate health is in minimizing regulation from government agencies. Where companies are believed to be acting unethically, the public is more likely to put pressure on legislators and other government officials to regulate those businesses or to enforce existing regulations. For example, in 1990 hearings were held on the rise in gasoline and home heating oil prices following Iraq's invasion of Kuwait, in part due to the public perception that oil companies were not behaving ethically.

A CODE OF ETHICS

A code of ethics is a formal statement that acts as a guide for how people within a particular organization should act and make decisions in an ethical fashion. Ninety percent of the *Fortune* 500 firms, and almost half of all other firms, have ethical codes. Codes of ethics commonly address issues such as conflict of interest, behavior toward competitors, privacy of information, gift giving, and making and receiving political contributions. According to a recent survey, the development and distribution of a code of ethics within an organization is perceived as an effective and efficient means of encouraging ethical practices within organizations.

Business leaders cannot assume, however, that merely because they have developed and distributed a code of ethics an organization's members have all the guidelines needed to determine what is ethical and will act accordingly. There is no way that all situations that involve decision making in an organization can be addressed in a code. Codes of ethics must be monitored continually to determine whether they are comprehensive and usable guidelines for making ethical business decisions. Managers should view codes of ethics as tools that must be evaluated and refined in order to more effectively encourage ethical practices.

CREATING AN ETHICAL WORKPLACE

Business managers in most organizations commonly strive to encourage ethical practices not only to ensure moral conduct, but also to gain whatever business advantage there may be in having potential consumers and employees regard the company as ethical. Creating, distributing, and continually improving a company's code of ethics is one usual step managers can take to establish an ethical workplace.

Another step managers can take is to create a special office or department with the responsibility of ensuring ethical practices within the organization. For example, management at a major supplier of missile systems and aircraft components has established a corporate ethics office. This ethics office is a tangible sign to all employees that management is serious about encouraging ethical practices within the company.

Another way to promote ethics in the workplace is to provide the work force with appropriate training. Several companies conduct training programs aimed at encouraging ethical practices within their organizations. Such programs do not attempt to teach what is moral or ethical but, rather, to give business managers criteria they can use to help determine how ethical a certain action might be. Managers then can feel confident that a potential action will be considered ethical by the general public if it is consistent with one or more of the following standards:

1. *The Golden Rule:* Act in a way you would want others to act toward you.
2. *The utilitarian principle:* Act in a way that results in the greatest good for the greatest number.
3. *Kant's categorical imperative:* Act in such a way that the action taken under the circumstances could be a universal law, or rule, of behavior.
4. *The professional ethic:* Take actions that would be viewed as proper by a disinterested panel of professional peers.
5. *The TV test:* Always ask, "Would I feel comfortable explaining to a national TV audience why I took this action?"
6. *The legal test:* Ask whether the proposed action or decision is legal. Established

laws are generally considered minimum standards for ethics.

7. *The four-way test:* Ask whether you can answer "yes" to the following questions as they relate to the decision: Is the decision truthful? Is it fair to all concerned? Will it build goodwill and better friendships? Will it be beneficial to all concerned?

Finally, managers can take responsibility for creating and sustaining conditions in which people are likely to behave ethically and for minimizing conditions in which people might be tempted to behave unethically. Two practices that commonly inspire unethical behavior in organizations are giving unusually high rewards for good performance and unusually severe punishments for poor performance. By eliminating such factors, managers can reduce much of the pressure that people feel to perform unethically. They can also promote the social responsibility of the organization.

SOCIAL RESPONSIBILITY

The term *social responsibility* means different things to different people. Generally, corporate social responsibility is the obligation to take action that protects and improves the welfare of society as a whole as well as organizational interests. According to the concept of corporate social responsibility, a manager must strive to achieve both organizational and societal goals.

Current perspectives regarding the fundamentals of social responsibility of businesses are listed and discussed through (1) the Davis model of corporate social responsibility, (2) areas of corporate social responsibility, and (3) varying opinions on social responsibility.

A model of corporate social responsibility that was developed by Keith Davis provides five propositions that describe why and how businesses should adhere to the obligation to take action that protects and improves the welfare of society and the organization:

> Proposition 1: Social responsibility arises from social power.
>
> Proposition 2: Business shall operate as an open system, with open receipt of inputs from society and open disclosure of its operation to the public.
>
> Proposition 3: The social costs and benefits of an activity, product, or service shall be thoroughly calculated and considered in deciding whether to proceed with it.
>
> Proposition 4: Social costs related to each activity, product, or service shall be passed on to the consumer.
>
> Proposition 5: Business institutions, as citizens, have the responsibility to become involved in certain social problems that are outside their normal areas of operation.

The areas in which business can become involved to protect and improve the welfare of society are numerous and diverse. Some of the most publicized of these areas are urban affairs, consumer affairs, environmental affairs, and employment practices. Although numerous businesses are involved in socially responsible activities, much controversy persists about whether such involvement is necessary or appropriate. There are several arguments for and against businesses performing socially responsible activities.

The best-known argument supporting such activities by business is that because business is a subset of and exerts a significant impact on society, it has the responsibility to help improve society. Since society asks no more and no less of any of its members, why should business be exempt from such responsibility? Additionally, profitability and growth go hand in hand with responsible treatment of employees. customers, and the community. However, studies have not indicated any clear relationship between corporate social responsibility and profitability.

One of the better known arguments against such activities is advanced by the distinguished economist Milton Friedman. Friedman argues that making business managers simultaneously responsible to business owners for reaching profit objectives and to society for enhancing societal welfare represents a conflict of interest that has the potential to cause the demise of business.

According to Friedman, this demise almost certainly will occur if business continually is forced to perform socially responsible behavior that is in direct conflict with private organizational objectives. He also argues that to require business managers to pursue socially responsible objectives may be unethical, since it requires managers to spend money that really belongs to other individuals.

Regardless of which argument or combination of arguments particular managers might support, they generally should make a concerted effort to perform all legally required socially responsible activities, consider voluntarily performing socially responsible activities beyond those legally required, and inform all relevant individuals of the extent to which their organization will become involved in performing social responsibility activities.

Federal law requires that businesses perform certain socially responsible activities. In fact, several government agencies have been established and are maintained to develop such business-related legislation and to make sure the laws are followed. The Environmental Protection Agency does indeed have the authority to require businesses to adhere to certain socially responsible environmental standards. Adherence to legislated social responsibilities represents the minimum standard of social responsibility performance that business leaders must achieve. Managers must ask themselves, however, how far beyond the minimum they should attempt to go—a difficult and complicated question that entails assessing the positive and negative outcomes of performing socially responsible activities. Only those activities that contribute to the business's success while contributing to the welfare of society should be undertaken.

Social Responsiveness. Social responsiveness is the degree of effectiveness and efficiency an organization displays in pursuing its social responsibilities. The greater the degree of effectiveness and efficiency, the more socially responsive the organization is said to be. The socially responsive organization that is both effective and efficient meets its social responsibilities without wasting organizational resources in the process. Determining exactly which social responsibilities an organization should pursue and then deciding how to pursue them are perhaps the two most critical decision-making aspects of maintaining a high level of social responsiveness within an organization. That is, managers must decide whether their organization should undertake the activities on its own or acquire the help of outsiders with more expertise in the area.

In addition to decision making, various approaches to meeting social obligations are another determinant of an organization's level of social responsiveness. A desirable and socially responsive approach to meeting social obligations involves the following:

- Incorporating social goals into the annual planning process
- Seeking comparative industry norms for social programs
- Presenting reports to organization members, the board of directors, and stockholders on progress in social responsibility
- Experimenting with different approaches for measuring social performance
- Attempting to measure the cost of social programs as well as the return on social program investments

S. Prakash Sethi presents three management approaches to meeting social obligations: (1) the social obligation approach, (2) the social responsibility approach, and (3) the social responsiveness approach. Each of Sethi's three approaches contains behavior that reflects a somewhat different attitude with regard to businesses performing social responsible activities. The social obligation approach, for example, considers business as having primarily economic purposes and confines social responsibility activity mainly to conformance to existing laws. The socially responsible approach sees business as having both economic and societal goals. The social responsiveness approach considers business as having both societal and economic goals as well as the obligation to anticipate upcoming social problems and to work actively to prevent their appearance.

Organizations characterized by attitudes and behaviors consistent with the social responsiveness approach generally are more socially responsive than organizations characterized by attitudes and behaviors consistent with either the social responsibility approach or the social obligation approach. Also, organizations characterized by the social responsibility approach generally achieve higher levels of social responsiveness than organizations characterized by the social obligation approach. As one moves from the social obligation approach to the social responsiveness approach, management becomes more proactive. Proactive managers will do what is prudent from a business viewpoint to reduce liabilities whether an action is required by law or not.

Areas of Measurement. To be consistent, measurements to gauge organizational progress in reaching socially responsible objectives can be performed. The specific areas in which individual companies actually take such measurements vary, of course, depending on the specific objectives of the companies. All companies, however, probably should take such measurements in at least the following four major areas:

1. *Economic function:* This measurement gives some indication of the economic contribution the organization is making to society.
2. *Quality-of-life:* The measurement of quality of life should focus on whether the organization is improving or degrading the general quality of life in society.
3. *Social investment:* The measurement of social investment deals with the degree to which the organization is investing both money and human resources to solve community social problems.
4. *Problem-solving:* The measurement of problem solving should focus on the degree to which the organization deals with social problems.

The Social Audit: A Progress Report. A social audit is the process of taking measurements of social responsibility to assess organizational performance in this area. The basic steps in conducting a social audit are monitoring, measuring, and appraising all aspects of an organization's socially responsible performance. Probably no two organizations conduct and present the results of a social audit in exactly the same way. The social audit is the process of measuring the socially responsible activities of an organization. It monitors, measures, and appraises socially responsible performance.

Managers in today's business world increasingly need to be aware of two separate but interrelated concerns—business ethics and social responsibility.

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THOMAS HAYNES

SOFTWARE

Computer systems consist in part of hardware that controls the overall activity of the computer. But in order for hardware to function, it must have the necessary instructions. These instructions are supplied by software. There are different kinds of software, each of which serves a specified purpose. Some software is necessary to make the computer operate. Another kind enables the computer to perform specific tasks. Still other software exists solely for entertainment purposes.

OPERATING SYSTEM SOFTWARE

The operating system software makes the computer perform its basic operational functions. Disk operating system (DOS) is one of the earlier types of operating system software used to power IBM-compatible computers. Commands are typed at a prompt to direct the computer to carry out its functions.

Windows is the most common operating system today. It permits several programs to be opened simultaneously and provides ease of movement between the open programs.

Windows NT is used for business networks. Once this operating system is downloaded and running, other kinds of software are opened to perform the desired functions.

The Macintosh Operating System (Mac OS) is designed for use with Apple, Mac, and PowerMac computers. One disadvantage of Mac OS is that fewer programs have been written for it compared to the number written for DOS or Windows.

APPLICATION SOFTWARE

Application software allows performance of specific tasks, such as writing letters, computing formulas, playing games, or carrying out desktop publishing tasks

- *Word-processing software*: Writing tasks previously done on typewriters with considerable effort can now be easily completed with word-processing software. Writing tasks such as keying in reports, letters, and tables, as well as merging documents, can be performed easily. Documents can be easily edited and formatted. Revisions can be made by deleting (cutting), inserting, moving (cutting and pasting), and copying data. Documents can be stored (saved) and opened again for revisions and/or printing. Many styles and sizes of fonts are available to make the document attractive.
- *Spreadsheet software*: Spreadsheet software permits performance of an almost endless variety of quantitative tasks such as budgeting, keeping track of inventory, preparing financial reports, or manipulating numbers in any fashion, such as averaging each of ten departmental monthly sales over a six-month period. A spreadsheet contains cells, the intersection of rows and columns. Each cell contains a value keyed in by the user. Cells also contain formulas with many capabilities, such as adding, multiplying, dividing, subtracting, averaging, or even counting. An outstanding feature is a spreadsheet's ability to recalculate automatically. If one were preparing a budget, for example, and wanted to change a variable such as an increase in salary or a change in amount of car payments, the formulas would automatically recalculate the affected items and the totals.
- *Database software*: A database contains a list of information items that are similar in format and/or nature. An example is a phone book that lists a name, address, and phone number for each entry. Once stored in a database, information can be retrieved in several ways, using reports and queries. For example, all the names listed for a given area code could be printed out and used for a commercial mailing to that area.
- *Desktop publishing software*: This software permits the user to prepare documents by using both word-processing devices and graphics. Desktop publishing software uses word-processing software, with all its ease of entering and revising data, and supplements it with sophisticated visual features that stem from graphics software. For example, one can enhance a printed message with virtually any kind of illustration, such as drawings, paintings, and photographs.
- *Presentation software*: A speaker may use presentation software to organize a slide show for an audience. Text, graphics, sound, and movies can easily be included in the presentation. An added feature is that the slide show may be enhanced by inclusion of handouts with two to six slides printed on a page. The page may be organized to provide space for notes to be written in by the audience as the pre-

sentation ensues. An example of this is Power Point. Preparation of the software is simplified by the use of 'wizards' that walk the user through the creation of the presentation.

- *Office suite software*: Office suite software puts together complete programs of software. A typical suite package might include word processing, spreadsheet, databases, and presentation software. Depending on the jobs that need to be done, the suite provides the tools to make professional-looking documents.

Each piece of software works independently as well as with other parts of the suite. Items on the menu bar —such as File, Insert, and Format —work similarly on all the programs in a suite. Thus, familiarity with one program makes it easy to work with the other programs.

A typical example of office suite software is mail sent via bulk rate. It is usually addressed by name to an individual, rather than to "Occupant," with names and addresses accessed from the database memory. Merging those names with the letter in the word processor produces a form letter. A spreadsheet might also have been used to include charts and graphs with the letter. When completed, all forms are inserted into envelopes addressed by means of the database and word processor.

COMMUNICATIONS SOFTWARE

Using telephone lines and working through the computer's modem, communications software makes it possible to communicate to any location in the world using either fax or electronic mail. A fax transmits whatever copy is on an original sheet of paper (text, graphics, or handwriting) to another computer or fax machine. Electronic mail (e-mail) is a text message. It remains in the receiver's computer until retrieved. The message can be stored in either the sender's or the receiver's computer for later processing. Attachments or files can also be sent via e-mail.

UTILITY SOFTWARE

Utility software is used to diagnose computer problems and repair them. A major type is a virus (or "illness") checker. It checks for viruses the computer may have received from downloading information received from the Internet, e-mail, or another disk. Although some viruses may do little damage, others can cause serious damage to files and/or the computer operating system. It is important for a computer owner to find a virus-check program, install it, use it, and keep it continually updated. New viruses are found continually, and the only way to be safe is to update. Some antivirus software allows easy updating by downloading new files from the Internet.

EDUCATIONAL SOFTWARE

By teaching by means of games, educational software is designed to make learning fun. The approach used in educational software is that of a tutorial in which the learner competes with him or herself. Such software appeals to persons of all ages but particularly to young children, who can learn skills related to reading and arithmetic. Older children and adults can learn or improve on a wide variety of more mature skills.

SPECIAL SOFTWARE ACQUISITION ARRANGEMENTS

Some kinds of software are given away. Another kind permits the potential user to try the software before purchasing it. *Freeware software* is free for those who ask, but the rights remain with the developer. *Public domain software* is free to the user without any copyright or other restrictions. *Shareware software* permits potential buyers to try out the software. A user who likes it may purchase it by sending payment to the developer. The developer in turn may send the buyer supporting materials and information.

SUMMARY

Software is as critical to computers as breathing is to humans. Fortunately, an extremely wide variety of software programs are available that make possible the preparation of virtually any kind of computer product.

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WANDA SAMSON

SOLE PROPRIETORSHIP

A sole proprietorship is the simplest form of business ownership. Not surprisingly, the vast majority of small businesses begin their existence as sole proprietorships. A sole proprietorship has but one owner. That sole owner may engage in any form of legal business activity any time and anywhere. Other than the various local and state business licenses that every business must purchase regardless of type of ownership, no legal formalities are required to start or operate the business. The owner is responsible for securing and investing the funds for the business. These funds may come from the owner's existing or borrowed financial resources.

The Internal Revenue Service (IRS) permits one exception to the "one sole owner" rule. If the spouse of a married sole proprietor works for the firm but is not classified as either a partner or an independent contractor, the business may still considered to be a sole proprietorship and forgo having to submit a partnership income tax return. Also, the sole proprietorship can avoid self-employment taxes.

If the owner's true name is used, such as "John Smith Auto Repair," there is ordinarily no problem in selecting a name for the sole proprietorship. But care must be taken if a fictitious name is contemplated. The owner must register the name with the county to see whether the name duplicates that of another business. Even if it does not, the owner must submit a "doing business as (dba)" form to the county, or, in a few states, to the secretary of state.

ADVANTAGES

An owner of a sole proprietorship gets to keep all profits derived from the operation but must also bear all losses. The owner may even share any portion of the profits and losses with another person or persons.

The owner has the authority to make all the decisions relating to the business. Since there are no co-owners, there is no need to hold policy-meeting sessions or form any group similar to a board of directors. The owner, of course, must bear the responsibilities that accrue from the decisions made.

The owner may hire employees or work with independent consultants and still retain the sole proprietorship form of ownership. Even if these employees or independent consultants are requested to offer their opinions relating to the firm's business decisions, the opinions are considered to be only recommendations. The owner cannot abdicate any responsibility for the outcomes fostered by these recommendations.

DISADVANTAGES

Unlimited liability is the major disadvantage borne by the sole proprietorship. The owner is financially responsible for satisfying all business debts and/or losses suffered by the firm, even to the point of sacrificing his or her personal or other business interests to pay off any liabilities. For example, assume a lawsuit inflicts a debt of $190,000 on a sole proprietorship that is able to contribute only $85,000 toward settlement of the liability. Further assume that the proprietor owns a home, equipment, and other business investments totaling $365,000.

The following shows the picture of the owner's liability:

Total liability of the proprietorship
$190,000

Capability of the proprietorship in settling the liability $85,000

Extent to which the owner's personal assets (totaling $365,000) must be used to settle the debt $105,000

Owners of sole proprietorships have severe potential liabilities from customers, competitors, lenders, employees, and even government. The cost of liability insurance or of defending against a lawsuit is beyond the financial capability of many business firms. For this reason, most individuals holding somewhat extensive personal assets do not ordinarily use the sole proprietorship form of ownership. Instead, an alternative form of ownership is often used, such as corporation or special forms of partnership, that eliminates the unlimited liability.

TERMINATION OF THE BUSINESS

A sole proprietorship legally terminates immediately upon the death of the owner. Even if a spouse, relative, or friend of the deceased owner assumes ownership and keeps the business operating under the same name, legally a new business enterprise has been formed. It is recommended that owners at least make a will, and preferably a revocable trust, to name the beneficiary of the owner's interest in the business.

A sole proprietorship also terminates if the ownership interest is sold to another person or group of persons, if the business is abandoned by the owner, or if the owner becomes personally bankrupt.

These potential risks of sudden termination place sole proprietorships at a serious disadvantage in attracting top-flight employees who may not to wish to tie their future to a business that may suddenly become inoperative.

INCOME TAXES

When filing an income tax return, no legal distinction exists between a person as a sole proprietor and an individual person. The sole proprietor's personal income tax return (Form 1040) must include calculation of the proprietorship's income tax as well as any income or loss that the owner incurs from any additional entity, such as an employee, investor, or the like.

If, for example, a taxpayer realizes net earnings of $65,000 from a sole proprietorship and $28,000 from investments, the IRS considers the total net income to be $93,000. But, on the other hand, if a sole proprietor suffers a net loss of $42,000 from the business and a $71,000 net income from investments, the IRS would consider the total income to be $29,000.

Sole proprietors use Schedule C of IRS Form 1040 to file their income tax return for the proprietorship section of their income. The details of Schedule C can get very involved; many sole proprietors require professional advice for this phase of their income tax report.

Where applicable, sole proprietors file Form 4562 to report depreciation and amortization, and Form 8829 to report business use of the owner's residence.

TYPES OF BUSINESS

Proprietorships engage in a wide variety of businesses. Using the major categories of the new North American Industry Classification System (NAICS), the types of business activity that small businesses (including sole proprietorships) are likely to be involved an as follows:

Accommodation, food services, and drinking places

Administrative and support and waste management remediation services

Agriculture, forestry, hunting, and fishing

Arts, entertainment, and recreation

Construction

Educational services

Health care and social assistance

Information

Manufacturing

Mining

Professional, scientific, and technical services

Real estate and rental and leasing

Religious, grant making, civic, professional, and similar organizations

Retail trade

Transportation and warehousing

Utilities

Wholesale trade

REQUISITES FOR SUCCESS

Success does not come easily for small business enterprises. To achieve success, authorities have recommended a number of characteristics and activities.

Successful sole proprietors should be strong physically and emotionally. It is very important that they be in good health. Attitudes of business owners are critical; they should possess a positive outlook and enthusiasm. They should be receptive to advice. They need to work very hard, particularly during the first several years.

Sole proprietors should possess considerable business experience, especially in the product or service lines offered by their business. Having an appropriate and sufficient education is very valuable. Other capabilities could be added, such as getting along with different kinds of people, having the ability to plan and organize, knowing how to arrive at and carry out decisions, and being a self-starter.

It is often recommended that sole proprietors select a type of business in which they have both skills and interest. The geographic location should be investigated thoroughly regarding its growth potential. And it may be important for a sole proprietor to consider having a partner.

In setting up a business, a new sole proprietor should do the following:

- Learn as much as possible about the product or service being offered for sale
- Make sure there is enough capital available to meet necessary equipment and building needs as well as to pay for the first year's operating expenses
- Determine the amount to be invested and find the sources of any necessary loans
- Secure the assistance of an accountant, attorney, insurance agent, and banker
- Become familiar with licenses required, zoning laws, and other regulations
- Determine the most desirable types of employees; take steps to locate them and interest them in applying; and learn how to handle all withholdings
- Learn the fundamentals of advertising and, if appropriate, store layout
- Make sure that the appropriate forms of accounting and record keeping are established, and see that balance sheets and income statements are prepared
- Learn all aspects of marketing, including the principles of determining market share

In addition, the new sole proprietor should write a thorough business plan. The Small Business Administration provides the following outline for the elements of a business plan:

I. Cover sheet

II. Statement of purpose

III. Table of contents

    A. The Business

        1. Description of business
        2. Marketing
        3. Competition
        4. Operating procedures
        5. Personnel
        6. Business insurance
        7. Financial data

    B. Financial data

        1. Loan applications
        2. Capital equipment and supply list
        3. Balance sheet
        4. Break-even analysis
        5. Pro-forma income projections (profit and loss statements)
            - Three-year summary
            - Detail by month, first year
            - Detail by quarters, second and third years
            - Assumptions upon which projections were based

6. Pro-forma cash flow

C. Supporting documents

- Tax returns of principals for last three years
- Personal financial statement
- Copy of franchise contract and all supporting documents if appropriate

D. Copy of proposed lease or purchase agreement for building space

- Copy of licenses and other legal documents
- Copy of resumes of all principals
- Copies of letters of intent from suppliers, and so forth

SEEKING ADVICE

Sole proprietors find it very helpful to consult with other sole proprietors who successfully operate a business. Many also seek the advice of the Small Business Administration (SBA), an independent government agency.

Organized by Congress in 1953, the SBA now has offices in nearly every major city in the United States. Its toll-free telephone number is 1-800-8-ASK-SBA. Among many other services, SBA sponsors the Service Corps of Retired Executives (SCORE), Business Information Centers (BICS), and Small Business Development Centers (SBDC).

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G. W. MAXWELL

SPEAKING SKILLS IN BUSINESS

Studies show that Americans' number-one fear is public speaking. Actors, television personalities, and public speakers all feel it. And so do salespeople, community leaders, and managers who are called on to make seemingly routine presentations.

Experienced speakers, though, know how to combat stage fright. Through careful planning, proper training, and conscious relaxation exercises, these speakers have learned how to channel fear into control and confidence. All people have the actual skills needed for good presentations; using these skills in front of an audience is the area in which training is needed. Good communication and successful speaking skills can be learned.

In defining a presentation, we begin with one end of the spectrum, something that is loosely called a speech. Most speeches have very little impact because they don't ask the speaker to do anything, whereas the very definition of the word *present* is "to bring, to give a gift to." This implies that a giver (a presenter) is tuned in to what the recipient (the audience) wants. What response do we get when we give someone a gift of something he or she really wants? What response do we get when we give someone a gift that he or she really doesn't like? The difference between these two is the difference between sharing a meaningful message and delivering a speech. Audiences dislike being talked to; they eagerly await speakers who drive home a point or idea that they can readily use in their personal or professional lives.

When imparting information, two things are happening simultaneously:

1. The presenter is making a commitment to the audience. The presenter is working to prove a point that will win the support of the audience or that will generate action.
2. The audience is making a judgment on the presenter, asking such questions as, "Do I really trust this person?" "Does this information make any sense?" "Are the facts presented accurate?"

A person who has accepted an invitation to speak should answer three questions before beginning to think about what to say and how to say it:

1. Who is the audience?
2. What does the audience want to know?
3. What is the best way to provide the audience with the information they want?

Most presentations are given for one of five reasons: to entertain, inform, inspire, convince, or persuade. Once the purpose is determined, a talk should be organized around three main parts:

1. *Introduction*: This "hooks" the audience, entices people to listen, and previews what's to come. Effective introductory devices include questions, dramatic or humorous statements, jokes, anecdotes, and personal experiences.
2. *Body*: This is the subject—the meat of the speech. It should relate the who, what, when, where, why, and how of the subject. To keep the talk simple and easy to understand, the speaker should stick to three—no more than four—main points, relying on facts, figures, illustrations, specific examples, and comparisons to support these main points.
3. *Conclusion*: This final section should highlight key points that the audience should remember. It should also make people feel they've gained something by listening. The audience might be challenged to act or react to the message within a specific time frame.

The content of the message should be structured in an orderly and logical manner. This makes it easier for people to follow, digest, and retain the information. If the audience has difficulty following the speaker's train of thought, the message won't get or keep their attention.

The skeletal structure of any presentation should be:

INTRODUCTION
Opener
Objective
Preview
BODY
Key Point 1
Supporting material
Transition statement
Key Point 2
Supporting material
Transition statement
Key Point 3
Supporting material
Transition statement
CLOSING
Summary
To Do

Formulating an achievable and clearly stated objective is crucial. It provides the whole focus for preparation and acts as a guide in determining what to include in the body of the message.

Stating the objective at the beginning of the presentation is equally important. Doing so lets the audience know what to expect. It prepares them for what they are about to hear; therefore, it should always be stated in conversational terms. It might begin this way: "Today we'll explore." or "I'll help you understand."

With the foundation (objective) in place, one can proceed to outline the body of the presentation. Key points are those that "unlock the door" to the subject and let the audience in on the most important content areas of the message.

It is said that every great message contains at least one key point but not more than three. The rule of three forces the speaker to think through the material and distill the most significant points. Having three or fewer points keeps it simple for listeners. Usually information is remembered in groups of threes, fours, or sevens. Telephone numbers, for example, are spoken first with a set of three numbers and then with a second set of four: 123-4567. Elementary school teachers never present material in groups of more than seven items. The way we store and recall information represents the brain's effort to organize and combine data, making it easier to remember.

This same principle applies to the body of a presentation. Simplifying it provides the audience with a message that they will be better able to assimilate and retain.

Supporting material for each key point can be obtained by using:

- Examples
- Stories
- Quotations
- Findings
- Comparisons

Since supporting material accounts for most of the content of a presentation, it generally takes the most time to identify, collect, and develop. Again, though, the rule of three should be applied. Significant points will get lost in the maze of rambling information if too much supporting material is presented. On the other hand, a presentation will not be convincing if too little supporting material to substantiate key points is included.

A transition statement acts as a minisummary or minipreview within the body of the presentation. It announces the end of one point and introduces the next. Transitions help listeners stay with the speaker, making the message easier to follow and remember. Without transitions, a speaker could be halfway into the next point while some of the listeners are still trying to figure out what this has to do with the previous point. A sample transition statement might be: "Now that we have studied . . . ," or "Let's take a look at . . ."

People are most readily persuaded by what they heard frequently and recently; therefore, a summary should include a capsule of the key points in brief sentence form. This review drives the message home to the listener.

Most trainers apply the formula T × 3 (tell them 3 times) when delivering a message:

Preview: Tell them what you're going to tell them.

Body: Tell them.

Summary: Tell them what you told them.

The last point to impress on an audience is how they can use the information presented to bring about meaningful change in their lives. The "To Do" of a message can be accomplished by using statements such as: "I challenge you to . . ." or "I encourage you to . . ."

Memorizing a presentation is a bad idea because stumbling or forgetting one word might cause the whole speech to fall apart. Memorized words also tend to sound cold and lifeless instead of warm and genuine. Reading a speech isn't a good option either, because doing so prevents having eye contact with the audience. Instead, a speaker should write the main points on note cards and rehearse the speech at least five times, striving for spontaneity, variety, and naturalness in delivery.

To assure a successful presentation, follow these suggestions:

1. Practice mental imagery. Imagine yourself triumphantly succeeding. Tell yourself, over and over again, that you have something important to share and that you'll do a great job sharing it.
2. Rehearse privately in front of a mirror and on tape. Critique the pace and tempo of your presentation, as well as your enunciation, articulation, and pronunciation of words. Ask a trusted friend to critique your delivery.
3. Type your talk in large, bold type and number all pages/cards of your presentation. If you drop them, visible numbers will help you put them back together again in the correct order.
4. Conduct extra research. Conducting detailed research on your topic helps you gain a tremendous feeling of mastery and confidence.
5. Dress comfortably, but in good taste, and tuck away a lucky symbol on yourself.

6. Bring along some handouts. Cartoons, objects, or memorabilia that can be passed around the room are very effective "interest grabbers." They're especially useful when you must pause to collect your thoughts or calm your nerves.
7. Talk to someone. Before your talk begins, talk to a friend in your audience. Or talk to several. The more people you have a chance to meet before the talk begins. the more easily you'll be able to treat your audience as a group of friends.
8. Introduce yourself. Talk a bit about your background. Let your audience know something about your interests. Even frightened speakers have the ability to introduce themselves with style.
9. Speak deeply. Let your comments flow from deep within your body. Your voice will sound more forceful as a result.
10. Position yourself firmly at the lectern or table. Rest your hands firmly but comfortably at the edge of the lectern or table. As your hands gently grasp the lectern. you'll boost your sense of command and confidence.
11. Remember that physical action often softens fear. The more you're able to move your body or your major muscle groups, the more likely you'll induce a sense of calm.
12. Modulate your voice. Enunciate carefully, pause when appropriate, and accent important points with a change in volume.
13. State your case. Good presentations are forceful presentations. Don't hesitate to express your viewpoint firmly and don't hesitate to offer provocative ideas to the audience. The more you're able to express strongly held views, the more you'll feel in control of the presentation.
14. Enjoy yourself. You need not be a polished celebrity to deliver a quality talk. Enjoy the experience. To relax yourself and your audience, don't forget to smile!

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JAN HARGRAVE

SPECIAL EVENT PRICING

(SEE: *Pricing*)

SPECIALTY GOODS

(SEE: *Shopping*)

SPREADSHEETS

Spreadsheet software is one of the most commonly used technologies for collecting, computing, and displaying data. Spreadsheets were developed as a way of organizing numeric data, by using an electronic table of rows and columns, and of creating business models, graphs and charts, and reports for financial, statistical, or other data.

SPREADSHEET PACKAGES

Spreadsheet packages are available for mainframes, minicomputers, and personal computers. Versions are available for various operating systems, including DOS, Windows (various versions), Macintosh, Unix, Java, Linux, and VMS. Spreadsheet capabilities are included in financial management packages as well as in integrated software packages. Dozens of spreadsheet software packages are available to users. The best-known packages are Microsoft Excel, Lotus 1-2-3, and Corel's Quattro Pro. These three packages are included as parts of integrated packages or suites from Microsoft Corporation, Lotus Development Corporation (owned by IBM Corporation), and Corel Corporation. In addition, dozens of other spreadsheet packages are available, many as "shareware," which offers a user an opportunity to try the product for a limited period and then pay a fee for permission to use the package beyond the evaluation period. Various spreadsheets are listed on the Internet by their developers, either as shareware or for purchase, and some are available for downloading.

SPREADSHEET APPLICATIONS

A spreadsheet is a table representing information in a worksheet form. It can be visualized as a large sheet of paper with rows and columns, and is based on the worksheets used by accountants for manual computations. A spreadsheet can range from a small, simple text table to a large document that can carry out complex computations and statistical analysis of thousands of data entries (Shelly et al., 1998). Simple spreadsheets can be displayed on-screen; more complex spreadsheets extend into vast numbers of cells and can be partially displayed on screen. The power of a spreadsheet is in its ability to store formulas and display their results. A recalculation feature in spreadsheets allows a user to enter new data into the spreadsheet, which can affect other sections of the spreadsheet, and see the results of new calculations. This "what if" feature of spreadsheets is a valuable tool for users.

FORMAT OF A SPREADSHEET

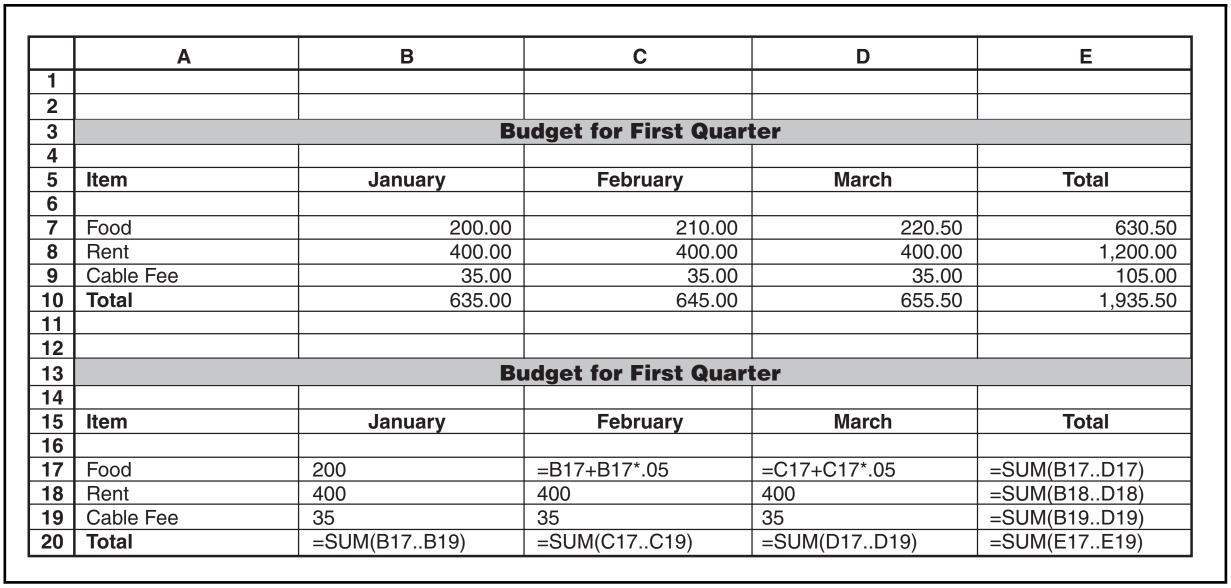
Spreadsheet software packages organize numeric data into table format, vertically in columns and horizontally in rows. Three types of data may be entered into a spreadsheet or worksheet: (1) values or numbers, (2) names or labels, and (3) formulas for calculation. Values may be used for basic arithmetic operations: addition, subtraction, multiplication, or division. Labels identify the information in the worksheet and help to organize it. Formulas perform calculations on data and display and store the resulting values. A cell, the intersection of a row and a column, can contain a label. a value, or a formula for performing calculations.

Only a small part of a spreadsheet is displayed on the screen at one time. Spreadsheets can contain millions of cells in each spreadsheet, and a spreadsheet file can include multiple spreadsheets. For example, the Lotus 1-2-3 (*Lotus 1-2-3 Millennium*, 1999) and Microsoft Excel (*Getting Results with Microsoft Office 97*, 1998) spreadsheets have 256 columns and 65,536 rows. Each spreadsheet thus can contain millions of cells of information. A spreadsheet file also may include multiple worksheets. Spreadsheets are very powerful, extensive electronic worksheets.

A spreadsheet handles such simple functions as adding, subtracting, multiplying and dividing. Arithmetic operators are used to represent the functions: addition (+), subtraction (−), multiplication (×), and division (÷). For example, an entry into cell D3 of " + B3 + C3" would instruct the spreadsheet to sum the contents of cell B3 and C3 and store the sum in cell D3. A symbol at the beginning of a formula identifies the entry as a formula instead of a label. In the example = B3 + C3, the equals sign identifies the entry as a formula.

A simple spreadsheet can be enhanced with tools provided in the spreadsheet. Font styles (e.g., boldface), type sizes, and typefaces can be changed, color can be added to the background of cells or labels, and graphs can be used to illustrate data shown in the spreadsheet.

A spreadsheet is initially set up by default with a given column width, row height, and format for entries. If labels are longer than the column width allowed, the spreadsheet does not "lose" the extra characters; instead they are not displayed if the cell to their right has an entry. The user may change the column width and row height to enhance the appearance of the entries. Values are stored by the spreadsheet in their simplest form initially; an entry of $1050.00, for example, will be stored as 1050. The user then has tools within the spreadsheet for formatting those entries. Numeric data may be formatted as dollars and cents, with commas separating hundreds and thousands, in various formats for different



	A	B	C	D	E
1					
2					
3	**Budget for First Quarter**				
4					
5	**Item**	**January**	**February**	**March**	**Total**
6					
7	Food	200.00	210.00	220.50	630.50
8	Rent	400.00	400.00	400.00	1,200.00
9	Cable Fee	35.00	35.00	35.00	105.00
10	**Total**	635.00	645.00	655.50	1,935.50
11					
12					
13	**Budget for First Quarter**				
14					
15	**Item**	**January**	**February**	**March**	**Total**
16					
17	Food	200	=B17+B17*.05	=C17+C17*.05	=SUM(B17..D17)
18	Rent	400	400	400	=SUM(B18..D18)
19	Cable Fee	35	35	35	=SUM(B19..D19)
20	**Total**	=SUM(B17..B19)	=SUM(C17..C19)	=SUM(D17..D19)	=SUM(E17..E19)

Figure 1

countries, with a given number of decimal points, in exponential form, or in other formats. When a formula is entered, the cell displays the result of computations. However, the formula itself is retained. To display the formula itself, not its results, in a cell, a user can choose a format for "text." A formula that is entered as + C3 + D3 − E3, for example, might show a result of 25. If the cell is formatted to the "text" format, the formula will show instead of the computed answer.

A set of data can be described to the spreadsheet by specifying the beginning cell, in the upper-left corner of the data, and the ending cell, in the lower-right corner of the data. For example, to identify a rectangle that begins with cell A1 and extends down to cell D3, the address of the range would be A1 . . . D3. Spreadsheets identify the range with a symbol that means "through." In the example A1 . . . D3, the format used by many spreadsheets, the range would be interpreted as "Cell A1 through Cell D3."

An example of a spreadsheet is shown in Figure 1. Rows 1 through 10 show a spreadsheet; rows 11 through 20 are a duplicate of that spreadsheet, with the text of formulas shown in rows 17 through 20. In row 3, BUDGET FOR FIRST QUARTER, the heading for the entire worksheet, is an example of a label. The column headings and items in column A are labels; columns B through D are values, which are summed in column E with formulas. The formulas in Column E sum the numbers for January, February, and March for each item. Across the bottom of the spreadsheet, the "Total" line is also a result of using formulas to sum the columns.

The heading, "BUDGET FOR FIRST QUARTER," and the column headings show how font changes can enhance the readability and attractiveness of a spreadsheet. Cells can be formatted to boldface, underline, or italicize entries; background color or shading can be added; and typefaces and sizes can be changed. In the sample worksheet, the main and column headings have been boldfaced for emphasis.

Values can be formatted. In the sample spreadsheet, the values in rows 7 through 10 have been formatted to two decimal places with commas. A user can select the desired formatting from a menu.

Spreadsheet data can also be selected for charts, or visual representations of those data. Cells are selected by highlighting them. Spreadsheet packages may chart one set of data in the

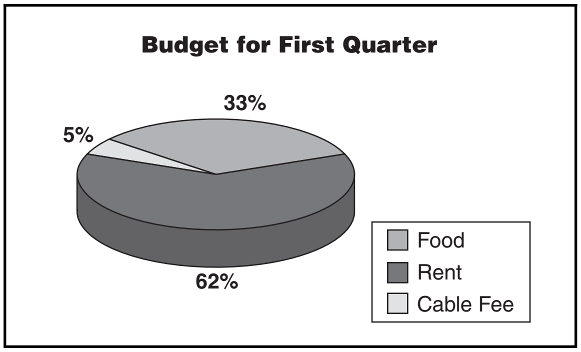


Figure 2

form of a pie chart, or two or more sets of data in bar charts (with vertical bars, horizontal bars, or stacked bars), line charts, area charts, or mixed charts, which combine bars and lines to represent data. They can be displayed in two-dimensional or three-dimensional form. Charts become part of the spreadsheet and may be stored on the same page as the spreadsheet or as a separate page or worksheet. A sample chart for the budget spreadsheet described above is shown in Figure 2.

The chart depicts the total figures from cells E7 through E9 in the spreadsheet, categorized by cells A7 through A9. A pie chart is only one of several choices of charts that could be used. The software provides steps for adding a heading to the chart and a legend, or listing of the labels for the charted data.

MACROS IN SPREADSHEETS

A macro is a series of commands that automate a spreadsheet task, streamline complex procedures, or create applications. For example, a macro to insert the user's name, company name, and date into worksheets can be stored and used repeatedly. A user can enter a macro into a worksheet file or into a macro library, a worksheet file that contains macros. To create a macro, the user enters the commands needed to carry out a task, gives the macro a name, and saves it in a file. To use the macro, the user selects it by name from a menu and asks the spreadsheet to run it. The steps are carried out automatically. For complex tasks that are used often, a macro makes it easier for a user to avoid mistakes in the task, since the steps are stored as a file and recalled as needed.

SPREADSHEETS IN INTEGRATED PACKAGES

Integrated software packages, which contain several kinds of software within one, usually include a spreadsheet. Information can be copied from a spreadsheet into other software packages, such as a word-processing package. Spreadsheets can be linked to files in other software in the package so that changes made in the spreadsheet are automatically reflected in the linked document. For example, a table from a spreadsheet could be linked to a word-processing document so that any changes in cell entries in the spreadsheet change the contents of the table in the word-processing document. This feature makes the spreadsheet a very powerful tool for analysis and reporting of data in various formats.

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BETTY J. BROWN

STAGGERS RAIL AND MOTOR CARRIER ACTS OF 1980

Prior to the Staggers Act, the railroad industry was suffering: Many railroads had financial problems, and the conditions of rail facilities had deteriorated. Public demand for a better rail system caused Congress to take action and pass the Staggers Act, which has resulted in rail profits and improved service. The Staggers Rail Act of 1980 marked the most significant change in rail policy since the Interstate Commerce Act of 1887. It eliminated most common-carrier obligations, granted railroads greatly increased commercial freedom, and generally reversed previous policy. The act was an effort to deregulate the nation's railroads. In deregulating the nation's railroads, Congress intended (1) to return the nation's railroads to financial health, (2) to replace government regulation wherever possible with the powers of competition, and (3) to continue to provide captive shippers with protection from "unreasonable" rates. Brennan (1997) reports that since the passage of the Staggers Act, the U.S. freight railroads have been virtually rebuilt. He indicated that economic deregulation has freed up resources such that investor-owned railroads can successfully focus on improved safety and reliability. Thus, the free-market environment has allowed a once-dying industry to recapitalize and make a future for itself.

The regulating agency for the railroads was the Interstate Commerce Commission (ICC). The intent of the Staggers Act was to replace federal regulation with market competition. The ICC was charged by Congress in the Staggers Act to promote rail-to-rail competition. Unfortunately, the ICC did not fully succeed in its charge. The ICC's successor, the Surface Transportation Board (STB) of the U.S. Department of Transportation, was created by Congress in 1995. The STB is responsible for railroad mergers, consolidations, and trackage rights. Railroads are still regulated in terms of entry, exit, and mergers. Railroads largely control their pricing. Changes must be approved by the STB and, if they are, the railroad is not subject to antitrust regulations (Poole, 1997).

The railroad industry is an example of an oligopoly, which is a form of industry structure characterized by a few firms that dominate the market, each large enough to influence market price (Brennan, 1997). In the United States there are nine recognized Class I railroads that form an oligopoly: Burlington, Northern Sante Fe Railway, Conrail, Canadian Pacific Railway, CSX Transportation, Illinois Central, Kansas City Southern Lines, Norfolk Southern, and Union Pacific. Class I rail companies account for 73 percent of the rail mileage operated, 89 percent of freight railroad employees, and 91 percent of freight railroad revenue (Brennan, 1997).

There is not complete agreement, by most measures, that railroad deregulation under the Staggers Act has been a success. The act has lowered rail rates on most commodities, saved shippers money, provided more timely service, and eliminated the necessity for large taxpayer bailouts. Brennan (1997) also agrees that rail profits increased and service improved as a result of the passage of the act. He maintains that the effects of rail deregulation include improvements in service quality and profits, less pressure on rates, and efficiency improvements. The railroad industry has transformed itself from a money-losing business into a much more concentrated and profitable one.

Pete Carpenter, president of CSX Transportation (CSX, 1996), hailed the success of railroads in the sixteen years since the passage deregulation legislation. He cautioned, however, that a challenge to the industry and government today is the need for a passenger commuter rail system that does not denigrate freight services. He indicated that the railroad industry has a good future and is well-poised to take advantage of current market demands.

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Phyllis Bunn

STANDARD AND POOR'S INDEX

(SEE: *Stock and Bond Indexes*)

STANDARD-BASED WORK PERFORMANCE

New forces in the marketplace—including new organizational values, work cultures, and business goals—have reshaped the structures, strategies, and human resource process of most organizations. One change brought about by these marketplace forces is the development of a new set of work standards. These work standards deliver clear and specific goals to employees, so that they understand exactly what is expected of them in order to earn fair and equitable pay for their job performance. These standards also provide employers with a reliable system of performance appraisal. These new compensation processes are referred to as *standard-based work performance.*

Standard-based work performance has also been termed *pay-for-performance*, *at-risk compensation*, and *merit pay*. It became fashionable in the 1990s, when a large percentage of U.S. organizations began using some form of standard-based work performance. In its purest forms, standard-based work performance also includes *selling on commission* and *piecework*, concepts that have been around much longer.

Standard-based pay is a form of compensation known as *incentive pay*. Under a standard-based pay plan, pay increases are granted to individuals on the basis of their rated performance in a previous time period. Pay increases are granted with the hope of motivating future performance. One philosophy views standard-based work performance compensation as a way to change behavior, while a second philosophy views it as a reward mechanism.

Organizations have moved toward this new form of evaluation related to compensation with the intention of getting the best possible performance from their employees. The main objective of standard-based work performance is to tie pay to performance. Other objectives include maintaining equitable relationships among jobs, attracting job applicants, and keeping payroll costs competitive.

STANDARD-BASED WORK PERFORMANCE PLAN REQUIREMENTS

A key to making standard-based work performance work for an organization is to have the appraisal system backed by a clear sense of corporate purpose. Therefore implementing a new compensation program or appraisal system requires a great deal of planning when deciding what action management wants to elicit from employees. The organizational culture and management styles will determine how to implement changes in compensation. Higher priority should be given to corporate strategy than to industry standards when developing pay plans. If an organization wants to encourage technological change, then linking pay to these measures conveys to employees that the goals of the organization have changed and rewards will be based on reaching the new goals.

Another issue to consider regarding the organizational culture is whether to promote teamwork or individual competition. The goals of each are very different and must be clearly stated. If compensation rewards are to be based on the effectiveness of the team's work rather than on individual performance, the organization needs to train employees to function as members of a team.

An organization must also decide whether performance-based compensation is practiced at executive, middle-management, or all employee levels. This decision is very important, because it will determine the type of training that will be required. All managers using a new appraisal system must have a thorough explanation of the plan and the phasing in process in order to avoid resistance from those employees being evaluated.

Standard-based performance is based on the assumption that performance can be measured. This is not an easy task; it is difficult to objectively measure job performance in many positions. The availability of accurate performance criteria and the ability to accumulate such information will determine the success of linking pay to performance. The key is designing the plan.

Successful performance-based pay plans have three common qualities. They must be clearly communicated to employees, they must include an annual review of the plan, and they need appropriately ambitious goals. The supervisor and employee should jointly develop specific plans on how to reach the goal and how performance in attaining the goal will be measured. This is a time-consuming but necessary task.

STANDARD-BASED WORK PERFORMANCE THEORIES

There are four psychological and three economic theories that address how work standards relate to work performance. The psychological expectancy theory suggests that standard-based work performance is likely to motivate increased performance when performance is necessary to attain an increase in pay. The theory states that in order for the performance-based pay plan to be successful, performance must be accurately measured, pay must be a valued outcome, pay must be made contingent on performance, and the employee must have the opportunity to have an impact on performance.

The psychological reinforcement theory suggests that standard-based performance should motivate increased performance when the outcomes of favorable performance are clearly defined to the employee, the rewards are contingent on a desired performance, and compensation is increased in a timely manner when performance improves.

The psychological equity theory suggests that standard-based pay will increase employee motivation when it leads to perceptions of equity by the employee. It requires an organization to shift from valuing seniority to valuing performance inputs and basing compensation on performance rather than on years of employment.

The psychological goal-setting theory suggests that standard-based performance increases motivation when it is the result of setting more difficult goals and demonstrating a commitment to reach these goals. Goals should be weighted by difficulty, and compensation rewards should be given based on degree of difficulty of the goal achieved.

Marginal productivity theory, an economic theory, suggests that an employee is paid on the basis of performance in order to minimize labor costs and keep the company competitive in the labor market. Although research indicates that pay and performance are not always directly related, reducing fixed compensation costs is a goal toward which most employers strive.

Implicit contract theory, another economic theory, holds that standard-based performance is an implicit contract in which performance is measured by the employer rather than assumed by the employee. Under this theory, an employee can then be paid based on actual contributions that minimize labor costs.

Efficiency wage theory, also an economic theory, suggests that standard-based performance pay should be set high to obligate employees to fully perform rather than shirk duties. When employers pay a premium wage, employees realize that they will encounter personal financial hardship if they lose their jobs. Better performance, reduced turnover, and decreased need to train new employees may offset the initial investment in a premium wage.

Research indicates that when an organization plans on implementing a standard-based performance plan, it must view standards in relation to previous employee performance. It is important for management to be aware of and recognize contributions an employee has made to the organization.

It is equally important to examine performance in terms of measurable outcomes or perceptions of work-related performance. An employee must know what will determine the awarding of increased pay—the manner in which work performed is being measured, the work itself, or the factor to be measured?

There are many examples of work standards in business today. Compensation experts say the key is to design a plan that enforces the goals of the organization and to regularly evaluate the effectiveness of the plan.

The Ford Motor Company, which has a standard-based performance pay plan, measures quality using warranty figures expressed as repairs per thousand vehicles and both short-term and long-term customer satisfaction. The company recognizes there is still a lot more to be done, and it continually challenges itself.

In the late 1990s Sun Microsystems started tracking quality of customer loyalty and customer quality. The results are updated regularly on the company's intranet. Employees understand that the corporation's overall success will affect their compensation. The employees know that their annual bonus is based on a reduction in customer dissatisfiers (late delivery, software defects, poor product quality, etc.) and an increase in customer loyalty.

The original idea for the Sun Microsystems plan resulted from quality benchmarking strategy meetings of chief executive officers of Sun Microsystems, Federal Express, Motorola, and Xerox. The successful standard-based work performance plans of these companies have three main qualities in common: clear communication with employees, annual plan reviews, and appropriately ambitious goals.

Employees must have a clear idea of the organization's specific goals, how their jobs fit into the big picture, and what their rewards will be for doing their part in achieving the goals. The degree to which an employee is accountable for results of the job is the amount of control or opportunity available to the employee. Standard-based performance focuses on the importance of providing accountability for work performance. Goals and compensation should be assessed, reviewed, and updated as part of annual reviews.

Three components in evaluating accountability are the freedom to act, impact, and magnitude. Freedom to act describes the degree to which personal or procedural control exists. Impact is the effect of specific jobs on the objectives of the company. Magnitude is the size of the unit or function affected by the job as related to the big picture of the organization. Magnitude and impact must fit together; neither can be final or meaningful without being related to the other. Accountability is a measurement of the effect of the job on end results.

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JAMES E. MILES

STANDARD COSTING

Costing is the identification of the value of resources used for specified goods or services. One purpose of costing is to determine what resources were required to provide the goods or services. A second purpose is to provide a guide to resource usage through the use of budgets that clearly identify managers' responsibility. It is the second purpose that is considered in the following discussion.

METHODS OF COSTING IDENTIFIED IN BUDGETS

Budget figures may be based on *actual, budgeted,* or *standard costs.* These categories are not mutually exclusive. For example, while a standard cost is a budgeted cost, a budgeted cost is not always a standard cost. An actual cost may or may not be the budgeted cost.

Budgets based on actual costs reflect expenditures anticipated for the level of resource use. Budgeted costs are generally described as the best estimate about what should be allowed for forthcoming activity. To establish budgeted costs, actual costs of the previous year, information from supervisors about where resources might be more efficiently used, and subjective judgments about the need to conserve resources are often considered. Standard costs are objectively determined costs that reflect the effective and efficient use of resources.

STANDARD COSTS

Standard costs are costs established through identifying an objective relationship between specified inputs and expected outputs. Therefore, standard costs are generally related to carefully analyzed phenomena both in the laboratory and in the workplace. For example, in the factory of a company that produces high-quality cotton shirts for men, standard costs are used for materials and labor. To establish the standard usage of fabric for a single shirt, the cutting possibilities are analyzed in the laboratory, where attention can be given to how much fabric must be used if the shirt is cut as specified. At this point, the focus is not on how many minutes are needed by an experienced cutter to meticulously cut the fabric so as to minimize usage. Rather, there is experimentation in the ways of cutting and the time required for each way considered. Experimentation continues until the most economical combination of fabric usage and cutting time is established. That combination is likely to be modified to take account of less than perfect conditions in the workplace.

The goal of the personnel responsible for setting standard costs is to provide realistic standards. Workers are to be motivated to achieve output with specified standards. If standards are unreasonable—either too tight or too loose—the level of discipline expected is seriously undermined. If standards cannot be achieved with reasonable effort, workers may become discouraged and become so indifferent that their work quality deteriorates significantly. If standards are too easy to achieve, there may be an unnecessary waste of resources.

Standard costing has applications to any type of business activity. The process described briefly above can be applied, for example, for processing documents in an insurance company or in a financial services business.

MONITORING STANDARD COSTS

Standard costs are monitored as a basis for determining the extent to which expectations are realized. Typically, companies plan for reporting weekly or monthly. A commonly used method is to determine the difference between what the budget allowed and what was actually spent for the output achieved. This difference is called a *variance.* For example, assume that in the factory producing shirts, 12,000 shirts, requiring 30,500 yards of fabric, were cut in a month. The standard usage was 2.5 yards per shirt, for a total of 30,000 yards. The excess usage would indicate an unfavorable usage variance of 500 yards. Variances are generally presented as units × standard cost for the fabric. Therefore, if the standard cost for the fabric was $4.75, the variance would be reported as 500 units × $4.75 = $2,375. A policy must be established about the level of variance that is to be investigated. Some variation from expectations is allowed, and if standards are realistic, much of the variation is eliminated over the period of a year—that is, insignificant favorable variances cancel out insignificant unfavorable variances.

Variances that are determined to be significant are investigated. Careful observation and discussion with those workers involved in producing the output that led to a variance will aid in assessing what circumstances appeared to be the explanation. Wise consideration of what should be done in the future can lead to the elimination of significant variances.

In an objective review of observations and discussions, questions may arise as to the appropriateness of the standards established. There may need to be a reconsideration of the earlier analyses that were the basis for the standards used in the budget followed by operational personnel.

For an organization to gain optimum value from standard costing, all employees involved must understand the motivation for such costing and understand the assessment that will be made. Imposing standard costs without communicating in an honest, candid manner will undermine much of the perceived value of such costing.

RELATED DEVELOPMENTS

Developments such as continuous improvement, target costs, and push-through production have changed to some extent the usefulness of traditional standard costing. However, each of these developments has been implemented in some organizations with aspects of standard costing included. For example, continuous improvement, in a general way, introduces a review of what resources were used this year to identify where fewer resources might be used in the forthcoming year. The task of identifying fewer resources is a standard-setting task. Target costs are calculated by starting with the cost consumers are believed to be willing to pay for the completed good or service, then analyzing the cost in a backward fashion. This process can also involve the basic concept of standard costing. Push-through production, in which groups have responsibility for a number of processes, can profit from standard costing as a basis for monitoring resource usage.

One major barrier to implementation of standard costing in the twenty-first century is the speed of change in how tasks are performed and in the alternative materials available. Frequent change leads to insufficient time for the careful analyses of inputs and outputs. Decisions are based solely on judgments and observations. Such decisions may be close to those established systematically—however, they may not be.

The usefulness of the information provided from analysis of variances related to standard costs has been challenged. Attention to quality, some critics say, is inadequate in this traditional analysis. Others have proposed that quality considerations can be incorporated in standard costing assessment (see Cheatham and Cheatham, 1996).

(SEE ALSO: *Costs*)

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BERNARD H. NEWMAN
MARY ELLEN OLIVERIO

STANDARD INDUSTRIAL CLASSIFICATION SYSTEM (SIC CODES)

(SEE: *North American Industry Classification System (NAICS)*)

STANDARD METROPOLITAN STATISTICAL AREAS

Over the last half-century, there has been a population movement from rural to urban areas. Because many urban areas cross political boundaries, the Office of Management and Budget has defined three metropolitan statistical areas. A Metropolitan Statistical Area (MSA) is a city of at least fifty thousand people with a surrounding rural population. A Primary Metropolitan Statistical Area (PMSA) is an area of more than a million people with internal and social links. If two or more PMSAs are geographically linked, they are referred to as Consolidated Metropolitan Statistical Areas (CMSA). There are twenty CMSAs in the United States, with New York, northern New Jersey, and Long Island being the largest. This trend toward urbanization has implications for marketing.

In highly industrialized countries, the growth of population has slowed, forcing marketers to adopt segment or target marketing. Segment marketing requires the marketer to break the total market into smaller segments by using certain variables: demographic, geographic, psychographic, and behavioristic.

Demographic variables are objective population characteristics that are easily collected and readily available in the United States. The information marketing people are interested in includes the following: age, gender, race, income, education, occupation, and family size. Demographic variables and geographic variables (such as size, region, and climate) are also important in selecting a market segment.

There are a number of examples of how marketers use some of these demographic variables. In the United States, age is an important variable for market segmentation. For example, since teenagers control a certain spending, certain products are marketed directly to them. The same is true of senior citizens, who constitute a growing segment of the American population.

Gender is another demographic variable. In industrialized countries where people are living longer, women generally outnumber men. The needs and buying habits of women must be factored into any marketing program.

Urbanization and population mobility are two other factors that are considered in marketing programs. Because it is easier to market goods and services in highly urbanized areas, marketing programs are more effective there. Mobility provides opportunities for national advertising for regional brands. For example, some products sold in the northeastern United States have done well in south Florida because many Northeasterners have migrated to Florida

Other variables that affect market segmentation are occupation and education. In 1960 approximately 30 percent of women were working outside the home; today that number has almost doubled. Marketing implications include work clothes for women, more eating out, and easily prepared convenience food. The list of demographic and geographic variables and their marketing implications can go on and on.

However, there are limitations to the use of population data. They may be dated because of the time lag from collecting it to its becoming available; also, census data is collected only every ten years. Some data (for instance, race) may be too broad and thus hide marketing opportunities; for example, the increase in the number of educated and upper-middle-class blacks would suggest a market not normally implied by using data on race. Finally, the use of demographic and geographic variables, which are easily gleaned from data on Metropolitan Statistical Areas, ignores two very important segmentation variables: psychographic and behavioristic variables.

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MARY JEAN LUSH
VAL HINTON

STATEMENTS ON MANAGEMENT ACCOUNTING

Statements on Management Accounting (SMA) are promulgated (produced, issued, and implemented) to reflect official positions of the Institute of Management Accountants (IMA), the largest and most prominent management accounting organization in the world. The IMA is an organization of accounting professionals that has a membership of more than 100,000.

HISTORY

One of the chief activities of the IMA is to conduct and sponsor research in management accounting. In 1969 the IMA (at that time operating using the name "National Association of Accountants"—name changed effective July 1, 1991, and is hereafter referred to as the "IMA") created the Management Accounting Practices (MAP) Committee to serve as its senior technical committee. This committee was, and is currently, charged with the task of promulgating statements on management accounting that reflect the views of the IMA. The MAP Committee membership includes twelve representatives appointed by the IMA president from corporate and public accounting as well as education. These representatives are widely considered to be expert authorities in accounting. Past members have included members of other prominent accounting regulatory groups such as the Financial Accounting Standards Board (FASB).

PURPOSE

The purpose of the MAP Committee in issuing SMAs is generally twofold: (1) to express the official position of the IMA on accounting and business reporting issues raised by other standard-setting groups, and (2) to provide broad guidance to IMA members and to the wider business community on management accounting concepts, policies, and practices. Regarding the first stated purpose, other standard-setting groups include those such as the Financial Accounting Standards Board, the Governmental Accounting Standards Board, the International Accounting Standards Committee, and government agencies such as the Securities and Exchange Commission. Regarding the second purpose, the work of the MAP Committee is seen as an effective method of summarizing the wide range of activities that define management accounting.

Some accountants believe that SMAs should be accorded the same considerable authority as generally accepted accounting principles (GAAP) (Schiff and Penino, 1990). As of 1999, such authority has not been granted. There is some support for this position. The American Institute of Certified Public Accountants (AICPA) Statement of Accounting Standards (SAS) No. 5 has defined these issuances as "pronouncements of bodies composed of expert accountants." Also, they are issued only after "a due process procedure, including broad distribution" and SMAs describe existing practices that are "generally accepted" (AICPA, 1982, p. 9).

The usefulness of authoritative statements to guide management accounting practice is apparent given the diversity of industries and accounting practices within industries. In addition, the business environment is becoming increasingly complex as technological advances make practices of the past obsolete. The role of external business reporting is also expanding. In 1994, the AICPA's Special Committee on Financial Reporting (sometimes referred to as the "Jenkins Committee") recommended significant changes in the current financial reporting model to include expanded coverage of both nonfinancial or operating data and more forward-looking or future-oriented data.

The recommendations of the AICPA Special Committee reflect the needs and desires of investors and other business report users to have increasing amounts of information and information of a nontraditional nature. Obtaining nonfinancial and predictive data requires access to previously nondisclosed or proprietary types of data traditionally used by management accountants within their companies. Thus the IMA, through their SMA promulgation mechanism, may be in a good position to produce suggestions in these areas of recommended increased disclosure. While investors and others strive to obtain increased amounts and different types of business information, companies with reporting responsibility are concerned with safeguarding information for which disclosure may affect their competitive position. Recommendations are needed for the control of what information should be released in many cases. This issue is one that will likely be addressed by a convergence of several professional accounting groups. If accounting organizations though SMA promulgation or other means are unable to achieve a satisfactory resolution on demands for increased disclosure, the judicial system may ultimately have to establish these boundaries.

PROCESS

In promulgating statements, the MAP committee uses a "Subcommittee on SMA Promulgation." Generally, each subcommittee member oversees the process of promulgating a particular SMA. After it is drafted, each statement is subjected to a rigorous exposure process whereby input is solicited from other members of the accounting profession in the form of two advisory panels. One panel is composed of a sample of IMA chapter presidents or other individual chapter representatives. (The IMA has more than 400 local chapters organized geographically in cities across America.) The other panel is composed of representatives nominated from other accounting or accounting-related organizations, including the American Institute of Certified Public Accountants, the Financial Executives Institute, the American Accounting Association, and the Society of Management Accountants of Canada.

Once the two advisory panels' comments have been reviewed by the subcommittee and appropriate modifications to a draft have been made, a proposed SMA is submitted to the MAP Committee for approval. The committee will then take one of three possible actions: (1) approve the draft as recommended, (2) further modify and then approve the draft, or (3) return the draft to the subcommittee to be developed further. SMAs are published only after completion of this review process and final approval requiring a two-thirds majority vote by the IMA's Management Accounting Practices Committee.

CONTENT

The SMA subcommittee is guided by a framework for management accounting that considers five broad categories: (1) objectives, (2) terminology, (3) concepts, (4) practices and techniques, and (5) management of accounting activities. All SMAs are classified and numbered based on this five-element framework. For example, SMA No. 1A is included in the objectives classification. Dates of publication are indicated parenthetically after each title.

In addition to following the five-element framework, the IMA's approach to the content of future SMAs, as with past statements, is clearly based on, and fully consistent with, the MAP Committee's definition of management accounting as follows (Institute of Management Accountants, 1981):

> *Management accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate, and control within an organization and to assure appropriate use of and accountability for its resources. Management accounting also comprises the preparation of financial reports for non-management groups such as shareholders, creditors, regulatory agencies, and tax authorities.*

The majority of issued Statements on Management Accounting are written for use by accounting practitioners. This perspective is consistent with the fact that the greatest number of statements issued to date have been in the Practices and Techniques category. This is also consistent with the stated purpose of an SMA, which is to supply an in-depth understanding of a management accounting subject that would allow a practitioner to implement the concepts and techniques. Often the application of information included in an SMA is illustrated by studies of companies who have implemented the techniques.

The content of issued Statements on Management Accounting ranges from fundamental issues, such as SMA No. 1A, "Definition of Management Accounting," to very specific accounting practice techniques, such as the (1999) SMA No. 4FF, "Implementing Target Costing." The following list comprises all Statements issued to date. [Those marked * are, as of 1999, currently being reviewed for revision.]

1. *Objectives*

    1A* "Definition of Management Accounting" (1981)

    1B* "Objectives of Management Accounting" (1982)

    1C "Standards of Ethical Conduct for Practitioners of Management Accounting and Financial Management" (1997)

    1D* "The Common Body of Knowledge of Management Accountants" (1986)

    1E* "Education for Careers in Management Accounting" (1987)

2. *Terminology*

    2A "Management Accounting Glossary" (1990)

4. *Practices and Techniques*

    4A "Cost of Capital" (1984)

4B “Allocation of Service and Administrative Costs” (1985)

4C “Definition and Measurement of Direct Labor Cost” (1985)

4D “Measuring Entity Performance” (1986)

4E “Definition and Measurement of Direct Material Cost” (1986)

4F “Allocation of Information Systems Costs” (1986)

4G “Accounting for Indirect Production Costs” (1987)

4H “Uses of the Cost of Capital” (1988)

4I “Cost Management for Freight Transportation” (1989)

4J “Accounting for Property, Plant, and Equipment” (1989)

4K “Cost Management for Warehousing” (1989)

4L “Control of Property, Plant, and Equipment” (1990)

4M “Understanding Financial Instruments” (1990)

4N “Management of Working Capital: Cash Resources” (1990)

4O “The Accounting Classification of Real Estate Occupancy Costs” (1991)

4P “Cost Management for Logistics” (1992)

4Q “Use and Control of Financial Instruments by Multinational Companies” (1992)

4R “Managing Quality Improvements” (1993)

4S “Internal Accounting and Classification of Risk Management Costs” (1993)

4T “Implementing Activity-Based Costing” (1993)

4U “Developing Comprehensive Performance Indicators” (1995)

4V “Effective Benchmarking” (1995)

4W “Implementing Corporate Environmental Strategies” (1995)

4X “Value Chain Analysis for Assessing Competitive Advantage” (1996)

4Y “Measuring the Cost of Capacity” (1996)

4Z “Tools and Techniques of Environmental Accounting for Business Decisions” (1996)

4AA “Measuring and Managing Shareholder Value Creation” (1997)

4BB “The Accounting Classification of Workpoint Costs” (1997)

4CC “Implementing Activity-Based Management: Avoiding the Pitfalls” (1998)

4DD “Tools and Techniques for Implementing Integrated Performance Management Systems” (1998)

4EE “Tools and Techniques for Implementing ABC/ABM” (1998)

4FF “Implementing Target Costing” (1999)

4GG “Tools and Techniques for Implementing Target Costing” (1998)

5. *Management of Accounting Activities*

5A “Evaluating Controllership Effectiveness” (1990)

5B “Fundamentals of Reporting Information to Managers” (1992)

5C “Managing Cross-Functional Teams” (1994)

5D “Developing Comprehensive Competitive Intelligence” (1996)

5E “Redesigning the Finance Function” (1997)

(SEE ALSO: *Institute of Management Accountants*)

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B. DOUGLAS CLINTON

STATE SOCIETIES OF CPAS

Independent professional societies for certified public accountants (CPAs) exist in each of the fifty states as well as in Washington, D.C., Puerto Rico, the Virgin Islands, and Guam. CPAs may choose to join their state's professional organization, generally known as (state's name) Society of CPAs or (state's name) Association of CPAs. These organizations consist of CPAs in public practice, in education, and in government and industry. In the larger states, the state societies are divided into chapters by geographic location. The relationships between the state societies and the national organization, the American Institute of Certified Public Accountants (AICPA), and also between the state societies and the state and national Boards of Accountancy, are also examined in this article.

The societies collect dues and are run by full time and/or part-time staff as well as a board of directors with officers elected from the membership. State societies have executive directors; these executive directors belong to an association that maintains an informative Web site: (http://www.cpasea.org). This site has profiles of each of the state societies, including information about their dues, membership, and publications.

SERVICES

State societies sponsor education programs and provide resources for their members as well as opportunities to network with other professionals. They represent the interests of the profession at the state legislative level and have an array of committees that their members can join. While some of the committees are common to most of the states, others may be unique to a state or a region.

Frequently state societies offer additional benefits to their members, such as access to insurance plans for professional liability, life, and health insurance. State society members often list "networking" as an important reason to join; frequently joint meetings/functions are held with other state professionals, such as lawyers, bankers, or educators.

EDUCATION

In many states, practicing CPAs are required to complete continuing professional education (CPE) credits to maintain their license. While licensing is the responsibility of the Board of Accountancy, state societies often offer a variety of CPE courses, usually available to both members and nonmembers. These courses can be taken through attending seminars or through self-study videos and/or workbooks.

ADVOCACY AND PROMULGATION OF PROFESSIONAL STANDARDS

State societies monitor developments in their respective state legislatures that potentially can affect their members. Legislation regarding matters such as regulating the profession, tax issues, and economic issues important to CPAs and their clients is of interest to the members. Depending on the issue, the response of the society may range from making the members aware of proposed legislation, to composing a position paper on a certain issue, to hiring lobbyists to be certain the views of the membership are heard.

COMMITTEES

Some state society committees exist to provide a forum for discussion among members with special interests, such as members in public practice, in business and industry, in government, or in education. Other committees enable members to discuss important topics such as peer reviews, changes or proposed changes in audit standards, or recent changes in tax law. Still others plan social events or fund-raising activities.

AICPA AND STATE SOCIETIES

The American Institute of Certified Public Accountants (AICPA) is a national professional society founded in 1887. It is a membership organization, as are the 54 state societies. As of 1999, AICPA membership numbered 328,000. AICPA members are licensed CPAs, with some limited specialty categories for non-CPA members. The AICPA and the state societies are unaffiliated. CPAs can join the AICPA and/or their state society. Members of state societies often serve on committees at the national level and use the services of the AICPA.

The AICPA employs a variety of professionals who serve as resources for CPAs and assist state societies with problems or initiatives. The AICPA promulgates accounting standards and is responsible for producing the uniform CPA exam. The exam is currently given in May and November in each of the states. Each state's Board of Accountancy is responsible for exam results. The AICPA serves as an advocate for the profession at the national level. Laws that affect CPAs are monitored by employees of the AICPA as well as representatives from the states. The AICPA publishes the monthly *Journal of Accountancy*, a widely read periodical with articles on timely topics affecting CPAs, and maintains a large professional library. Their website (http://www.aicpa.org) contains a wealth of information about the organization as well as the profession.

The AICPA has a Code of Professional Conduct that holds members to certain ethical standards. Most state societies implement the code through a Joint Ethics Enforcement Program. Members who fail to abide by the code may have their membership terminated and their name published. A member's license, however, can only be revoked by a state Board of Accountancy.

BOARDS OF ACCOUNTANCY

Each state has a Board of Accountancy responsible for administering the uniform CPA examination within the state, licensing certified public accountants, and regulating the practice of public accountancy, generally through legislation. State regulations include the requirements for getting a CPA certificate and/or license and rules governing CPE credits—both the number of hours needed and the content areas. State Boards of Accountancy are regulatory agencies with no direct ties to the AICPA or the state societies, although they frequently cooperate on projects that benefit the profession.

The National Association of Boards of Accountancy (NASBA) exists to enhance the effectiveness of the state Boards of Accountancy. It serves as a forum for the nation's state Boards of Accountancy and includes a member from each state's Board of Accountancy. NASBA maintains an informative Web site (http://www.nasba.org).

Although the state's Board of Accountancy is independent of the state's society and the AICPA, they may form joint task forces. Some examples of cooperation include peer review and unifying the requirements for becoming a CPA. Peer review is a method for relicensing mandated by a state's Board of Accountancy. These programs are often monitored by the state society, an arrangement generally accepted by the state Board of Accountancy. Also, an attempt to unify the accountancy laws in the various states has been proposed by NASBA with the AICPA's and several state societies' backing. This effort toward a Uniform Accountancy Act would streamline the regulations for becoming and remaining a CPA in the different states.

CONCLUSION

The state societies and the AICPA are professional organizations that CPAs may join. The state Boards of Accountancy are regulatory agencies. The organizations are independent, with each having a different function. Since the topic of state societies and their relationship to the AICPA and the Boards of Accountancy is not covered in texts or reference material, the best sources of further information are the websites mentioned in this article.

(SEE ALSO: *American Institute of CPAs*; *National Association of Boards of Accountancy*)

KATHLEEN SIMONS

STOCK EXCHANGES

A stock exchange is a forum for trading in securities representing shares of firms. An exchange provides ways by which financing is raised by the sale of shares to outside investors. It provides a mechanism for the valuation of companies through the process of price discovery and a means by which such information is disseminated.

A formal definition of the term *exchange* is a critical component of law and regulation regarding securities trading markets, discussed by Domowitz (1996) and Lee (1998). In the United States, the New York Stock Exchange (NYSE) is legally an exchange, while the markets operated by the National Association of Securities Dealers (NASDAQ) and Instinet, an electronic communications network (ECN), are not. All three examples nevertheless satisfy the definition of a stock exchange given above. Given differences across countries with respect to legal definitions, a more unified approach is needed to focus the discussion.

The approach taken here is to identify important attributes and functions of institutions satisfying the basic definition in practice. Exchanges provide *trading systems* and may offer more than one. Types of trading systems are sometimes differentiated by the form of *market intermediation* provided by entities with direct access to the system. The nature of *competition* between exchanges is a defining feature, since exchanges may adopt varying market structures in order to compete in different fashions. A stock exchange is a business entity, and the form of its *governance* arrangements is important in understanding its nature and conduct.

TRADING SYSTEMS

Trading markets may be defined as systems consisting of an order routing system, an information network, and a trade execution mechanism (Stoll, 1992). A trading system is a communications technology for passing allowable messages between traders, together with a set of rules that transform traders' messages into transactions prices and allocations of quantities of stock among market participants.

The nature of allowable messages varies with the exchange's rules and technology. A typical message consists of an offer to buy, or to sell, a given number of shares at a certain price. The NYSE, for example, permits such messages, as well as orders, to buy some amount of stock at current market prices. The OptiMark system of the Pacific Stock Exchange also allows traders to submit a message indicating the strength of the traders' desire to transact an amount of stock at a particular price. Orders for the shares of a company, contingent on the completion of transactions in other companies, are possible. As technology advances, the ability of trading systems to offer more flexible messages increases.

The transformation of messages and information from the system into a price and a set of quantity allocations is governed by another set of rules. In *open outcry auctions*, bids and offers are orally exchanged by traders standing in a single physical location. The acceptance of a bid or offer by another trader generates a transaction. In *dealer systems*, such as NASDAQ, dealers accept orders by telephone or computerized routing, and transact at prices they themselves set. In *batch auctions*, such as that of the Arizona Stock Exchange, price is set by maximizing trading volume, given order submission at the time of the auction. In most computerized markets, traders submit orders to a central *limit order book*, and a mathematical algorithm determines prices and

Floor of New York Stock Exchange.

quantities. Examples include the CAC system of the Paris Bourse and the OM system of the Stockholm Stock Exchange. The range of possibilities here is large, and a taxonomy of rules is given in Domowitz (1993).

MARKET INTERMEDIATION

Investors are generally not given free access to trading systems. Entry into the exchange's systems is intermediated by *brokers.* Brokers may simply route orders to exchanges. They sometimes make decisions as to what exchange, and what system within the exchange, should process various parts of an order. In open outcry markets, brokers also physically represent orders on the floor of the exchange.

Exchanges are differentiated most by a class of intermediaries known as *market makers.* Market makers trade for their own accounts, usually providing an offer to sell and an offer to buy at the same time, but at different prices. In doing so, they both contribute to the pricing process and supply immediacy to the market by a willingness to be a counterparty to an order for which another investor may not be immediately available.

On some exchanges, most notably the NYSE, there is one primary market maker designated by the exchange, known as the *specialist.* The specialist obtains consideration for the supply of immediacy and the maintenance of an orderly market by having private access to order-flow information through the order book for the stock.

There may be multiple market makers in a given stock, regardless of the precise form of trading system. The prototype example is that of dealer markets, in which the dealers are the market makers. They post bids and offers, and trade out of their own inventory.

Electronic limit order book markets offer the possibility of trading without such financial intermediation. In practice, however, market makers exist on electronic markets as well. Multiple market makers in a security are often designated by an exchange, fulfill obligations not dissimilar to those of a specialist, and receive some consideration for the service. Anyone with direct access to the trading system can function as a market maker, however, simply by continuously offering quotes for stock on both sides of the market.

COMPETITION

Exchanges have two clienteles: companies, which list their shares, and investors, who trade on the exchange. Historically, the product (a listing) offered to companies was a bundle, consisting of (1) liquidity, (2) monitoring of trading against forms of fraud, (3) standard-form rules of trading, (4) a signal that a listing firm's stock is of high quality, and (5) a clearing function to ensure timely payment and delivery of shares (Macey and O'Hara, 1999). The product offered to investors consists of a combination of liquidity and pricing information, as well as any benefits accruing to the investor from the bundle offered to companies.

Government regulation and increased competition from automated trading systems lessen the importance of exchange monitoring and standardized rules. Technological advances in information processing allow better signals about company quality than simple listings, permit wide distribution of pricing information outside exchanges, and enable separation of the clearing function from other exchange operations. The result is that exchanges now compete solely along the dimensions of liquidity and cost of trading (Domowitz and Stell, 1999; Macey and O'Hara 1999).

Competition through liquidity and cost has led to increased automation of the exchange trade execution process. Automated exchanges are less costly to build and operate, and provide lower-cost trade execution. Liquidity is enhanced by the ability to establish wide networks of traders through communications systems with an automated execution system at the nexus. The drive for increased liquidity through computerization has led to new developments in the structure of the exchange services industry, most notably including mergers and alliances between automated exchanges for increased order flow.

Communications technology and the computerization of trade execution have also globalized trading. The physical location and boundaries of an exchange floor are no longer important to traders. A company does not need to be listed, or even traded, on a domestic exchange. Not only are there many possible execution services providers, but electronic exchanges place their own terminals on foreign soil, allowing direct access to overseas listings, regardless of the nationality of the companies involved. An example is the U.K. electronic exchange, Tradepoint, which conducts operations in the United States.

GOVERNANCE

Exchanges historically have been organized as not-for-profit membership cooperatives. Exchange governance is shifting to a for-profit corporate structure. Ten such demutualizations globally are listed in Domowitz and Stell (1999), and such initiatives are under investigation by many traditional exchanges, including NASDAQ and the NYSE. Three rationales for this change have been proposed.

Increased competition between exchanges forces the change in ownership structure (Hart and Moore, 1996). This is the view of the exchange services industry, as well. The industry argument is simply that a corporate structure with a profit motive enables faster initiatives in response to competitive advances than a committee- and voting-oriented membership organization.

Changes in the contractual relationship between exchanges and listing companies might outweigh competition as a force behind the shift from cooperative to corporate ownership arrangements (Macey and O'Hara, 1999). The long-term mutual dependency between companies and exchanges no longer exists, and market makers do not make firm-specific investments that might be fostered under a cooperative umbrella.

The third view is that communications and computerized execution technology permit and encourage the change in governance structure (Domowitz and Stell, 1999). Traditional exchanges are limited by floor space, and access is rationed through the sale of limited memberships. In an automated auction, there are no barriers to providing unlimited direct access, with a transactions-fee pricing structure, which in turn lends itself to corporate for-profit operations. All examples of the change in governance begin with a conversion from floor trading technology to automated trade execution. For trade execution services with no prior history of cooperative governance structure, the mutual structure is routinely avoided in favor of a for-profit joint-stock corporation.

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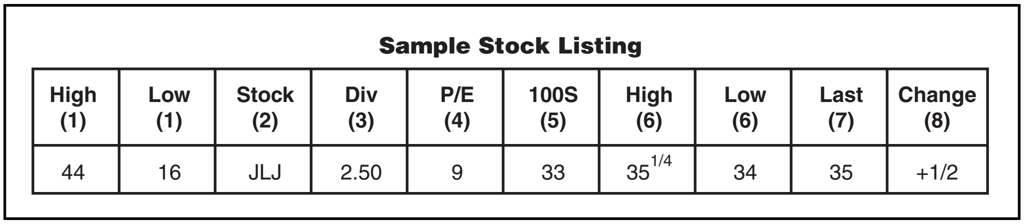
IAN DOMOWITZ

STOCK INDEXES

An understanding of the basic characteristics of the different kinds of stocks will be helpful in considering the information in this entry. (See "Stocks")

An investor's most important tool is information: information about stock prices, movement in the market, and business trends. Without sound information, investment decisions are pure guesswork. The first place to look for information about any stock is the financial pages or a newspaper, and the best place to start is with the columns listing the current stock prices on one or more of the major organized exchanges. Figure 1 shows a typical listing for a stock traded on one of the major exchanges, and the following list explains the information in the figure and what it means for prospective investors:

1. *High and low*. These are the highest and lowest prices paid for the stock during the previous fifty-two weeks. This entry shows that the highest price paid for this stock during the previous period was $44 per share; the lowest price, $16 per share.
2. *Stock*. Stocks are listed alphabetically by an abbreviated form of the corporate name.
3. *Dividend*. The rate of annual dividend is shown; it is generally an estimate based on the previous quarterly or semiannual payment. This entry shows that JLJ is paying an annual dividend of $2.50 per share, or about 7 percent yield.
4. *Price/Earnings ratio*. This is the ratio of the market price of the stock to the annual earnings of the company per share of stock. This is an important indicator of corporate success and investor confidence. It cannot be calculated from the information given here. Other data are needed.
5. *Shares traded.*This is the number of shares sold for the day, expressed in hundreds. In the example shown, 3300 shares of JLJ stock were traded. The figure does not



Sample Stock Listing

High (1)	Low (1)	Stock (2)	Div (3)	P/E (4)	100S (5)	High (6)	Low (6)	Last (7)	Change (8)
44	16	JLJ	2.50	9	33	35$^{1/4}$	34	35	+1/2

Figure 1

include odd-lot sales. *Note:* If the number in this column is preceded by a "z," it signifies the actual number of shares traded, not hundreds.

6. *High and low.* These are the highest and lowest prices paid for JLJ stock during the trading session (that is, the business day). The highest price paid for JLJ stock was $35.25 per share; the lowest price, $34 per share. Stock prices are shown in dollars and fractions of dollars up to 15/16. However, a new system of dollars and cents, implemented in 2000, is now also used.
7. *Closing price.* The final price of JLJ stock for the day. In this case, it was $35 per share.
8. *Change.* The difference between the closing price of the stock for this session and the closing price for the previous close; yesterday's closing price would have been $34.50.

The expectations of future growth and profit are captured through computations that are called market indexes. Such indexes provide, in essence, summaries of expectations. Indexes reflect a variety of assumptions about the factors that influence expectations as assessed by the designers of market indexes. Many market indexes will, at times, provide the same assessments. However, there is considerable difference in the performance of indexes in the long run. The stocks, divisors, and weighting selected for an index lead to long-run difference.

Some of the most popular indexes (as of early 2000) are:

- American Stock Exchange composite index
- Dow Jones Industrial Average index
- Nasdaq composite index
- Nasdaq—100 index
- New York Stock Exchange composite index
- Russell index
- Standard and Poor's 500 index
- 30-Year Treasury bond index

We examine here three of the most widely accepted stock market indexes and the types of stocks they include.

THE DOW JONES INDUSTRIAL AVERAGE

Charles H. Dow introduced the Dow Jones Industrial Average in 1896 when the market was not considered a respectable venture because of unscrupulous dealers, massive speculation, and the lack of information. His average brought about change at a time when people found it quite difficult to understand the ups and downs of fractionalized points. It is called an average because it originally was computed by taking the stock prices, adding them together, and dividing them by the number of stocks. The first figure came out on May 26, 1896, with an average of 40.94. Dow defended his average by comparing it to the placement of sticks in the sand on the beach. His concept was to determine, after each wave, whether the tide was coming in or receding. If the average of his stocks increased progressively, then he was able to call the period a "bull market." If the average dropped lower, then a "bear market" had taken hold.

The Dow provides a comparison of industrial stocks to the direction of the average. In attempts to gauge or predict large-scale trends in stock-market values, the Dow Jones Industrial Average (DJIA) is most often cited. The term "industrial" is a bit misleading. In the late nineteenth century, railroads and steel companies were the important corporations. Today, they do not represent any great hold on the "Dow." The DJIA is the most frequently mentioned of four Dow Jones averages (covering industrial stocks, transportation stocks, utility stocks, and a composite average); it is a barometer of stock market trends based on the stock prices of thirty large U.S. corporations listed on the New York Stock Exchange. Every day, the fluctuations in the prices of these stocks are combined by adding up the prices of the thirty stocks and dividing the result by the designated factor used to compensate for complicating situations, such as stock splits, spin-offs, and periodic substitutions in the list of stocks used.

The current divisor is published every business day in the Money & Investing section of the *Wall Street Journal.* Over the history of the average, the divisor has been changed many times, mostly downward. This explains why the average can be reported as, for example, 10,000, although no single stock in the average approaches that price level. Today, a $1 rise in the price of a component stock would raise the Dow Jones Industrial Average roughly five points, assuming prices of the other twenty-nine stocks were unchanged. The thirty stocks and their symbols that made up the DJIA during 2000 are shown in Figure 2.

THE STANDARD & POOR'S 500

The Standard & Poor's (S&P) index was created (in its present mode) in 1958 in order to make indexes more popular with the investing public. Rather than keeping its previous index, made up of ninety stocks, it moved to a much broader scale of four hundred large capitalization industrial companies, forty utilities, twenty transportation companies, and forty financial firms, making it the S&P 500. In its continuous review, the selection committee replaces about thirty companies annually. The reason for a company's elimination might be its own downsizing (so it can no longer be considered a large-cap stock) or its acquisition by or merger with a different type of company not represented in the S&P.

The reported number (factor) that one sees in the daily paper or hears about on the financial news report, along with the Dow and the Nasdaq, is determined by the price of the five hundred stocks in the Standard & Poor's index. It is also important to mention that the S&P is market-weighted. This is done so that no single company, or small group of companies, will dominate the index or influence its calculations. Market weighting is determined by taking the number of shares of the outstanding stock of a company and multiplying it by its price. This creates a market situation in which no one company's performance can drastically change the overall performance of this index. The Dow Jones Industrial Average is not calculated in this manner, creating the possibility that the performance of a single stock in the Dow could change the value of the entire index on any given day.

Also, consider the number of businesses involved in the S&P index. With five hundred stocks market-weighted, this index becomes a good indicator of market movements because it mirrors the combined knowledge of thousands of analysts and investors who, through their sales and purchases of stocks, determine the market value of the shares of stocks in the index.

THE NASDAQ COMPOSITE

The Nasdaq (formally known as the National Association of Securities Dealers Automated Quotations) was created in 1971 to compete with the S&P 500 and to measure the entire range of the market. However, with a great proportion of its companies in the high-tech field, the Nasdaq is much more volatile than the stock market in general and the Dow and the S&P in particular. The Nasdaq is not involved only in high-tech stocks; however, the index comprises eight industry subindexes—banking, biotechnology, computers, finance, industrials, insurance, telecommunications, and transportation. The Nasdaq has been called the "index of the new economy," as compared to the "old economy" of the Dow. This composite index includes 5500 companies

Stocks That Make Up the DJIA

Alcoa	(AA)	Exxon	(XON)	McDonald's	(MCD)
Allied Signal	(ALD)	General Electric	(GE)	Merck	(MRK)
American Express	(AXP)	General Motors	(GM)	Microsoft	(MSFT)
AT&T	(T)	Hewlett-Packard	(HWP)	Minnesota Mining	(MMM)
Boeing	(BA)	Home Depot	(HD)	Philip Morris	(MO)
Caterpillar	(CAT)	Intel	(INTC)	Procter & Gamble	(PG)
Citigroup	(C)	Internal Business Machines	(IBM)	SBC Communications	(SBC)
Coca-Cola	(KO)	International Paper	(IP)	United Technologies	(UTX)
Du Pont	(DD)	J.P. Morgan	(JPM)	Wal-Mart	(WMT)
Eastman Kodak	(EK)	Johnson & Johnson	(JNJ)	Walt Disney	(DIS)

Figure 2

and, like the S&P, is market-weighted, thus providing more meaningful numbers. The index's composite figure is computed by measuring the market value of all common stocks listed on the Nasdaq. Any change in any security in any direction will cause the index to change in that direction, but only in proportion to its market value (the last transaction price multiplied by the total shares outstanding). In 1985, Nasdaq introduced the Nasdaq-100 index, which is made up of the largest and most active nonfinancial domestic and international issues on the Nasdaq Stock Market based on market capitalization.

It is true that there is no way to tell where the market will be a year or two from now, but by keeping informed and using indexes as a guide, investors stand a better chance in the roller-coaster market that we have experienced.

JOEL LERNER

STOCKS

There's no doubt that investing in the stock market can be one of the most exciting ways of making money. Nothing quite compares with the thrill of seeing the little-known stock you picked become a hot property, perhaps doubling in price—and then doubling again and again. But as with any investment, the potential risks are equal to the rewards, so investors who want to play the market owe it to themselves to become fully informed before getting involved.

HOW DOES THE STOCK MARKET WORK?

A share of stock represents a unit of ownership in a corporation. When you buy stock, you are becoming a part owner of the business. Therefore, you benefit from any increase in the value of the corporation and you suffer when the corporation performs badly. You're also entitled to share in the profits earned by the corporation.

Stocks are bought and sold in marketplaces known as *stock exchanges*. The exchange itself does not buy or sell stock, nor does it set the price of stock; the exchange is simply a forum in which individuals and institutions may trade in stocks. Stock exchanges play a vital role in a capitalist economy. They provide a way for individuals to purchase shares in thousands of businesses, and they provide businesses with an important source

フジテレビ 4676
TOTO 5332
トステム 5938
三菱電 6503
パイオニア 6773
三菱重 7011
任天堂 7974
興銀 8302
東急 9005
KDD 9431
533
922
2115
360
2450
498
9900
340
4710
富士写 4901
新日鉄 5401
タクマ
NEC 6701
松下通 6781
川崎重 7012
コクヨ 7984
富士銀 8317
JR東日本 9020
NTT 9432
4730
1400
7350
265
2000
655
760
1120
コニカ 4902
富士通 6702
ビクター 6792
石川島 7013
伊藤忠 8001
あさひ銀 8322
517
1623
823
220
232
608
資生堂 4911
NKK 5404
沖電気 6703
マクセル 6810
日産自 7201
ミズノ 8022
三井信 8401
1595
410
2200
473
341
159
トヨタ 7203
東エレク 8035
619
3400
6100
本田技 7267
住友商 8053
5120
741
島津製 7701
三菱商 8058
469
764

Japan's electronic stock board.

of capital for expansion, growth, and research and development.

HOW DOES AN INVESTOR PURCHASE STOCK?

Here, in two steps, is what happens when an investor decides to buy or sell a particular stock. First, an account executive at the brokerage house receives the buy or sell order, which may take any of several forms:

- *Round-lot order.* An order to buy or sell 100 shares, considered the standard trading unit
- *Odd-lot order.* An order to buy or sell fewer than 100 shares
- *Market order.* An order to buy or sell at the best available price
- *Limit order.* An order to buy or sell at a specified price
- *Stop order.* An order designated to protect profits or limit losses by calling for sale of the stock when its price falls to a specified level
- *Good till canceled order (GTC).* An order that remains open until it is executed or canceled by the investor

Second, after the order is received, it is sent to the floor of the stock exchange. The brokerage firm's floor broker receives the order and executes it at the appropriate trading post. Confirmation of the transaction is reported back to the account executive at the local office, who notifies the investor. Remarkably, the entire process may take as little as two or three minutes.

WHAT KINDS OF STOCKS ARE AVAILABLE?

There are two kinds of stocks: common and preferred.

Common Stock Each year, hundreds of new issues of stock, known as initial public offerings (IPOs), are sold to the public. Although human life ends at the hands of the *undertaker*, it begins for common stock at the hands of the *underwriter*, who sells the stock, at a fixed price, to a group of initial buyers who in turn "farm out" the investment until it reaches the "street"—which is you, the investor. IPOs have their fans and detractors. If you're anxious to make big money on an IPO, then the letters stand for "immediate profit opportunity." If you're a skeptic, the acronym has only one meaning—"it's probably overpriced."

A share of common stock represents a unit of ownership, or equity, in the issuing corporation. Each share of common stock usually has a par value, which is a more or less arbitrary value established in the corporation's charter and which bears little relation to the stock's actual market value. The market value is influenced by many factors, including the corporation's potential earning power, its financial condition, its earnings record, its record for paying dividends, and general business conditions.

Ownership of a share of common stock carries certain privileges:

1. *A share in earnings.* Each year, the board of directors of the corporation meets to determine the amount of the corporation's earnings that will be distributed to stockholders. This distribution, known as the *dividend*, will vary depending on the company's current profitability. It may be omitted altogether if the company is earning no current profits or if the board elects to plow back profits into growth.
2. *A share in control.* Holders of common stock have the right to vote on matters of corporate policy on the basis of one vote per share held. However, the small investor with only a few shares of stock has little or no practical influence on corporate decisions.
3. *A claim on assets.* In the event of the company's liquidation, holders of common stock have the right to share in the firm's assets after all debts and prior claims have been satisfied.

There are four main categories of common stock, each of which is best for a particular investment strategy and purpose.

1. *Blue-chip stocks.* High-grade, or blue-chip, stocks are issued by well-established corporations with many years of proven success, earnings growth, and consistent dividend payments. Blue-chip stocks tend to be relatively high priced and offer a relatively low-income yield. They are a relatively safe investment.
2. *Income stocks.* Income stocks pay a higher-than-average return on investment. They are generally issued by firms in stable businesses that have no need to reinvest a large percentage of profits each year.
3. *Growth stocks.* Issued by firms expected to grow rapidly during the years to come, growth stocks have a current income that is often low, since the company plows back most of its earnings into research and expansion. However, the value of the stock may rise quickly if the company performs up to expectations.
4. *Speculative stocks.* Speculative stocks are backed by no proven corporate track record or lengthy dividend history. Stocks issued by little-known companies or newly formed corporations, high-flying "glamour" stocks issued by companies in new business areas, and low-priced "penny stocks" may all be considered speculative stocks. As with any speculative investment, there is a possibility of tremendous profit—but a substantial risk of losing all as well.

Preferred Stock Preferred stock, like common stock, represents ownership of a share in a corporation. However, holders of preferred stock have a prior claim on the company's earnings as compared with holders of common stock; hence the name *preferred stock*. Similarly, holders of preferred stock have a prior claim in the company's assets in the event of a liquidation, but they have no voting privileges.

Preferred stock also has certain distinctive features related to dividend payments. A fixed, prespecified annual dividend is usually paid for each share of preferred stock. This fixed dividend may be expressed in dollars (for example, $10 per share) or as a percentage of the stock's par value. It must be paid before dividends are issued to holders of common stock.

However, preferred stock dividends are not considered a debt of the corporation—unlike, for example, the interest due on corporate bonds—because the firm is not obligated to meet its dividend payments. If the corporation is losing money, the board of directors may decide to withhold the dividend payment for a given year. To protect stockholders against undue losses, most preferred stock is issued with a cumulative feature. If a dividend is not paid on cumulative preferred stock, the amount is carried over to the following period, and both current and past unpaid dividends must be paid before holders of common stock can receive any dividend.

WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF STOCKS?

Like any investment, stocks have distinct advantages and disadvantages.

Advantages:

1. *Growth potential.* When a company has the potential for growth in value and earnings, so does its stock. If you pick the right stock or group of stocks, you can profit significantly and relatively quickly. History shows that, as a whole, the stock market has had an upward trend in values, with years of gain outnumbering those of decline by better than three to one.
2. *Liquidity.* Stocks traded on the major exchanges can be bought and sold quickly and easily at readily ascertainable prices.
3. *Possible tax benefits.* Growth stocks, which pay low or no dividends so that company profits can be reinvested, provide an effective tax shelter. As the corporation's value grows, so does the value of the stock, which is a form of tax-deferred income, since no taxes need be paid on these gains until the stock is sold.

Disadvantages

1. *Risk.* There can be no guarantee of making money by investing in stocks. Companies may fail, stock prices may drop, and you may lose your investment. Remember the saying of one concerned investor: "I am not so concerned with the return *on* my investment as I am with the return *of* my investment."
2. *Brokerage commissions.* Most investors need the help and advice of a stockbroker when they become involved in the market. However, high broker commissions can largely erode profits. Since one fee is charged when you buy the stocks and another when you sell them, you are, in effect, forced to pay twice. Unusually well-informed investors should look into the use of a discount broker, who provides little or no investment counseling but charges greatly reduced commissions when trading stocks.
3. *Complexity.* The stock market is complicated, and the amount of knowledge needed to be consistently successful is tremendous. Investors who lack the patience, time, or skill to inform themselves about the market often buy and sell on impulse, thereby minimizing their profits and maximizing their losses.

SUMMARY

Never forget that whenever you buy a stock, there is someone selling it. You may buy the stock because you believe that the investment is good and the price will rise. However, the person selling that same stock believes the opposite, so only one of you will be correct. Think of it in these terms, and you will become a realistic and conservative player.

(SEE ALSO: *Financial Statements*; *Securities Acts: Requirements for Accounting; Securities and Exchange Commission*)

JOEL LERNER

STRATEGIC MANAGEMENT

Strategic management is the process of developing and executing a series of competitive moves to enhance the success of the organization both in the present and in the future. These competitive moves are derived from the demands of the external environment in which the firm operates as well as the internal capabilities which it has developed or can reasonably hope to build or acquire. While managers may follow somewhat different strategic management routines, a sound process should include an analysis of the current business situation, the formulation of objectives and strategies based on that analysis, and an implementation and evaluation procedure that ensures progress toward each strategy and objective. This article focuses on the formulation of appropriate strategic objectives based on a sound understanding of the internal and external environments faced by the firm. A brief discussion of implementation is included though this topic is covered in greater detail in other entries.

SITUATIONAL ANALYSIS

In order to create appropriate strategic objectives, organizations work to understand their internal capabilities as well as the environment in which they operate. Further, they also seek to clarify their purpose or mission. The situation analysis firmly focuses management's attention on these issues, allowing it to create a fit between its resources and the demands of the competitive situation.

The steps to be taken in a situational analysis are largely agreed upon, though there does exist some debate as to whether one starts with a mission statement or with an analysis of the state of the organization. Those who believe that a mission statement is the logical starting point argue that management must first think carefully and creatively about the future direction of the company if they are to create and implement effective objectives (Thompson and Strickland, 1998). In this way, managers can choose their own vision of what the company ought to be rather than be unduly affected by company history or industry exigencies. On the other hand, managers may want to have a keen understanding of the history and current performance of a company as well as important industry factors so as to craft a strategic vision that is attainable in terms of organizational competencies and industry dynamics. While both sides have merit, this article discusses the state of the organization first.

STATE OF THE ORGANIZATION

In analyzing the state of the organization, managers take a candid measure of its recent performance. Typically, they consider such issues as profitability, stock price performance, market share, revenue growth, customer satisfaction, product innovation, and so forth. These measures can vary from industry to industry. Product innovation, for example, is important to the pharmaceutical industry, while the number of new distributors signed may be a more important measure in the multilevel marketing industry.

In addition to this performance review, managers typically examine a company's (s)trengths, (w)eaknesses, (o)pportunities, and (t)hreats by conducting a (SWOT) analysis. Strengths consist of those things that a company does particularly well relative to its competition and that provide it with some competitive advantage. Strengths can be found in many different areas, including people, such as a particularly competent sales force; systems, such as Federal Express's information systems; locations, like that occupied by a restaurant with sweeping ocean views; and intangible assets, such as a strong brand name. These strengths provide the competitive advantage needed to succeed in the marketplace.

Weaknesses, on the other hand, diminish the competitiveness of a company. They, too, can be found in many different areas, including outdated equipment, a poor understanding of customers, or a high cost structure.

Strengths and weaknesses are typically internal to a company and, therefore, largely under a company's control. Opportunities and threats, on the other hand, are usually derived from the external market situation and require some response from a company if it is to perform well.

Opportunities can arise in many areas, including geographical expansion, new technologies, and changing customer preferences and tastes. Only when a firm has (or can hope to acquire) the specific skills needed to seize upon some option does it become an opportunity for the company.

While opportunities are chances to be seized, threats can be thought of as concerns that are largely outside of the organization's control but have the potential to disrupt its operations. Probably the biggest threat to many companies is their competition. Other sources of threats include foreign economic crises such as the "Asian flu" that began in the latter part of the 1990s, government regulations, natural disasters, and so forth. In creating strategic objectives, management prepares contingency plans to minimize the impact of its most serious threats.

In addition to conducting a SWOT analysis and candid performance review, the executive team may use several other tools to acquire a better understanding of its current situation. They may, for example, identify those forces in the industry that are causing the nature of competition to change for all competitors. One example would be the publicizing of the link between cholesterol and heart disease that made many consumers more aware of the amount of fat in foods. This change made it important for many food manufacturers to either lower the amount of fat in their products or to introduce fat-free or low-fat versions of those products. These forces that change the nature the way companies compete in an industry are known as *driving forces.*

Another tool used by managers in conducting a state-of-the-organization review is an analysis of *key success factors.* In this analysis managers examine those things that all companies within a given industry must do well if they are to survive. These might include rapid service for the fast-food industry, producing large numbers of vehicles so as to offset the high cost of specialized equipment in the automotive industry, or having skilled designers in the fashion industry. By understanding such factors, managers are in a position to better allocate resources so as to perform well in the future.

In addition to these tools, managers may also conduct other types of analyses, including ones focused on customers, economic characteristics of the industry, supplier relationships, and so forth. These analyses constitute a first step in the strategic management process as organizational leaders attempt to understand the organization's current situation so as to later be able to identify those strategic objectives most likely to improve performance.

MISSION STATEMENTS

Having thoroughly understood an organization's internal and external environment, managers establish a mission statement to create a five- to ten-year vision of the company. A mission statement documents the service or product the company provides to the marketplace and the unique way in which it distinguishes itself from other companies. It also indicates the target group of customers that the company serves.

An example of this type of mission statement is provided by *Courtyard by Marriott.* It indicates that *Courtyard by Marriott* is serving economy- and quality-minded frequent business travelers with a premier, moderate-priced lodging facility that is consistently perceived as clean, comfortable, well maintained, attractive, and staffed by friendly, attentive, and efficient people. This mission statement indicates the product and service provided to the target customers and the way in which it will be done.

Mission statements serve several purposes in strategic management. First, they provide direction for the organization. As a firm engages in its strategic planning process it compares its objectives with the path it has set for itself. If any of the goals suggest a deviation from the purpose of the organization, managers must decide if the goal is sufficiently important to warrant a change in the mission statement. Otherwise, the objective might be dropped. With this in mind managers are typically careful to write mission statements that are broad enough to encourage growth but specific enough to give direction.

A second purpose of mission statements is to create a shared sense of purpose and inspiration among employees. In some organizations, employees are required to memorize the mission statement so that they will understand what is appropriate behavior and what is not. For this reason, most mission statements are relatively short so that the purpose of the company remains clearly in the minds of its employees. Further, many companies seek the input of their employees in creating a mission statement so as to create a document that is owned by all.

Finally, mission statements are also external documents. They communicate to the outside world the values and goals of the organization. Unfortunately, some companies create mission statements as a marketing document and then fail to live up to that vision of themselves. For a mission statement to be effective, it must be a living document that motivates behavior.

EXTERNAL ENVIRONMENT REVIEW

Once a company has carefully and frankly understood its situation and has spent time considering the appropriateness of its mission statement, it may choose to do a more thorough review of the external environment. This environment consists of industry, government, competitive, economic, political, and other factors that the organization cannot control but which may have an important impact on the company. For example, the dietary supplements industry in the United States spends large amounts of money to keep abreast of the latest regulations issued by the Food and Drug Administration.

Much of this analysis may be done within the State of the Organization report, but some companies choose to address it as a third step in the strategic planning process so as to assure that they are not caught off guard by these important factors. While the organization cannot control these forces, it can formulate responses that will minimize the potential damage or even put the firm in a better competitive position should the eventuality actually occur.

KEY OBJECTIVES AND STRATEGIES

Having conducted the previous three steps, managers have sufficient information to choose objectives that are most likely to match the internal capabilities of the firm with the exigencies of the external environment. Thompson and Strickland (1998) state that "objectives represent a managerial commitment to achieving specific performance targets within a specific time frame" (p. 36). While drawing heavily on the previous three steps in the process, objectives rely even more particularly on the SWOT analysis in enhancing certain strengths, overcoming specific weaknesses, capitalizing on opportunities, and addressing the threats. By creating such a fit between the demands of the industry and the skills and competencies of the organization, a firm increases its ability to compete successfully in the marketplace.

Firms may set specific objectives including such things as increasing market share, decreasing customer complaints, cutting costs by 10 percent, or creating a more effective food preparation facility. These broad objectives are then broken down into specific strategies that may, in turn, be broken down into even more specific action steps. It is important that objectives be written in a way that clearly indicates the nature of what is to be achieved, the single individual responsible for the objective, a committee to work on the project, funding assigned, and date to be completed. Based on these requirements, an objective for a rural hospital might take the following form:

Objective 2: Increase revenues from visiting physicians by $500,000.
Person Responsible: Virginia Moody (CEO)
Committee Members: Virginia Moody, Dr. Etta, Erika Boerk (PR director), Sean Ortiz (Facilities Coordinator), and Tristan Roberts (Marketing)

Funding:	*$125,000*
Date Due:	*June 1, 20XX*

Strategies

1. Develop relationship with Dr. Yang (podiatrist).

2. Refurbish existing office space to accommodate visiting physicians.

3. Contract with local newspaper to advertise visits.

4. *Find a dermatologist*
5. *Etc.*

In addition, each of the strategies could also be broken down in similar fashion to include the person(s) responsible, funds required, and due dates.

IMPLEMENTATION

Having created detailed objectives and strategies, an organization may find that some internal adjustments in the way a firm is organized or in the competencies of its workers are required to achieve those objectives. These adjustments may be as simple as sending an employee to a seminar to better understand a new information process software or as complex as creating a new international division to take advantage of overseas opportunities. This process requires the identification of those individual and organization competencies needed to facilitate the accomplishment of the stated objectives.

In addition to serving as a guide to the form of the organization, the objectives also serve as the basis of the year's budgets and performance standards. Having set the funding requirements for each objective, these monies are added to the normal operating budget for each division so that they can fulfill these goals. Further, these objectives and strategies are added to the existing performance standards for each division or department and become an integral part of the performance evaluation of the individuals assigned to each task. In this way the progress of each objective is tracked throughout the year and a specific and agreed-upon measuring stick exists for each employee's performance.

Finally, it should be mentioned that in any strategic management process, but particularly in those taking place in dynamic environments, situations change and strategic plans require modification. While five-year plans may remain relatively unchanged in some industries, other industries may make major modifications monthly. For this reason, most firms consider strategic management to be an ongoing process characterized by periodic progress evaluations and major plan analysis on a yearly basis. Such updates allow a firm to continually reconfigure its internal process and capabilities to create a better fit with the demands of the competitive situation.

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NORMAN S. WRIGHT

STRESS, WORK-RELATED

Stress has been defined in a number of ways by a number of different individuals, but everyone agrees that stress is experienced by all workers in the business world no matter what their position. Stress is the body's reaction to any demand placed on it, and health experts agree that some stress is essential for human survival. As demands are placed on a person's body, there will be some kind of automatic reaction. When this reaction is positive, the stress helps individuals perform their jobs better. Positive stress, called eustress, can lead individuals to a new awareness of their abilities and a completely new perspective on their jobs. Negative stress, called distress, upsets individuals and can make them physically sick. It can lead to feelings of distrust, rejection, anger, and depression, which may lead to a number of medical problems, including stroke, heart disease, high blood pressure, cancer, and ulcers.

SYMPTOMS OF STRESS

Because everyone is different, the symptoms of stress are varied and numerous. The symptoms of stress have been placed in different categories, the most common being physical, psychological, behavioral, and mental. Headache, fatigue, grinding teeth, clenched jaws, chest pain, shortness of breath, insomnia, nausea, high blood pressure, muscle aches, constipation or diarrhea, and heart palpitations are all physical symptoms of stress. Anxiety, nervousness, depression, anger, defensiveness, hypersensitivity, apathy, feelings of helplessness, impatience, and short temper are symptoms of psychological stress. Behavioral symptoms include overeating or loss of appetite, procrastination, increased use of alcohol or drugs, pacing, nervous habits (nail-biting, foot-tapping), crying, swearing, poor personal hygiene, and withdrawal or isolation from others. Individuals who experience a decrease in concentration and memory, indecisiveness, confusion, loss of sense of humor, and mind going blank or racing may have mental stress.

Many of these symptoms, when not treated, can lead to serious medical problems as well as loss of time on the job. When individuals experience stress, they often miss work because of illness or arrive late because they dread coming to work. When on the job, they may not performing up to their ability.

REACTION TO STRESS

When individuals perceive or anticipate a threatening or stressful situation, part of the nervous system, the sympathetic nervous system, becomes activated and releases a number of chemicals. One of these chemicals, adrenaline, is a stimulant hormone and is released into the bloodstream. Adrenaline and other hormones, including noradrenaline, produce changes in the body that get the individual geared up for action.

David Posen (1995), who specializes in stress management, indicates that gearing up for action is often called ‘‘the fight-or-flight response’’ because it provides the strength and energy to either fight or run away from danger. These responses increase heart rate and blood pressure in order to get more blood to the muscles, brain, and heart, the organs that are the most important in dealing with danger. This increase in blood flow to the brain, heart, and muscles means that there is a decrease in the blood flow to the skin, digestive tract, kidneys, and liver, where it is least needed in a time of crisis. Individuals will also begin to breathe faster to take in more oxygen, and their muscles will tense so that they are prepared for action. An increased mental alertness and sensitivity of sense organs occurs. As these reactions are taking place, there is also an increase in the blood sugar, fats, and cholesterol and a rise in platelets and blood-clotting factors.

Repeated release of chemicals as a reaction to stress can, over time, cause wear and tear on the heart and blood vessels, eventually leading to heart disease and stroke. Because adrenaline and the other hormones released during stress increase muscle tension, slow digestion, and constrict and dilate arteries, the liver may deliver cholesterol and fat into the bloodstream. The hormone testosterone may increase, which can reduce the levels of high-density lipoproteins (HDL), the good cholesterol.

CAUSES OF STRESS

There are a number of life events, experienced at one time or another by everyone, that cause stress. Some of these are family-related, such as marriage, death of a family member or close friend, divorce or separation, birth or adoption of a child, a personal major illness or illness of a family member, and a major change in a spouse’s job or income. An individual’s control over the situation will determine the amount of stress these events will cause.

Physical stressors include pollution, excessive noise, physical disability or handicap, weather extremes, smoking, excessive drinking, obesity, overeating, poor nutrition, and lack of rest or relaxation. Many of these physical stressors are beyond an individual's control.

Common workplace stressors include the possibility of dismissal, time pressures, too many responsibilities, unreasonable deadlines, disorganization, adapting to new technology, conflicts with co-workers, information overload, and major changes in job responsibilities.

COMPUTERS AND STRESS

The use of computers in the workplace has introduced new sources of stress. One of the most frequent computer-related stressors is repetitive strain injury (RSI), which occurs when the employee is overworked or when the working environment is not physically conducive to work. Causes of RSI may be repetitious actions such as typing or using a mouse, poor lighting, and poor posture. Another computer-related problem is carpal-tunnel syndrome (CTS), which occurs when the person typing has bad posture and uses incorrect hand movements on the keyboard. Hands and eyes are the main source of communication with the computer. When bad posture and incorrect hand movements are too prevalent, the result is tingling and numbness of the fingers.

Extended time spent working before a computer monitor can produce eye irritation, fatigue, and difficulty focusing, all of which are symptoms associated with eyestrain. Nearsightedness has been associated with eye strain caused by working at a computer monitor.

SOURCES OF JOB STRESS

Job pressures are a major source of stress. Several job conditions have been identified as increasing stress in most employees. Job overload is one such condition. Although some employees may have the ability to do the job, they may not have enough time to do the amount of work necessary. Other employees lack the ability to do the job, being unable to meet the performance standards or expectations set by the employer. Clear job objectives are necessary, and when employees do not know what specific job performance is expected of them, they begin to develop stress.

When jobs are too boring or employees are not challenged to use their abilities, stress occurs. Stress also results from undesirable physical working conditions. Employees experience stress when the work environment is too noisy, too hot, too cold, or too crowded.

A major source of stress involves frequent or significant changes that have a direct effect on the individual's job. These changes can include changes in management, management style, equipment, or job location.

MANAGING STRESS

Just as there are a number of causes for and symptoms of stress, there are a number of ways to manage stress. Individuals vary in their ability to manage stress, and the same techniques do not work for every person. Individuals need to become aware of the stressors they experience and how they react to these stressors.

One stress-management technique that can apply to almost all individuals is learning to manage time more effectively. Managing time more effectively means that individuals learn to prioritize and plan so that they have time for themselves, thus leaving time for listening to music, exercising regularly, mediating, or engaging in whatever type of activity that they find relaxing. Developing an organized time schedule helps ward off tension, which helps reduce stress.

When on the job, employees and managers need to match individual abilities with workload. Managers should be sure that the job objectives are clear so that there is no role ambiguity or role conflict. As employees' work responsibilities change, managers should keep them informed of what is going to happen, why it is going to happen, and when it will happen.

When individuals cannot manage stress on their own or with the help of their managers, medication may be necessary. These medications can, in the short term, moderate physical reactions to stress. Doctors usually prescribe Valium and Xanax for relief from stress. Tranquilizers are suggested for only short periods of time, because individuals can become dependent on them.

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JIM D. RUCKER

SUPPLIERS

(SEE: *Channels of Distribution*)

SUPPLY

(SEE: *Supply and Demand*)

SUPPLY AND DEMAND

The market process is generally modeled using the economic concepts of supply and demand. The plans/desires of consumers are embedded in the concept of demand and the plans/desires of producers in the concept of supply. The plans of these two types of economic actors are brought together in markets, which are the entities in which transactions occur. In a modern economy, markets do not require that the buyers and sellers meet in a geographic place, so markets no longer require actual "marketplaces."

The concept of demand represents the market activity of consumers. Demand is defined as the quantity of a good or service that consumers will be both willing and able to purchase at any given price during a specific period of time, holding all other factors constant. Demand is, therefore, a relationship between price and quantity demanded. Many factors other than price affect the amount consumers choose to purchase, and these factors are what is being held constant within the concept of demand.

Demand can be illustrated in a schedule that shows how many units of a good or service consumers will purchase at several distinct prices. Table 1 shows how many units of a good (widgets) consumers will purchase at a number of different prices. This relationship between price and quantity demanded can also be represented graphically. A demand curve represents the maximum price that consumers would be willing to pay for a particular quantity of the good. Consumers are willing to purchase something because they value that product more than its opportunity cost. The opportunity cost is the value of the best alternative they could purchase with the same money; that is, when a consumer chooses to spend $2 on a hamburger, he or she has decided that the hamburger provides more satisfaction (at that moment in time) than anything else that could be bought with that $2. Thus, the demand curve represents the value of the product to the consumer. The area under the demand curve provides a measure of the total value that consumers receive from consuming that amount of the product.

The nature of this relationship between price and quantity demanded is so consistent that it is called the law of demand. This law states that the relationship defined by the concept of demand is an inverse or indirect one. When prices rise, other factors held constant, consumers will purchase less of the good, and vice versa. The rationale for the law is that when the price of a product changes relative to the price of other products, consumers will change their purchasing patterns by buying less of the now higher-priced good and purchasing more of other goods which are now relatively less expensive that satisfy the same basic wants. Goods that satisfy the same basic wants are called substitutes. For example, if the price of beef rises relative to the price of pork, chicken, and turkey, consumers will shift some of their purchases from beef to pork, chicken, and turkey.

Supply can be defined as the relationship between the price of a good or service and the quantity producers are willing and able to make available for sale in a given period of time, holding other things constant. A supply schedule showing how many widgets producers will make available for sale at several distinct prices is also shown in Table 1. Supply represents graphically the minimum price that consumers are willing to accept in order to make a given amount of the good or service available for sale. As such, it is the opportunity cost to society of producing that particular good.

The law of supply states that this relationship is a direct one. When the price of a good rises, holding other factors constant, producers will be willing to supply more of the product. The rationale for this law is that resource owners will want to use their resources in the most valuable way possible. For example, if the market price of corn rises relative to that of wheat, farmers will choose to plant more of the land available to them in corn and less in wheat.

EQUILIBRIUM

A market is a place where suppliers and demanders meet to conduct an exchange. Modern markets do not require these two parties to be in the same place or even to communicate their desires at the same time. The market process can be thought of as a type of "auction process." Given the supply and demand curves shown in Figure 1, if an auctioneer was to call out a price of $5, consumer would be willing and able to purchase 50 units (the quantity demanded), but producers would be willing and able to supply only 10 units (the quantity supplied). If consumers want to buy 50 units and there are only 10 for sale, there is a shortage of 40 units (quantity demanded minus quantity supplied). Whenever there is a greater quantity demanded than supplied, there will be a shortage. Consumers will then attempt to compete for the scarce units. This competition will take the form of bidding up the price. To continue with the auction illustration, the auctioneer sees that people want to buy more than is available, and so he calls out a new, higher price of $7 per unit. At $7, the consumers who valued the product more than $5, but less than $7, drop out of the market. That is, the quantity demanded falls from 50 units to 40 units. However, the law of supply tells us that the new, higher price will induce producers to increase the quantity supplied. The quantity supplied rises from 10 to 20 units. Consumers still want to buy more than producers want to sell, so there continues to be a shortage, but the shortage has been reduced from 40 units to 20 units. Consumers still must attempt to out-compete other consumers, and the price is bid up again. Only when our imaginary auctioneer calls out a price of $9 is the quantity consumers demand equal to the quantity that producers supply. This is called the market clearing price. This price "clears" the market because everyone who wants to buy at that price is able to and everyone who wants to sell at that price is able to. This makes the market stable because consumers no longer have a need to bid up the price. Thus, the market is at an equilibrium at the price for which the quantity demanded is equal to the quantity supplied.

Widgets

Quantity Supplied	Price	Quantity Demanded
50	$13	10
40	$11	20
30	$ 9	30
20	$ 7	40
10	$ 5	50

Table 1

If the price is above the market clearing price, consumers will be willing and able to buy less than producers are willing and able to make available for sale. For example, if the price is $13

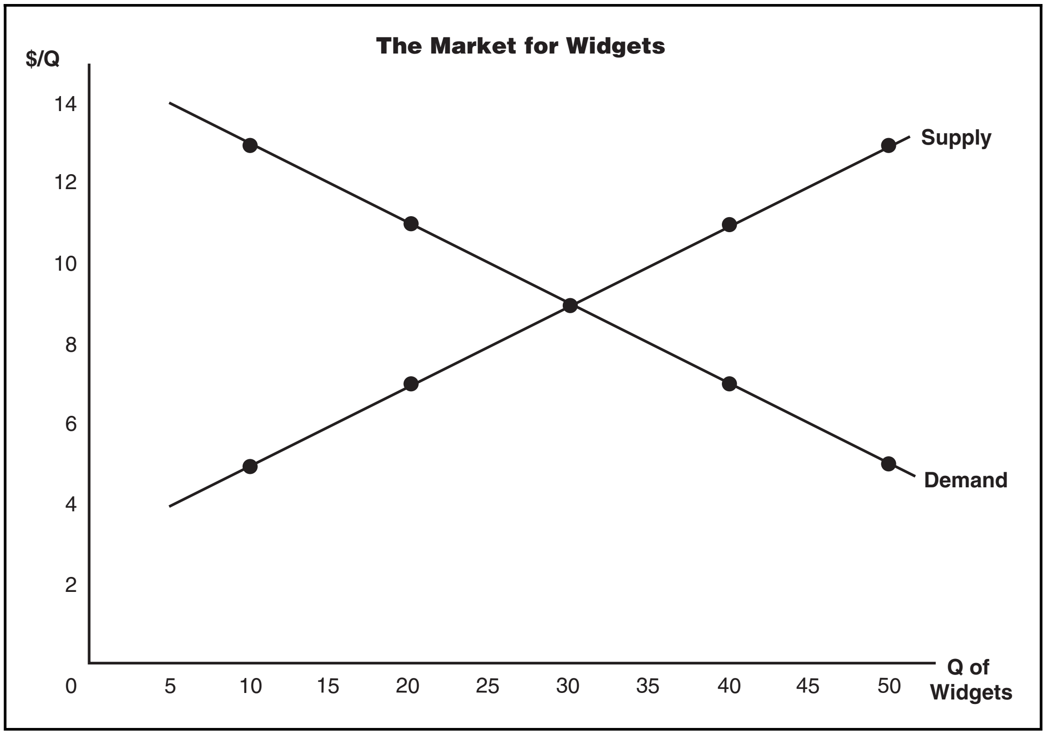

Figure 1

(in Figure 1), quantity demanded will be 10 units and quantity supplied will be 50 units. Whenever quantity supplied is greater than quantity demanded, there will be a surplus. In this case, the surplus is equal to 40 units (quantity supplied minus quantity demanded). If there is a surplus in a market, producers will compete with each other for scarce buyers by bidding down the price. When the price falls to $11, consumers will increase the amount they want to buy to 20 units and producers will reduce the amount they want to sell to 40 units, so that the surplus falls to 20 units. But here, the producers will continue to try to outcompete other producers for the consumers in the market by offering their product for an even lower price. It is not until the price falls to the market clearing level of $9 that the surplus disappears and producers no longer need to bid the price down in order to sell their product.

If the price is below the market clearing price, consumers will up bid the price, and if the price is above the equilibrium price, producers will bid down the price. It is only at the equilibrium price that quantity demanded equals quantity supplied and the market price stabilizes. This is the only price for which consumers have no reason to offer a higher price and producers have no reason to offer a lower price.

NONPRICE DETERMINANTS OF DEMAND

Consumers base their purchasing decisions on several factors other than price. These nonprice determinants of demand are the things that are held constant in the definition of demand. When these factors change, the relationship between price and quantity demanded changes; that is, the demand curve itself shifts. An increase in demand is represented graphically as a shift in the demand curve in a northeasterly direction (for example, from *D*0 to *D*1 in Figure 2), and a decrease in demand is represented as a shift of the demand curve in a southwesterly direction (for example, from *D*0 to *D*2 in Figure 2). The two main nonprice determinants of demand are consumers' incomes and wealth, and the prices of

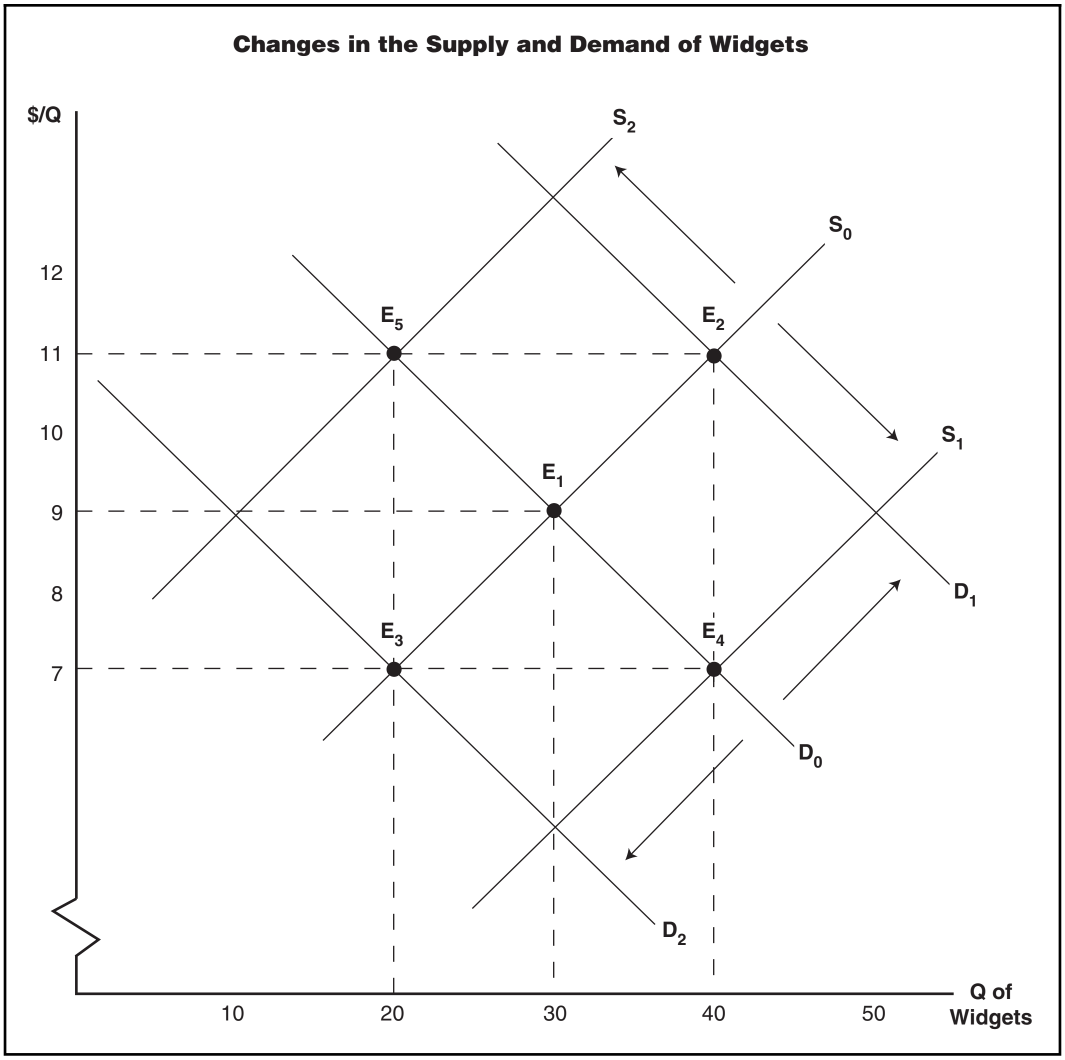

Figure 2

related goods. An increase in income and/or wealth can cause the demand for a good to either increase or decrease. If an increase in income/wealth causes the demand for a good to increase, the good is called a normal good. This increase in demand is illustrated in Figure 2 by a shift from *D*0 to *D*1, causing the market equilibrium to change from *E*1 to *E*2, resulting in an increase in the market price (from $9 to $11) and an increase in quantity bought and sold (from 30 to 40 units). If an increase in income/wealth causes the demand for a good to decrease, the good is called an inferior good. This is illustrated in Figure 2 by a shift in demand from *D*0 to *D*2. The market then clears at *E*3 with a lower market price ($7) and a smaller quantity (20 units). Likewise, the impact of a change in the price of a related good on a good's demand depends on whether the goods are related as substitute goods or complementary goods. Two goods are substitutes if an increase in the price of one causes the demand for the other to increase, and the goods are complements if an increase in the price of one causes the demand for the other to decrease.

NONPRICE DETERMINANTS OF SUPPLY

Producers base their decisions about what to produce with the productive resources they have at their disposal on more factors than just the prices of the different goods. These other factors are called the nonprice determinants of supply. The major nonprice determinants of supply are the prices of the inputs used to produce the product, the state of technology used to produce the product, and the prices of other goods that are related in production. An increase in supply is represented graphically as a shift in the supply curve in a southeasterly direction and a decrease in supply is shown as a shift in a northwesterly direction (see Figure 2). An increase (decrease) in the price of an input into the production of a good, which would increase (decrease) the cost of production, will cause the supply to fall (rise). For example, an increase in the price of fertilizer will cause the supply of corn to fall, holding other factors constant. If the supply curve were to shift from *S*0 to *S*2, everything else being equal, the market equilibrium would change from point E1 to E5, causing the market clearing price to rise (from $9 to $11) and quantity transacted to fall (from 30 to 20 units). An advancement in technology that lowers the cost of production will also cause supply of the good to rise. For example, the discovery of a new chemical agent that increases the yield of an acre of land planted in corn will increase the supply of corn, holding other factors constant. If the supply curve were to shift from *S*0 to *S*1, the market equilibrium would change from point *E*1 to *E*4, causing the market clearing price to fall (from $9 to $7) and the quantity transacted to rise (from 30 to 40 units). An increase (decrease) in the price of a different good that is produced using the same inputs (goods that are related in production) will cause producers to increase their production of the now higher-priced, and hence more profitable, good. In order to do this, resources will need to be reallocated away from the production of other goods. For example, an increase in the price of wheat (relative to the price of corn) will cause producers to shift factors of production toward the production of wheat and away from the production of corn.

JOHN L. CONANT

SUPPLY CURVES

(SEE: *Supply and Demand*)

T

TARGET MARKETING

A *target market* is a set of buyers sharing common needs or characteristics that a company decides to serve. A company identifies a target market in order to organize its tasks and cope with the particular demands of the marketplace. Target marketing forms the foundation of a modern marketing strategy because doing it well helps a company be more efficient and effective by focusing on a certain segment of its market that it can best satisfy.

Targeting also benefits consumers because a company can reach specific groups of consumers with offers carefully tailored to satisfy their needs. To do so, a company has to evaluate the various segments and decide how many, and which one, to target. There is no single way to segment a market. A company needs to research different segmentation variables alone, and in combination with others, to find its target market. There are four main variables that can be used in segmenting consumer markets: geographic segmentation, demographic segmentation, psychographic segmentation, and behavioral segmentation.

Geographic segmentation calls for dividing the market into different geographic units, such as nations, regions, states, counties, cities, or neighborhoods. Many companies today are localizing their products—as well as their advertising, promotion, and sales efforts—to fit the needs of individual cities, regions, and neighborhoods. For example, clothing stores sell clothes targeted to their geographic markets. In January, the Gap clothing store sells winter clothing in Portland, Maine, such as mittens, scarves, and winter jackets. A Gap located in Clearwater, Florida, will sell more T-shirts, shorts, and bathing suits.

Demographic segmentation divides the market into groups based on such variables as age, gender, family size, family life cycle, income, occupation, education, religion, race, and nationality. Demographics is the most popular basis for segmenting customer groups because of consumer needs, wants, and usage rates often closely reflect demographic variables. Even when a market segment is first defined using other factors, such as psychographic or geographic segmentation, demographic characteristics must be known in order to assess the size of the target market and to reach it efficiently. This information is also the easiest and least expensive to retrieve because it is secondary data; that is, it comes from research that has already been conducted. An example of successful demographic target marketing is that of cosmetic companies that have responded to the special needs of minority market segments by adding products specifically designed for black, Hispanic, or Asian women. For example, Maybelline introduced a highly successful line, called Shades of You, targeted to black women, and other companies have followed with their own lines of multicultural products.

Psychographic segmentation is the process of dividing markets into groups based on values, social class, lifestyle, or personality characteristics. Individuals in the same demographic group may fall into very different psychographic segments. Psychographic segmentation involves qualitative aspects—the "why" component of consumer buying patterns. Therefore, a company must conduct its own research, which can become very time-consuming and expensive. Marketers, however, are increasingly focusing on psychographic characteristics. *Redbook* magazine, for example, targets a lifestyle segment it calls "*Redbook* jugglers," defined as 25 to 44-year-old women who must juggle family, husband, and job. According to a *Redbook* ad, "She's the product of the me generation, the thirty-something woman who balances home, family, and career—more than any generation before her, she refuses to put her pleasures aside. She's old enough to know what she wants. And young enough to get it." According to *Redbook*, this consumer makes an ideal target for marketers of health foods and fitness products. She wears out more exercise shoes, swallows more vitamins, drinks more diet soda, and works out more often than do consumers in other groups.

Behavioral segmentation divides a market into groups based on consumer knowledge, attitude, use, or response to a product. Many marketers believe that behavior variables are the best starting points for building market segments. Why does one consumer drink Coke, and another Pepsi, and a third iced tea? Demographics and psychographics can provide many clues, but it is often helpful to consider additional factors as well. Individuals act differently depending on their situation or the occasion for using the product. For example, a woman who shops only at discount stores for clothing may nonetheless think nothing of spending $100 on a bathing suit at a specialty shop for her Caribbean vacation. Some holidays, such as Father's Day and Mother's Day, were originally promoted partly to increase the sale of flowers, candy, cards, and other gifts. Many food marketers prepare special offers and ads for holidays. For example, Beatrice Foods runs special Thanksgiving and Christmas ads for Reddi-whip in November and December, months that account for 30 percent of all sales of whipped cream.

Companies often begin segmenting their markets by using a single base, then expand by adding other bases. Consider Paging Network, Inc. (PageNet), a small provider of paging services. At first, PageNet used geographic segmentation, targeting easily accessible markets in Ohio and its own state of Texas. Once these markets were secure, the company introduced its product to thirteen additional geographically dispersed markets that represented the most growth potential. The small company next developed profiles of major users of paging services and targeted the most promising user groups, including salespeople, messengers, and service people. Flush with success, PageNet set out to capture more of their targeted markets. They used psychographic segmentation to target parents who leave their children with sitters, commuters who are out of reach of telephones while traveling to and from work or school, and elderly people living alone whose families want to keep an eye on them. Because of its successful use of target marketing, PageNet became the largest and most successful paging systems and services company in the nation. As of 2000, the company was expanding its target base once again with a service called VoiceNow, which transmits voice messages to customers' pagers, targeting customers who want "short bursts of information."

Many variables can be used to segment and select a target market. Practically any variable—such as age, sex, product usage, lifestyle, or desired benefit—can be used to describe a target market. The number of target markets identified also depends on a marketing strategist's ability to be creative in identifying segments. Target marketing is especially important for specialty products and shops. Target marketing rests on the assumption that differences among customers are related to differences in the purchasing behavior.

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TATUM TURNER

TARIFFS

(SEE: *International Trade*)

TAXATION

Taxation is the imposition of a mandatory levy on the citizens and/or the businesses of a country by their government. In almost every country, the government derives a majority of its revenues for financing public services from taxation. Most individuals will feel the impact of quite a number of taxes during their lifetimes. In addition, taxes have become a powerful instrument for policy makers around the world to use in attaining economic and social goals. As a result, the system of taxation in the United States and elsewhere has an impact on almost every business and investment decision that is made.

NATURE AND HISTORY OF U.S. TAXATION

In 1936, the U.S. Supreme Court defined a *tax* as "an exaction for the support of the Government." In this regard, there is no direct relationship between the exaction of revenue by the government and any benefit to be received by the taxpayer. As a result, a taxpayer—such as a corporate shareholder—cannot trace his or her tax payment to any particular governmental asset or program. Taxes may be distinguished in a similar fashion from licenses and from fees, which are payments made to the government for some special privilege granted or service rendered (such as a marriage license or a camping fee). They can also be distinguished from regulations and from penalties, which are charges imposed by government to eliminate or control a specific activity.

For taxes to pass constitutional muster, they must be levied on the basis of predetermined criteria. Not only must taxes be determined objectively, but also taxpayers must be able to calculate their tax liability ahead of time. Since most taxes are levied on a recurring or predictable basis, individuals can also engage in tax planning or in tax avoidance. In other words, they are free to conduct their lives in a way that minimizes the amount that must be transferred to the government in taxes.

Despite the adage that nothing is certain in the world but death and taxes, taxation has not always been the chief source of revenue for governments. While the primary goal of taxation is to provide the resources necessary to fund governmental expenditures, any taxing authority that has the power to control the money supply—such as the U.S. federal government—can satisfy its revenue needs merely by creating money. Complete reliance on this governmental power, however, would stimulate excess demand in the economy, which—in turn—would cause price inflation. Taxes, on the other hand, raise revenue with the opposite effect: They drain money from the private sector, causing a reduction in private consumption or investment expenditures.

Reflecting one of the rallying cries of the American Revolution—"No taxation without representation"—the system of taxation in the United States closely parallels the tax regime of England. At the time of its adoption in 1789, the U.S. Constitution gave Congress the power to levy and collect taxes. Promptly exercising this authority, Congress enacted was the Tariff Act of 1789, imposing a system of duties—called excise taxes—on imports. As a result, tariffs became the federal government's principal source of revenue.

As the scope of governmental activities and programs increased, additional sources of revenue were necessary to supplement the tariff system. However, the Constitution required that any direct tax imposed by Congress had to be apportioned among the states on the basis of their relative populations. Because the sizes of the states' populations differed, any tax on income would result in a different tax rate for the citizens of each state. Despite the apportionment requirement, Congress enacted the first federal income tax in 1861 to finance the vastly increased expenditures brought on by the Civil War.

While the original federal income tax was allowed to expire after the Civil War, it did lead to the successful effort to amend the Constitution. The Sixteenth Amendment to the Constitution became effective on February 25, 1913, providing that: "The Congress shall have the power to lay and collect taxes on incomes from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration." Without hesitation, Congress enacted the Revenue Act of 1913, on October 3, 1913 and made it retroactive to March 1, 1913.

As historical conditions changed and the federal government's need for additional revenues increased, Congress exercised its income taxing authority by the passage of many new revenue acts. Since each new piece of legislation simultaneously reenacted previous revenue acts and added new amendments to the law, it became necessary to research over one hundred separate statutory sources to determine what tax law was currently in effect. Eventually, in 1939, Congress resolved the confusion by systematically arranging all of the tax laws into the Internal Revenue Code of 1939, a permanent codification of the law that does not require reenactment.

MAJOR TYPES OF U.S. TAXES

Since its establishment in 1913, the income tax has played the dominant role in providing the funds with which the federal government operates. An income tax is an extraction of some of the taxpayer's economic gain, usually on a periodic basis. The federal government, and almost every state government, imposes a tax on the income of individuals, corporations, estates, and trusts. A final tax reckoning—involving the reporting of income and payment of taxes due—is made at the end of each year. However, in order to ensure tax collections, Congress has created a pay-as-you-go requirement, through a combination of payroll withholdings and estimated tax prepayments during the year.

Income is generally defined as any permanent increment to wealth. It does not include loans or any other temporary increments. As a general rule, Congress considers any incremental wealth to be taxable income, unless specific statutory authority excludes it. These increments to wealth can take many forms, such as cash, property other than cash, and services that are rendered to the taxpayer. While state governments set their own tax rules and rates, a majority of the states use the same definition of gross income as the federal government.

Unlike federal and state income taxes, wealth-transfer taxes are not significant revenue producers. Historically, the primary function of wealth-transfer taxes has been to hinder the accumulation of wealth by family units. Since 1976, the federal estate tax and the federal gift tax have been combined into one tax, known as the unified transfer tax. This unified system eliminates the distinction previously made between taxable lifetime transfers and transfers at death. Under this system, the value of a decedent's taxable estate is treated as his or her final gift.

Like federal income taxes, the tax rates on unified transfers are progressive. This means that an increasing percentage rate is applied to increasing increments of the tax base. Unlike the annual assessment of federal income taxes, the federal transfer tax is computed cumulatively on gifts made during a lifetime as well as on transfers at death. In addition, many states impose an inheritance tax on the right to receive property at death. Unlike an estate tax, which is imposed according to the value of property transferred at death, an inheritance tax is imposed on the recipient of property from an estate, although many wills provide that the estate should pay any inheritance taxes imposed on recipients of property.

In addition to income taxes and wealth transfer taxes, the federal government and most states impose some form of employment tax. The most common form of state employment tax is levied on wages, with the proceeds used to finance that state's unemployment compensation benefits program. In addition to its own unemployment tax, the federal government also imposes a Social Security tax on employers, employees, and self-employed individuals. The federal government uses proceeds from the Federal Insurance Contribution Act (FICA) tax to finance the payment of Social Security benefits as well as Medicare health insurance. If an employee will be eligible for Social Security and Medicare, the FICA tax is paid by both the employee and by his or her employer. Although subject to a different tax rate, self-employed individuals are required to pay FICA taxes on their net earnings from self-employment.

With only a few exceptions, state and local units of government in the United States also use the income tax and wealth transfer taxes as a source of revenue. In addition, these taxing jurisdictions have customarily relied on two other tax sources that generally escape taxation by the federal government:

1. The annual assessment of property tax has traditionally been the backbone of the local revenue system. It is a tax on the value of property—usually only real property, such as land and buildings—owned within a jurisdiction by nonexempt individuals or organizations.
2. In addition, most states and many local units of government impose sales taxes. This is a tax on the gross receipts from the retail sale of tangible personal property—such as automobiles and clothing—and certain services. Each taxing authority determines its own tax rate as well as the services and articles to be taxed. The seller collects the tax at the time of the sale, and then periodically remits the revenue to the appropriate taxing authority.

TAX PLANNING

In the United States and other democracies, a majority of citizens—or their duly elected representatives—vote to impose taxes on themselves in order to finance public services on which they place value but which are not adequately funded by market processes. However, determining which individuals or households or businesses actually reduce their private consumption or wealth as a consequence of a tax is not always a straightforward matter. After all, although taxes affect numerous aspects of our lives, their impact is not uncontrollable.

Tax planning is simply the process of arranging one's actions in light of their potential tax consequences. After all, a character in *Gone with the Wind* improves on the earlier adage by observing, "Death and taxes and childbirth! There's never any convenient time for any of them!" Despite the inconvenience that taxes impose, the average individual will feel the impact of quite a number of taxes during his or her lifetime. As a result, almost any attempt to accumulate or preserve wealth requires diligent tax planning.

The process of minimizing the tax liability—of an individual or of a transaction—is usually referred to as tax avoidance. Not to be confused with tax evasion, tax avoidance is the perfectly legal effort by taxpayers, and by paid tax advisers on behalf of their clients, to take those steps necessary to reduce one's taxes. As a result, anyone interested in minimizing their tax liabilities in the United States should take their cue from a 1947 opinion by Justice Learned Hand: "Over and over again courts have said that there is nothing sinister in so arranging one's affairs so as to keep taxes as low as possible. Everybody does so, rich or poor, and all do right, for nobody owes any public duty to pay more than the law demands: taxes are enforced exactions, not voluntary contributions. To demand more in the name of morals is pure cant."

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JEFFREY L. JACOBS

TEAMWORK

(SEE: *Work Groups*)

TELECOMMUNICATIONS

Telecommunications is the transmission of data and information between computers using a communications link such as a standard telephone line. Typically, a basic telecommunications system would consist of a computer or terminal on each end, communication equipment for sending and receiving data, and a communication channel connecting the two users. Appropriate communications software is also necessary to manage the transmission of data between computers. Some applications that rely on this communications technology include the following:

1. Electronic mail (e-mail) is a message transmitted from one person to another through computerized channels. Both the sender and receiver must have access to on-line services if they are not connected to the same network. E-mail is now one of the most frequently used types of telecommunication.
2. Facsimile (fax) equipment transmits a digitized exact image of a document over telephone lines. At the receiving end, the fax machine converts the digitized data back into its original form.
3. Voice mail is similar to an answering machine in that it permits a caller to leave a voice message in a voice mailbox. Messages are digitized so the caller's message can be stored on a disk.
4. Videoconferencing involves the use of computers, television cameras, and communications software and equipment. This equipment makes it possible to conduct electronic meetings while the participants are at different locations.
5. The Internet is a continuously evolving global network of computer networks that facilitates access to information on thousands of topics. The Internet is utilized by millions of people daily.

Actually, telecommunications is not a new concept. It began in the mid-1800s with the telegraph, whereby sounds were translated manually into words; then the telephone, developed in 1876, transmitted voices; and then the teletypewriter, developed in the early 1900s, was able to transmit the written word.

Since the 1960s, telecommunications development has been rapid and wide reaching. The development of dial modem technology accelerated the rate during the 1980s. Facsimile transmission also enjoyed rapid growth during this time. The 1990s have seen the greatest advancement in telecommunications. It is predicted that computing performance will double every eighteen months. In addition, it has been estimated that the power of the computer has doubled thirty-two times since World War II (Withrow, 1997). The rate of advancement in computer technology shows no signs of slowing. To illustrate the computer's rapid growth, Ronald Brown, former U.S. secretary of commerce, reported that only fifty thousand computers existed in the world in 1975, whereas, by 1995, it was estimated that more than fifty thousand computers were sold every ten hours (U.S. Department of Commerce, 1995).

Deregulation and new technology have created increased competition and widened the range of network services available throughout the world. This increase in telecommunication capabilities allows businesses to benefit from the information revolution in numerous ways, such as streamlining their inventories, increasing productivity, and identifying new markets. In the following sections, the technology of modern telecommunications will be discussed.

COMMUNICATIONS NETWORKS

When computers were first invented, they were designed as stand-alone systems. As computers became more widespread, practical, useful, and indispensable, network systems were developed that allowed communication between computers. The term "network" describes computers that are connected for the purpose of sharing data, software, and hardware. The two types of networks include local area networks (LANs) and wide area networks (WANs). As the name suggests, LANs cover a limited geographic area, usually a square mile or less. This limited area can be confined to a room, a building, or a group of buildings. Although a LAN can include one central computer connected to terminals, more commonly it connects a group of personal computers. A WAN covers a much larger geographic area by means of telephone cables and/or other communications channels. WANs are often used to connect a company's branch offices in different cities. Some familiar public wide area networks include AT&T, Sprint, and MCI.

INTERNET, INTRANET, AND EXTRANET

"Internetwork" is the term used to describe two or more networks that are joined together. The term "Internet" describes the collection of connected networks. The Internet has been made accessible by use of the World Wide Web. The Web allows users to navigate the millions of sites found on the Internet using software applications called Web browsers. People make use of the Internet in numerous ways for both personal and business applications. For instance, an investor is able to access a company directly and set up an investment account; a student is able to research an assigned topic for a class report; a shopper can obtain information on new and used cars.

The Internet concept of global access to information transferred to a private corporate network creates an intranet. In conjunction with corporate Internet access, many companies are finding that it is highly practical to have an internal intranet. Because of the increased need for fast and accurate information, an efficient and seamless communications line enabling all members to access a wealth of relevant information instantaneously is vital.

A company intranet in conjunction with the Internet can provide various types of information for internal and/or external use. Uses such as instantaneous transfer of information, reduced printing and reprinting, and elimination of out-of-date information can provide great benefits to geographically dispersed groups. Some examples of information that an intranet might include are company and procedures manuals, a company phonebook and e-mail listings, insurance and benefits information, in-house publications, job postings, expense reports, bulletin boards for employee memoranda, training information, inventory lists, price lists, and inventory control information. Putting such applications on an intranet can serve a large group of users at a substantially reduced cost.

Some companies might want to make some company information accessible to preauthorized people outside the company or even to the general public. This can be done by using an extranet. An extranet is a collaborative network that uses Internet technology to link businesses with their suppliers, customers, or other businesses. An extranet can be viewed as part of a company's intranet. Access by customers would allow entering orders into a company's system. For example, a person may order airline tickets, check the plane schedule, and customize the trip to his or her preferences. In addition to time and labor savings, this type of order entry could also decrease errors made by employees when entering manually prepared orders.

Security and privacy can be an issue in using an extranet. One way to provide this security and privacy would be by using the Internet with access via password authorization. Computer dial-in and Internet access to many financial institutions is now available. This is an example of limited access to information. While bank employees have access to many facets of institutional information, the bank customers are able to access only information that has to do with their own accounts. In addition to their banking account number, they would have to use their password to gain access to the information.

TRANSMISSION MEDIA

The physical devices making up the communications channel are known as the transmission media. These devices include cabling media (such as twisted-pair cable, coaxial cable, and fiber-optic cable) and wireless media (such as microwaves and other radio waves as well as infrared light). Wireless transmission has the advantage of not having to install physical connections at every point. Microwave stations use radio waves to send both voice and digital signals. The principal drawback to this system is that microwave transmission is limited to line-of-sight applications. Relay antennas are usually placed twenty-five to seventy-five miles apart and can have no interfering buildings or mountains between them. Earth-based microwave transmissions, called terrestrial microwaves, send data from one microwave station to another, similar to the method by which cellular telephone signals are transmitted.

Earth stations receive microwave transmissions and transmit them to orbiting communication satellites, which then relay them over great distances to receiving earth stations. Usually, geosynchronous satellites are placed roughly twenty-two thousand miles above the earth. Being geosynchronous allows the satellites to remain in fixed positions above the earth and to be constantly available to a given group of earth stations.

Many businesses either lease or rent satellite and/or microwave communication services through the telephone company or other satellite communication companies. If a business has only a small amount of information to be transmitted each day, it may prefer to use a small satellite dish antenna instead.

TYPES OF SIGNALS AND THEIR CONVERSION BY MODEM

Most telecommunications involving personal computers make use of standard telephone lines at some point in their data transmission. But since computers have been developed to work with digital signals, their transmission presents a noncompatible signal problem. Digital signals are on/off electrical pulses grouped in a manner to represent data. Originally, telephone equipment was designed to carry only voice transmission and operated with a continuous electrical wave called an analog signal. In order for telephone lines to carry digital signals, a special piece of equipment called a modem (MOdulator/DEModulator) is used to convert between digital and analog signals. Modems can be either external to the computer, and thus to be moved from one computer to another, or they can be internally mounted inside the computer. Modems are always used in pairs.

Both the receiving and transmitting modems must operate at the same speed. Multiple transmission speeds allow faster modems to reduce their speed to match that of a slower modem. The transmission rate and direction are determining factors that influence the speed, accuracy, and efficiency of telecommunications systems.

CONCLUSION

Telecommunications is one of the fastest-growing areas of technology in the world. Because of its rapid growth, businesses and individuals can access information at electronic speed from almost anywhere in the world. By including telecommunications in their operations, businesses can provide better services and products to their customers. For individuals, telecommunications provides access to worldwide information and services.

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Mary Alice Griffin
Susan Evana Jennings

TELECOMMUTING.

Telecommuting, the practice of working at home with the aid of computers, modems, and fax machines linked to the office, is becoming more prevalent in the modern business environment for a number of reasons. Environmental standards and car-pool requirements are being imposed on many businesses across the country. Economic factors are causing many employers to consider alternatives to an office facility-based staff. There is also an increasing number of parents who wish to remain at home to care for young children while maintaining their positions at work.

The key to a successful home-based office is to structure it so that customers and business associates sense no difference in work performed in the home and work done in a regular office. Unlike those who run their businesses exclusively from home, the telecommuter must have access to all information and resources required at both locations, and these arrangements must be cost-effective.

For those organizations that balance individual and corporate interests, this new frontier of the alternative workplace offers a profound opportunity to benefit both the employee and the company (Fisher, 1998). Yet a successful telecommuting program requires the combination of a motivated manager, a motivated employee, and a well-defined task.

DIFFERENT TYPES OF TELECOMMUTING

According to the "Pacific Bell Network Telecommuting Guide," the several different types of telecommuting are:

1. *Working at home*: This is the most popular method, one in which the employee designates workspace at home to conduct business functions.
2. *Satellite offices*: These are remote office locations, usually placed within a large concentration of employee residences, that allow employees at a single company to share common office space and reduce the time and expense of the commute to and from the main office facility.
3. *Neighborhood work centers*: Such a center provides workspace for employees of different companies in one location. Each company housing employees at these locations is usually responsible for the administrative and technical requirements of its employees.
4. *Virtual office mobile workers*: This is the newest form of telecommuting, whereby the telecommuter's office may be an airport, a hotel, or a car. These mobile telecommuters are constantly on the road and use technology to link to the office. ("Pacific Bell Network," 1998).

NUMBER OF TELECOMMUTERS IS GROWING

Today's knowledge workers are ideal candidates for splitting time between a central office and a home office. According to IDC/Link, a research firm in Framingham, Massachusetts, 11 million Americans are telecommuters working at home. In 1997 the advocacy group Telecommuter American counted 11 million at-home corporate workers (Johnson, 1998). Anne Fisher reported

Telecommuting is becoming more widespread.

that the ranks of at-home workers are growing 15 percent a year and that about 7 percent of U.S. white-collar employees now say they telecommute at least part of the time (Fisher, 1998). Although the telecommuter ranks are growing, only a third of the more than 1800 companies William M. Mercer recently surveyed offer employees the option of telecommuting (''Making Stay-at-Homes,'' 1998).

William G. Deming, a bureau economist, speculated that the increase in corporate telecommuting programs may explain much of the increase in the number of telecommuters. *Business Week* stated that one hint that this may be true is that there was not a corresponding increase in unpaid work done at home; indeed, the number of wage and salary workers who do work at home for which they are not paid decreased from 12.2 million to 1.1 million (“Home Sweet Officer,” 1998).

Some of the “telecommuting-friendly” employers include Aetna, with 2 percent; Arthur Andersen, with 20 percent; AT&T, with 55 percent; Boeing, with 1 percent; Cisco Systems, with 66 percent; Georgia Power, with 5 percent; Hewlett-Packard, with 8 percent; IBM, with 20 percent; Merrill Lynch, with 5 percent; and The Leisure Company/America West, with 16 percent (“Making Stay-at-Homes,” 1998).

WORKPLACE AND WORK FORCE FOR THE NEW MILLENNIUM

The philosophy that people are the most important element of a company has created a new awareness of the necessity to adapt the work facility to the needs of employees. Although telecommuting is one of the fastest-growing business trends, not every line of work is conducive to it. Telecommuting has been common for sales staff who spend most of their time on the road, but this arrangement can work for many other employees involved with office activities.

Technology-driven corporations are in the forefront of telecommuting. Telecommuting is ideal for such individuals as computer programmers, sales representatives, technical writers, public relations individuals, news reporters, clerical assistants, computer systems analysts, engineers, researchers, customer service representatives, pieceworkers, and data-entry clerks.

CHALLENGES

Areas of concern include feelings of isolation, exploitation of workers, working too much, supervision, access to files, and performance evaluation. Union officials fear that telecommuting will lead to “home work” equaling “electronic sweatshops.” The implementation of telecommuting in Los Angeles has led to the filing of three notices of alleged unfair labor practices by Local 660 of the Service Employee International Union, which represents half of the county’s permanent employees. The fundamental contention was that home workers are less protected from such potential abuses as violations of overtime standards and payment for work on a piecework basis. In Japan, piecework is done by telecommuters, with a truck coming by once a week to pick up the products.

A major stumbling block for companies is created by managers who do not trust that employees will work unless under direct supervision. The adage “While the cat’s away, the mouse will play!” applies. The major problem employees face with telecommuting is fear that they won’t be remembered when promotion time comes around. To address these concerns, both employers and employees must be involved in the development of the telecommuting program and learn to measure productivity in terms other than office hours.

BENEFITS

Telecommuting benefits both the company and employees in many ways. The most frequently mentioned advantages of telecommuting include greater productivity, improved information turnaround, better communication, reduced office space requirements, greater staffing flexibility, lower employee turnover, and an expanded employee market. Managers state that the key benefit of telecommuting is increased productivity, while employees state the key benefit is greater independence.

Telecommuting provides opportunities for new mothers, physically challenged individuals, the elderly, people living in remote locations, and individuals taking care of housebound persons to join the work force. Telecommuting is seen as a potential means of employing and retaining valuable employees by helping them balance work and home demands as well as reducing commuting costs and time. The major advantages of telecommuting are the reduced time and expense of commuting and the increased flexibility of working hours. Telecommuting is becoming a viable work alternative for many and can attract more individuals into the work force and retain them there. The Information Age brings a myriad of change that can be viewed either as a threat or a treat.

SELECTION OF PERSONNEL

Successful telecommuting requires a cooperative arrangement between managers and employees. Managers must select individuals who are suited to working at home and jobs that can be completed at home. Since it is difficult to monitor the employee and the workplace, the manager must be involved in designing and overseeing the telecommuting program. A trusting relationship between the employer and the employee is essential.

A self-assessment survey and a job description survey developed at the University of Tennessee can assist with the selection of the proper employee and the proper project for telecommuting. The results of such a test should not be used exclusively in determining whether a particular individual should work at home or a particular task should be completed at home; it should be combined with interviews and past evaluations.

Potentially successful employees should be self-directed, self-motivated, productive, well organized, and very knowledgeable about their job. Potentially successfully supervisors should trust employees, have a positive attitude toward telecommuting, be flexible, and be able to communicate well.

EQUIPMENT PROCUREMENT AND SELECTION

Any equipment that works well in the office also works well in the home office. Equipment is needed in two main areas: (1) communication—phone, a fax, and Internet access for e-mail; and (2) information—whether it is a simple calendar and contact database or complex documents, spreadsheets, and presentations. Access software is needed to dial into the office computer or into another machine that has needed files and information.

The American Telecommuting Association (ATA) states that a home office is quick and easy to hook up because of modern technology. According to the ATA, an office could include the following pieces of equipment: a $1000 desktop computer or $2000 notebook computer, fax, printer, copier, and scanner. For less than $2000 one can set up a powerful, complete business system in a spare bedroom or a corner of the kitchen (ATA, 1998).

IMPLICATIONS FOR TRAINING

As economic and demographic changes force telecommuting to become a reality for organizations and employees, there is a tremendous demand for training. A curriculum for a successful telecommuting program should include the following subjects: keyboarding, work environment, office automation, time management, performance-based evaluation, decision making, and ethics.

According to the City of Los Angeles Telecommuting Task Force report, training for home telecommuters should include how to set up a home office, how to start and stop working, how to control interruptions, and how to develop a results orientation to work assignments. The training for supervisors should include establishing performance standards for telecommuters, troubleshooting potential problems, and selecting the right employee and the right task.

SUMMARY

As our global economy in the Information Age evolves, telecommuting will increasingly become a popular work style. Many companies are turning to telecommuting to solve the dilemma of recruiting and retaining quality employees, controlling costs of office space, and meeting environmental standards. The major national advantages for telecommuting include savings in gasoline, a reduction in pollution, a decrease in traffic congestion, and lower highway accident rates.

For a successful telecommuting program, top-down support is vital, employee support is necessary, screening is important, training is essential, and guidelines are required. Major capital investments are not necessary. Telecommuting should be customized for each agency, each employee, and each task.

Peter Drucker sums up telecommuting in the following quotation: "Commuting to office work is obsolete. It is now infinitely easier, cheaper, and faster . . . to move information . . . to where the people are."

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CAROL LARSON JONES

TELECONFERENCING

(SEE: *Videoconferencing*)

TELEMARKETING

Telemarketing is the process of selling goods and services over the telephone. It has been used to successfully market a variety of products ranging from insurance to newspapers to industrial equipment, and it has the potential for selling virtually any product.

There are two kinds of telemarketing—outbound and inbound. Outbound telemarketing calls are those placed by salespeople to homes or businesses. Inbound telemarketing occurs when customers call in to businesses to place orders.

Outbound telemarketing is particularly appealing to businesses whose salespeople have traditionally made outside sales calls. It reduces the cost per contact, increases the number of contacts that can be made per day or week, and still retains the human element. Computerized databases of prospects and automated predictive dialers can further extend the potential number of contacts a telemarketer can make. Outbound calls can be used to canvass for new business, follow up former customers, and contact new leads.

Outbound calls present an ideal marketing situation in which the telemarketer has the undivided attention of the prospect and can get immediate feedback. At the same time, the limited window of opportunity requires that the salesperson establish rapport and trust quickly, listen carefully, and provide clear information. Success in outbound sales is related to product knowledge and presentation skills and, thus, can be enhanced by training.

Inbound telemarketing is also a very efficient marketing approach that also retains the element of personal interaction. Calls are generated by catalogues mailed to prospective customers or by radio, television, or print advertisements. These promotional pieces solicit customers to buy by calling a toll-free number. When customers call in, they may either reach a telemarketer directly or receive an electronic message that gives them the option to be connected to a salesperson. Since inbound callers have entered the buying process when they call in, a customer service orientation is more critical to the success of the telemarketer than sales training.

The use of the telephone as a sales tool dates back to the early 1900s. However, the full potential of outbound telemarketing was not recognized by business until WATS (wide area telephone service) lines came into existence in 1960. Likewise, the full potential for inbound sales did not become apparent until the Sheraton motel chain implemented the first toll-free 800 lines in 1967. During the 1970s, telemarketing techniques became more refined and were incorporated into the marketing strategies of business of all sizes. Between 1981 and 1991, spending on telemarketing efforts grew from $1 billion to $60 billion. And in 1997 telemarketing sales, to consumers and businesses, totaled $425.5 billion.

Although telemarketing has experienced continued growth, it has not been without problems. Many consumers have a negative perception of it because of untimely and annoying calls. It has also been the vehicle for a variety of fraudulent schemes, a fact that prompted a crackdown by the U.S. attorney general in 1997. Despite these concerns, the outlook for the industry appears to be positive. Research indicates that businesses are becoming increasingly receptive to doing business with sales representatives by telephone, sales trends are upward, and expansion is indicated by the projection that an additional 5 million telemarketing employees will be hired between 1995 and 2000.

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Earl C. Meyer
Winifred L. Green

TELEPHONE SKILLS

Telephones are devices that allow the user to communicate messages across lines electronically. One can easily communicate with those both nearby and far away using the telephone by simply dialing a specially designated number. The word *telephone* comes from two Greek words meaning "far" and "sound" ("Telephones," 1990).

Alexander Graham Bell invented the first telephone in 1876 in Boston, an outgrowth of his teaching the deaf and his experimentation with devices to assist in improving the hearing process.

Today it is difficult to estimate the total number of telephones in existence; because of their extreme importance as a communications tool, they are ubiquitous. Telephones come in a wide variety of shapes, sizes, and colors as well as with options that can be configured to accommodate almost any conceivable need.

DEVELOPING EFFECTIVE TELEPHONE SKILLS

Effective telephone skills are predicated on strong communications skills. The four major means of communication are speaking, reading, writing, and listening—with listening being the most important part.

Listening involves sensing, interpreting, evaluating, and responding. The major roadblocks to effective listening include distractions and interruptions. Roadblocks to effective listening can be overcome by practicing the following techniques:

- Being ready to listen actively.
- Keeping your emotions in check.
- Listening for specific information.
- Asking questions when necessary.

PARTS OF AN EFFECTIVE TELEPHONE CALL

Telephone calls may be broken into three major parts—(1) the *introduction*, in which both parties establish their identity and the convenience of the call; (2) the *purpose*, which involves communicating needs by asking well constructed questions; and (3) the *conclusion*, whereby both parties reach a verbal agreement on the points made during the call and any specific action that needs to be taken.

QUESTIONING SKILLS

Questions should be asked in such a way as to obtain the desired information. These are three major types of questions:

- *Open questions*: These questions call for more than a yes/no answer and often begin with *who, what, where, when, why* or *how*.
- *Closed questions*: These questions are used primarily to verify information. Often these

questions begin with *are you, do you, can, could, did, will,* or *would*

- *Forced-choice questions*: These questions call for an either/or response. The listener has the choice of at least two options.

During the call, when both parties are asking questions, it is equally important to listen attentively. Attentive listening can be demonstrated by speaking in such ways that the listener knows you are hearing. It is also an excellent idea to write down any questions you want to ask prior to beginning the call or during the call.

SKILLS FOR MAKING EFFECTIVE TELEPHONE CALLS

Before you make a telephone call, consider *why* you are making the call. Calls could possibly be made to obtain information, return a call, schedule an appointment, or service a customer.

Be ready psychologically to make the call. Have a positive attitude toward making the call at the time you are making it. Place *all* necessary information before you when you make the call.

When making a call, be sure to do the following:

- Identify yourself immediately to get the call off to a positive start.
- Tell the person why you are calling. Be specific.
- Ask well-stated, appropriate questions to obtain the desired action.
- Close the call in a friendly tone with an understanding between both parties of the action(s) that need to be taken.

TOOLS FOR EFFECTIVELY MAKING TELEPHONE CALLS

Telephone numbers may be obtained from your own record, from directories, or from directory assistance.

Have the telephone number directly before you when you get ready to make the call. Developing your own personal telephone list is very helpful.

Telephone directories that contain both White Pages and Yellow Pages can also be sources of excellent information. Use the White Pages when you want to locate a specific name of a person. Use the Yellow Pages when you want to locate a product or service.

Directory assistance provides access to a telephone number by going through a directory assistance operator. Usually there is a fee for obtaining this information.

OPERATOR-ASSISTED CALLS

Operator-assisted calls are the most expensive type of telephone calls. Avoid them if possible. Types of operator-assisted calls include the following:

- *Collect calls*: In collect calls, the person being called must agree to accept the charges for the call.
- *Third-number billing*: Such a call is billed to a third party.
- *Person-to-person*: Such a call involves telling the operator you will speak only to a designated person. If that person is unavailable, you will not have to pay for the call.
- *Cellular calls*: A call made from a cellular phone may require an operator. If this is the case, phone charges can be expensive.

INCOMING TELEPHONE CALLS

Be prepared to answer the telephone when it rings. Keep pens and message pads close by as well as telephone directories and other reference materials. Use an answering machine if you must be away from your desk.

When answering the phone, follow these guidelines:

- Answer the telephone no later than the second ring.
- Identify yourself in a friendly tone.
- Use the caller's name.
- Gather as much information as possible.
- Do not interrupt the caller.
- Give accurate information.

SCREENING CALLS

Screening a call means using judgment to determine whether you should put the caller through to the desired person. By being friendly to the caller without revealing embarrassing or unnecessary information.

TRANSFERRING CALLS

Transferring a call means that, for any number of reasons, it would be best for the caller to speak with someone else. It is important to be thoroughly familiar with the specific procedure for transferring a call.

MESSAGE TAKING

Today, messages may either be left as voice-mail messages for the person being called or written down by someone else. If you are writing down the message, use a telephone message form to fill in the appropriate parts.

HANDLING COMMON TYPES OF SPECIALIZED TELEPHONE CALLS

Handling the wide variety of both incoming and outgoing specialized telephone calls requires in-depth skill. The following are some of the more common types of specialized calls:

- *Information calls*: Calls you make to gather information require careful thought to determine exactly *what* information you are trying to obtain.
- *Scheduling appointment calls*: Know exactly *when* you want an appointment *before* you place the call. Have all information in front of you when you place the call. If you are making calls for another individual, notify that person of the scheduled appointment. Likewise, be certain you have carefully recorded on an appointment calendar the designated scheduled time as well as any special instructions.
- *Complaint calls*: Often a complaint call can become a negative experience by nature of the call's very existence. Be prepared to deal with emotions in as positive a fashion as possible.
- *Collection calls*: Collecting money over the telephone is a challenging experience. Good questioning skills are of paramount importance in handling a collection call.
- *Telemarketing calls*: Selling a product or service over the telephone is done by a skilled salesperson called a telemarketer. Generally, telemarketers have been trained to deal with a wide variety of responses and situations.

It is wise to follow these steps when dealing with specialized calls:

1. Always respond in a courteous and professional manner.
2. Give accurate information.
3. Be prepared to deal with rejection and negative responses.
4. Offer a variety of positive solutions.
5. End all calls courteously.

CUSTOMER SERVICE ON THE TELEPHONE

Customer service is an extremely important aspect of telephone skills. This is the reason most businesses are in existence—to serve the customer. Good customer service via the telephone shows respect for the customer and builds business over time. Good customer service is provided by maintaining an excellent voice quality that is easy to understand and includes a pleasant tone spoken at a reasonable speed. Selecting appropriate vocabulary is also important. If words are used that are not understood, positive communication will not be conveyed. Listen intently when servicing a customer. Be prepared to offer responses that will be delivered in a positive manner.

TELEPHONE EQUIPMENT AND EMERGING TECHNOLOGY

Choosing telephone equipment is a challenge with the wide variety of choices available. Today there are many telephone-related pieces of equipment that can be used with the telephone. Some points to consider when selecting telephone equipment include: size, location, number of phones, special options, and whether to buy or lease. Careful thought should be given to researching your needs before making a decision.

Cellular telephones are the type of mobile phones used, for example, in cars, on planes—or on the street. These phones are serviced through licensed cellular phone companies with a variety of configurations. Check them out carefully. Often bad weather or other types of interference can make communication by cellular phone difficult.

Cordless telephones are portable and very convenient. They come in a wide variety of styles for easy use. Cordless phones can be used only within a certain range of area. Their base must be attached to a telephone line in order to function.

Pagers are devices that can be used to alert the user that someone is trying to call them. Pagers come with various options. The more options that are selected, the more expensive the pager.

TELEPHONE SKILLS AND THE FUTURE

Telephone skills will undoubtedly continue to be increasingly important as the technology and equipment evolve. Strong communication skills will always be highly essential when using the telephone. Evolving technology will enhance the telephone in the future. Telephone skills must be integrated with that technology to make the process work.

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DOROTHY A. MAXWELL

TEMPORARY EMPLOYMENT

Temporary employment is work that is not a permanent job. Rather, temporary employment allows an individual to work for shorter terms in a variety of jobs utilizing many skills. The scope of temporary employment is wide-ranging. In many cases, temporary employment can lead to permanent positions. Temporary employment is an expanding type of work in the twenty-first century. As America joins the global marketplace in seeking qualified employees for its work force, temporary employment is playing a major part in the process.

Since the middle of the twentieth century, temporary employment has expanded greatly and become a viable and effective tool for American businesses. In 1995, it was estimated that the actual size of the "contingent" ("flexible") work force was between 2.2 and 4.9 percent of the work force (Bureau of Labor Statistics, 1995).

The Conference Board estimated in 1997 that by the year 2000, 35 percent of the companies are expected to use contingent workers (U.S. News, 1997).

Clerical workers presently account for approximately 40 percent of the total U.S. temporary payroll. However, the number of contingents includes CEOs, human resources directors, computer systems analysts, accountants, doctors, and nurses . . . Approximately 20 percent are professionals . . . About 90 percent of short-term temporary workers are supplied by a staffing company (Sunoo, 1998).

When a business can hire temporary help on an "as needed" basis, costs can usually be controlled. In the twenty-first century, temporary employment is playing a major role in expanding jobs in the global marketplace. Employing people on a temporary basis to work in diversified work environments allows businesses worldwide to deal with competition more effectively.

REASONS FOR EXPANSION

There are several major reasons for increased temporary employment. One is *company downsizing*. Many companies are being forced to downsize because of increased costs of operation. When a company is placed in this position, temporary employment often becomes a realistic option. From the standpoint of cost, it is cheaper, as many fringe benefits do not have to be paid to temporary employees. Companies can hire temporary employees for periods of time necessary to accomplish the project or task at hand. Also minimal training is required for temporary employees.

Another reason is *increased global competition.* Today's global marketplace necessitates the use of temporary employment on a worldwide scale. There is a growing acceptance of temporary hiring through Europe. Formerly, many nations did not acknowledge temporary employment; however, governments are beginning to recognize a legitimate need to use all human resources available in dealing with global competition.

Job requirements vary greatly from country to country, thus creating unusual challenges for those considering the use of temporary employees. Benefits also vary greatly. For example, Belgium requires a substantial contribution to health and social security costs for temporaries, a contribution that totals about 35 percent of the gross salary, payable by the temporary help firm. In contrast, the United Kingdom requires very few benefits for temporaries.

In many European countries, temporary employees function as temporary replacements for those on maternity leave. Throughout much of Europe, maternity leaves last much longer than in the United States. For example, in Belgium pregnant employees get four and a half months of leave. In France, employees stop work six weeks before their due date and come back to work eight weeks after the birth of the child. In both countries, the employees' jobs are guaranteed upon return (Messmer, 1994).

VALUES TO FIRMS AND EMPLOYEES

Temporary employment is growing for several reasons. To begin with, technology has provided opportunities for both large and small companies to customize and streamline their tasks. But doing so requires specialized technical competence. Temporary employees can provide state-of-the-art competence.

Professional staffing firms are especially helpful in this area. For example, Manpower has a division called Manpower Technical, whose employees are assigned to many of the world's leading high-technology firms. Specific technology training is provided for them to meet this increasing demand.

In addition, with the workplace constantly undergoing change, temporary employees can "bridge the gap" when a business experiences a shortage of help. Temporary employment gives companies the opportunity to test patterns of employment trends and gives employees the opportunity to explore various careers. The combination creates a unique opportunity for a win-win situation.

Reasons for considering temporary employment are as individual as the individuals who seek temporary employment. The major reasons individuals become temporary employees include the following:

Additional income: With a continuing trend of more family members needing to work, temporary employment provides additional income.

Career-path mobility: Temporary employment can often lead to full-time temporary positions or to permanent positions. Employers who use part-time employees have the opportunity to "try out" an individual to see if perhaps a permanent job match would work. The wide variety of firms using temporary employees provides for ample career exploration.

Temporary employment can alleviate the financial and emotional stress involved in the search for a permanent job, thus resulting in a better permanent job.

Skill improvement: Temporary employment provides employees with an opportunity to gain additional training in specific skills, especially in the area of technology. Most large staffing firms provide training to temporary employees on an ongoing basis.

Flexibility: Temporary employment provides flexibility in a variety of ways. This can be both a plus and a minus. Being assigned a temporary job usually means working with different groups of individuals to get a job done in a short period of time. On the other hand, temporary jobs can provide personal opportunities for acquiring knowledge in various fields of work. Temporary employment demands flexibility in being available for work on short notice with a positive attitude toward whatever the assignment may be.

SOURCES

The most common route to temporary employment is through a professional staffing service. One good approach is to look in the Yellow Pages of the telephone book. Newspapers are also good resources. And the Internet abounds with a wide variety of staffing services. In addition, many companies who have Web sites have a section called "Applying for a Job." Of course, the traditional door-to-door approach can provide opportunities for temporary employment, as can word of mouth.

It is recommended that persons consider these points when seeking a temporary job through use of a staffing service:

1. What is the history of the staffing service?
2. What is its placement record?
3. Do I have to pay a fee if a job is found?
4. What benefits does the temporary staffing service offer?
5. How often am I paid?
6. Is the staffing service affiliated with a national association such as the National Association of Temporary and Staffing Services?
7. What potential is there for growth with the staffing service?
8. What if any job restrictions exist?
9. Will I be kept busy with challenging and interesting assignments?
10. Will I be provided with training?

Getting answers to these questions is important for those considering temporary employment, for they often reflect the quality of the staffing service.

THE FUTURE

The future of temporary employment appears extremely good. Temporary work assignments are becoming more challenging and are lasting for longer periods of time.

Temporary employment will probably continue to be a strong training ground for businesses. The effect of downsizing indicates that no job is stable forever. Because of technology, many jobs have become obsolete, and thus employees without technological skills have been separated from companies for which they had been employed for many years. These displaced workers often turn to temporary employment as an opportunity to improve old skills and learn new ones. Although education can be obtained by returning to a formalized school setting, training can also be obtained at a staffing agency.

Professional temporary employees work for a variety of reasons. Many seek only short-term employment to keep busy. Many are semiretired and looking for a sense of involvement while supplementing their retirement incomes.

Temporary employment offers many interesting opportunities, but it definitely is not for everyone. A staffing agency should be investigated carefully before one signs on. Being flexible and assuming a fair amount of risk taking is recommended. Long- and short-term goals should always be kept in mind.

Temporary employment is almost certainly here to stay and should continue to grow in the years ahead. Learning both the obstacles and the opportunities of temporary employment can provide a sense of focus and direction.

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DORORTHY A. MAXWELL

THEORIES X-Y

(SEE: *Management/Leadership Styles*; *Motivation*)

THEORY Z

(SEE: *Management/Leadership Styles*)

TIME MANAGEMENT

Time is probably the most valuable asset available to people and organizations. Understanding how to manage one's time can contribute mightily to the success of personal and professional lives. However, as with any other asset, it may be wasted if it's not valued.

Unfortunately, it is human nature to waste time. It is true that some people naturally have good time-management skills, having developed good techniques for managing themselves and their time. But others have developed poor habits related to time. Needless to say, most people do not like to proclaim or admit these kinds of weaknesses.

Wasted time cannot be replaced. With increasing demands both in the workplace and at home, a great need exists for time to become more respected, valued, and balanced.

DEFINITION OF TIME MANAGEMENT

Time management may be defined as the discovery and application of the most efficient method(s) of completing assignments of any length in the optimum time and with the highest quality.

This definition of *time management* has widespread applications:

- It applies to the entire spectrum of activities ranging from (1) simple "do-it-this-morning tasks" assigned by individuals to themselves or to others (e.g., prepare several short letters) to (2) large projects developed for a large organization by many people with completion contemplated to take a long period of time (e.g., write a book or open a new branch office).
- It denotes the "best" time, which is usually but not always the shortest time.
- It pertains either to (1) continuing and repetitious activities (e.g., daily logging-in of shipments received) or to (2) occasional activities (e.g., selection of new CEO).
- It includes production of anything, such as manufacture of a tangible product, provision of a service, preparation of a written document, development of a procedure, or arrival at a decision.
- It may include a progress-point assignment (e.g., development of plans for the preliminary testing of a new product) or an end-goal assignment (e.g., a final marketing plan for a new product).
- Development of plans for time management must necessarily presume the existence and application of such desirable personal and work qualities as motivation, discipline, consideration for others, and the desire to succeed.

BENEFITS OF GOOD TIME MANAGEMENT

Many valuable rewards potentially await those willing to develop good time-management practices. In individual careers, increased job performance and promotions may result. In personal lives, individuals may achieve successful marriages, more family time, less debt, and less stress. In addition, all types of organizations—business, civic, school, political, and religious—may receive productive, competitive, and financial benefits from observance of good time-management practices.

ACHIEVEMENT OF GOOD TIME MANAGEMENT

Business firms and other organizations often find it profitable to take tangible steps to learn the best possible time-management strategies. Some or all of the following approaches may be considered:

- Call in an outside person or organization that specializes in time-management consulting and have a detailed evaluative study conducted of the practices being followed.
- Develop task forces within the firm or organization to undertake time-management studies with the goals of finding, analyzing, and "curing" areas experiencing wasteful time procedures.
- Have individuals within the firm or organization engage in educational and research activities related to time management, such as

- enrolling in college courses, checking the Internet, participating in correspondence courses, and/or attending seminars.
- Check into the possibility of visiting and studying other firms noted for their efficient time-management practices.

ACHIEVING AND APPLYING GOOD TIME-MANAGEMENT PRINCIPLES

In most organizational and personal activities, three areas of endeavor play prominent roles in achieving and applying good time-management principles: (1) development of suitable personal qualities, (2) development of short- and long-range goals, and (3) effective use of computers.

Development of Suitable Personal Qualities Good time management requires the utmost in organizational ability. Answers to questions such as the following must be found: Does the worker have all the necessary tools located conveniently? Can necessary tools be found without wasting time? Is provision made for replacement of items that routinely get used up? Are necessary lists placed in a handy location? Are lighting, temperature, and noise at proper levels? If reference materials are needed to perform the job, are they placed in accessible locations? Where direct contact with other persons is necessary to obtain information, can these persons be quickly contacted? Have procedures been worked out to reduce clutter and confusion? Is complete cleanup of workstations required daily or at other appropriate time intervals? Have job duties been arranged in order of priority?

Planning is necessary to achieve success in time management. Companies find that production moves more efficiently when procedures have been carefully worked out in detail.

Self-discipline and motivation play key roles in this process. Once a commitment is made to improve, an urge to proceed efficiently tends to follow, and it is necessary to apply this urge to the tasks at hand. Motivation grows as workers begin seeing the results of improved production.

Special efforts need to be paid to procrastination, one of the deadliest enemies of good time management. People who suffer from procrastination wait until the last possible moment to do almost anything. Some find it almost impossible to take the first step in any project. It can seriously affect work quality and heighten personal stress. It may create uninvited feelings of panic and chaos.

Perhaps the best cure for procrastination is imposition of strict time limits either upon one's self or upon others in the chain of command.

Development of good time-management practices may require inauguration of a program of self-evaluation. Personal habits may need to be studied carefully to see if any are faulty and need to be improved.

Development of Short- and Long-Range Goals Establishing short- and long-range goals is essential to successful time management in both one's personal life and one's work life.

When establishing goals, it is necessary to determine and specify standards that must be achieved within stated dates and/or times. This involves identifying a series of specific steps designed to bring one closer and closer to a stated goal. A good plan must include amounts of time per day or hour (or other time measurement) that will be devoted to work geared to achievement of the goal. It should include estimated time costs that might result from barriers or obstacles encountered along the way.

Prioritizing—that is, ranking goals in order of importance—is necessary in situations where the most important of the possible goals may not be easily determined. For example, in designing a new refrigerator, there is often a clash between the engineers, who wish it designed to operate at the highest efficiency level, and the marketing people, who wish it to be given a price tag that will maximize its salability. Which is given the highest priority—quality or pricing? A time-management plan may very well be involved in determining the answer.

Effective Use of Computers Computers can provide essential assistance in helping people to manage their time wisely by tracking details, coordinating schedules, facilitating communication, and securing and organizing data.

Computers greatly assist those who work with others at a considerable geographic distance. Written messages can be transmitted instantly through e-mail. Data can be researched comparatively quickly through the Internet.

In and of themselves, however, computers do not provide an automatic solution for time-management problems. They are most helpful to people who are already both knowledgeable and organized—and therefore best able to apply the benefits of computers to time management.

In addition to computers, other technology exists that can contribute to the quality of time-management plans:

- Faxing is the instantaneous transmission of communications from one fax (facsimile) machine to another anywhere in the world.
- Priority mail and overnight-delivery service are offered by the U.S. Post Office.
- Telephones, which once provided only voice-transmission service, now offer voice-mail recording, beepers, cellular service, and other services.

TIME MANAGEMENT AND LARGE PROJECTS

Complications inevitably arise with a large project that involves management and coordination of several organizations and people who are all contributing to its completion. A classic example is a construction project involving a building, dam, bridge, or road.

Suppose, for example, a building is being constructed for XYZ business firm. Often, in cases like this, the role of time is very critical. It may be that XYZ firm has found it necessary to get heavily involved in activities such as selling or leasing its existing location, making the myriad of moving arrangements for its employees and their equipment, and working out contacts with its customers.

XYZ firm very much desires the building under construction to be completed at the agreed-upon time. If not, XYZ firm could encounter large expenses in having to put up with temporary locations and increase the time spent in making large numbers of alternative arrangements. In fact, time in such situations is so critical that contracts often require builders to forfeit fees if the construction is not completed on schedule.

In cases such as this (and in many other applications), extensive use may be made of the Program Evaluation and Review Technique, usually called *PERT*. Developed in the 1950s, PERT groups various activities graphically. Activities in the construction of a large building, for example, might include excavations, various foundation workings, windows, air conditioning, heating, painting, and so on. Each activity requires not only estimates of time but also the costs of labor, material, and money. Some of the activities are sequential—the first activity must be completed before the second can begin. Other activities are concurrent—more than one activity can be worked on at a time. Many valuable rewards await people and organizations who are willing to develop good time management practices.

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CARRIE FOLEY

TIME VALUE OF MONEY

Are you indifferent between receiving $1,000 today and receiving $1,000 one year from today? If your intuition prefers receiving the funds today, rather than one year from today, then your intuition recognizes the time value of money. Owners of cash can permit borrowers to rent the use of their cash. *Interest* is payment for the use of cash.

Expenditures for an investment most often precede the receipts produced by that investment. Cash received later has less value than cash received sooner. The difference in timing affects whether making an investment will earn a profit. Amounts of cash received at different times have different values. We use interest calculations to make valid comparisons among amounts of cash paid or received at different times.

CONCEPTS

Businesses typically state interest cost as a percentage of the amount borrowed per unit of time. Examples are 12 percent per year and 1 percent per month. When the statement of interest cost includes no time period, then the rate applies to a year; thus “interest at the rate of 12 percent” means 12 percent per year.

The amount borrowed or loaned is the *principal. Compound interest* means that the amount of interest earned during a period increases the principal, which is then larger for the next interest period.

If you deposit $1,000 in a savings account that pays compound interest at the rate of 6 percent per year, you will earn $60 by the end of one year. If you do not withdraw the $60, then $1,060 will earn interest during the second year. During the second year your principal of $1,060 will earn $63.60 interest; $60 on the initial deposit of $1,000 and $3.60 on the $60 earned the first year. By the end of the second year, you will have $1,123.60. Compounded annually at 8 percent, cash doubles itself in nine years. If a twenty-five-year old invests $2,000 each year which earns 8 percent a year, the retirement fund will grow to more than $425,000 by the time that person reaches age sixty-five.

When only the original principal earns interest during the entire life of the loan, the interest due at the time the borrower repays the loan is *simple interest.* Simple interest calculations ignore interest on previously earned interest. Nearly all economic calculations, however, involve compound interest.

Problems involving the time value of money generally fall into two groups:

1. We want to know the *future value* of cash invested or loaned today.
2. We want to know the *present value*, or today’s value, of cash to be received or paid at later dates.

FUTURE VALUE

If you invest $1 today at 12 percent compounded annually, it will grow to $1.12000 at the end of one year, $1.25440 at the end of two years, $1.40493 at the end of three years, and so on, according to the formula:

$$Fn; = P(1 + r)_n$$

where

F_n = accumulation or future value

P = one-time investment today

r = interest rate per period

n = number of periods from today

The amount F_n is the *future value* of the present payment, P, compounded at r percent per period for n periods.

Example. How much will $2,000 deposited today at 8 percent compounded annually be worth 40 years from now?

\$2,000 will grow to \$2,000 × $(1.08)^{40}$ = \$2000 × 21.72452 = \$434,490 *

*(While you can compute 1.08 can be raised to the 40th power manually, future value tables, calculation, and computers can remove the tedium of such computations.)

PRESENT VALUE

Now, consider how much principal, P, you must invest today in order to have a specified amount, F_n, at the end of n periods. You know the future amount, F_n, the interest rate, r, and the number of periods, n; you want to find P. In order to have \$1 one year from today when deposits earn 8 percent, you must invest P of \$.92593 today. That is, $F_1 = P(1.08)^1$ “or” \$1 = \$.92593 × 1.08.

The number $(1 + r)-^{n}$ [= $1/(1 + r)^n$] equals the present value of $1 to be received after *n* periods when interest accrues at *r* percent per period. The discounted present value of $1 to be received n periods in the future is $(1 + r) - ^{n}$ when the discount rate is *r* percent per period for *n* periods.

Example What is the present value of $1 due 10 years from now if the interest rate (equivalently, the discount rate) *r* is 8 percent per year? $(1 + .08) - ^{10} \times \$1 = \$.46319$ *
*(Present value tables and computers simplify such a calculation)

CHANGING THE COMPOUNDING PERIOD: NOMINAL AND EFFECTIVE RATES

"Twelve percent, compounded annually" states the price for a loan; this means that interest increases principal once a year at the rate of 12 percent. Often, however, the price for a loan states that compounding is to take place more than once a year. A savings bank may advertise that it pays 6 percent, compounded quarterly. This means that at the end of each quarter the bank credits savings accounts with interest calculated at the rate 1.5 percent (= 6%/4).

$10,000 invested today at 12 percent, compounded annually, grows to a future value one year later of $11,200. If the rate of interest is 12 percent compounded semiannually, the bank adds 6 percent interest to the principal every six months. At the end of the first six months, $10,000 will have grown to $10,600; that amount will grow to $10,600 × 1.06 = $11,236 by the end of the year. Notice that 12 percent compounded semiannually is equivalent to 12.36 percent compounded annually. At 12 percent compounded monthly, $1 will grow to $1 × (1.01)12 = $1.12683 and $10,000 will grow to $11,268. Thus, 12 percent compounded monthly provides the same ending amount as 12.68 percent compounded annually. Common terminology would say that *12 percent compounded monthly* has *an effective rate of 12.68 percent compounded annually* or *is equivalent to 12.68 percent compounded annually*. If a nominal rate, *r*, compounds *m* times per year, the effective rate equals $(1 + r/m)^{m} - 1$.

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ROMAN L. WEIL

TRADE DISCOUNTS

(SEE: *Pricing*)

TRADEMARKS

Trademarks or *marks* are words, symbols, designs, combinations of letters or numbers, or other devices that identify and distinguish products and services in the marketplace. When trademarks are presented to the public via advertising, marketing, trade shows, or other means, they become one of a company's most valuable assets—potential customers identify a company by its trademark. Because certain trademarks immediately create an image of quality goods and services to potential buyers, they are valuable assets that should be protected.

When trademarks are registered at the state, federal, or international levels, their owners are provided the maximum legal protection for company names and/or company products. Thus, in creating or selecting company names and trademarks, a major concern is to design names and trademarks that may be registered with U.S. Patent Office. Today, the feasibility of designing names for products and services as well as trademarks for them is not likely because millions of trademarks are already registered.

The creation of trademarks involves the development of symbols or other devices to identify products and services in the marketplace. Guidelines exist for creating trademarks. Individuals who are developing trademarks must avoid generically descriptive and misleading terms as well as foreign translations. As soon as a tentative trademark has been developed, its creators should consult a patent attorney for assistance making it sufficiently distinctive to be registrable.

A Chicago Cubs trademark logo.

After the distinctive trademark has been designed, the creators need to ascertain that it is available for use; that is, it should not be currently used by another company. Thus, a trademark search is recommended by a company specializing in trade and service mark law. Once the availability of the proposed trademark has been certified, applications and related artwork are filed with the U.S. Patent Office. On receipt of the application, examiners in the Patent Office conduct a search to validate that the proposed trademark is not confusingly similar to previously registered trademarks and is thus usable. To receive a filing registration date, the owner must provide all of the following: (1) a written application form; (2) a drawing of the mark on a separate piece of paper; (3) the required filing fee; and (4) if the application is filed based on prior use of the mark in commerce, three specimens for each class of goods or services. The specimens must show actual use of the mark with the goods or services. The specimens may be identical or they may be examples of three different uses showing the same mark.

If the Patent Office search does not yield any conflicting trademarks and the proposed trademark is deemed registrable, it is published for opposition in the Patent Office's *Official Gazette.* Anyone who believes that a company may be damaged by the registration of the proposed trademark has an opportunity to challenge its registration. If no objection to the proposed trademark is filed, then the registration is allowed and issued. Thus, the trademark is distinctive and the ® may be used after it. Once the trademark has been issued by the Patent Office, its owners need to watch for inappropriate use of it. In addition, trademark owners need to monitor proposed trademark registrations for similar trademarks.

Trademark maintenance involves periodic filing of documents with the Patent Office to keep the registration active. Unlike copyrights or patents, trademark rights can last indefinitely if the owner continues to use the mark to identify its goods or services. The term of a federal trademark registration is ten years, with ten-year renewal terms. However, between the fifth and sixth year after the date of initial registration, the registrant must file an affidavit setting forth certain information to keep the registration alive. If no affidavit is filed, the registration is canceled. A U.S. registration provides protection only in the United States and its territories. The owner of a mark who wishes to protect it in other countries must seek protection in each country separately under the relevant laws. The U.S. Patent Office cannot provide information or advice concerning protection in other countries. Interested parties may inquire directly in the relevant country or its U.S. offices or through an attorney.

RANDY L. JOYNER

TRADE SHOWS

Trade shows provide a forum for companies to display and demonstrate their products to potential buyers who have a special interest in buying

CHICAGO 1997 AUTO SHOW
SAAB
SAAB
SAAB

Displays at the Chicago Auto Show.

these products. The compacted time frame and concentrated location of trade shows are cost-effective for exhibiting companies and convenient for buyers.

Since the 1960s, trade shows have become an increasingly prominent part of the promotional mix. Their relative importance is reflected in the promotional expenditures of U.S. companies: Larger amounts are spent each year on trade exhibitions than on magazine, radio, and outdoor advertising; only newspaper and television advertising receive a larger share of promotional dollars.

The primary role of trade shows in the promotional mix is that of a selling medium. Depending on the type of product being exhibited, selling activities can involve booking orders or developing leads for future sales. If show regulations permit, they can even involve selling products directly at the exhibit. Trade shows also serve as vehicles for advertising and publicity. Exhibits can be very effective three-dimensional ads as well as collection points for names for direct-mail lists. They can also command the attention of the news media, which regularly cover shows in search of stories on new products and new approaches.

Participating companies can also accomplish nonpromotional marketing objectives at trade shows. Market research data, for example, can be collected from show visitors. Competitors' offerings can be evaluated. And contacts can be made with potential suppliers and sales representatives.

More than 10,000 trade shows are held in the United States each year, and the number is growing. Nearly half of those are large business-to-business shows with 100 or more booths. The smaller exhibitions include both business-to-business and consumer shows.

Business-to-business trade shows focus on goods and services within an industry or a specialized part of an industry. They are targeted to wholesalers and retailers with the intent of pushing products through the channel of distribution. Most attendees at these shows are actively looking for products and have the authority to buy. Examples of business-to-business exhibitions are those in the areas of health care, computer products, electronics, advertising specialties, heavy equipment, agriculture, fashions, furniture, and toys.

Consumer trade shows, like business-to-business expositions, also have an industry focus. They are different, however, in that they target the general public and, accordingly, are designed to stimulate end-user demand. The kinds of products exhibited at these open shows include autos, housewares, boats, antiques, and crafts.

Several trade show organizations provide information and assistance to exhibitors and those considering exhibiting. The Center for Exhibition Industry Research (formerly the Trade Show Bureau) is an umbrella organization that represents the entire exhibition and convention field. It sponsors research on the effectiveness and cost-efficiency of trade shows, has a resource center, and serves as a referral point for more specialized groups. The International Association of Exhibit Managers is the association of individuals within companies who are responsible for exhibit arrangements. Others, like the Healthcare Convention and Exhibitors Association, concentrate on the organization and promotion of shows for specific industries.

(SEE ALSO: *Exhibitors and conventions*; *Promotional mix*; *Promotion strategy*; *Pull strategy*; *Push strategy*; *Sales promotion*; *Trade promotion.*)

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EARL C. MEYER
WINIFRED L. GREEN

TRADING BLOCS

An evolving trend in international economic activity is the formation of multinational trading blocs. These blocs are made up of a group of contiguous countries that decide to have common trading policies for the rest of the world in terms of tariffs and market access but have preferential treatment for one another. Organizational form varies among market regions, but the universal reason for the formation of such groups is to ensure the economic growth and benefit of the participating countries. Regional cooperative agreements have proliferated since after the end of World War II. Among the more well-known ones existing today are the European Union and the North American Free Trade Agreement. Some of the lesser-known ones include the MERCOSUR (Southern Cone Free Trade Area) and the Andean Group in South America, the Gulf Cooperation Council in West Asia (GCC), the South Asian Agreement for Regional Cooperation in South Asia (SAARC), and the Association of South East Asian Nations (ASEAN). The existence and growing influence of these multinational groupings implies that nations need to become part of such groups to remain globally competitive. To an extent, the regional groupings reflect the countervailing force to the increasing integration of the global economy—it is an effort by governments to control the pace of the integration.

Trading blocs take many forms, depending on the degree of cooperation and interrelationships, which lead to different levels of integration among the participating countries. There are five levels of formal cooperation among member countries of these regional groupings, ranging from a free trade area to the ultimate level of integration, which is political union.

Before the formation of a regional group of nations for freer trade, some governments agree to participate jointly in projects that create economic infrastructure (such as dams, pipelines, and roads) and that decrease the levels of barriers from those that allow little or no trade to those that encourage substantial trade. Each country may make a commitment to financing part of the

Representatives from Canada, the United States, and Mexico sign the North American Free Trade Agreement in 1994.

project, such as India and Nepal did for a hydroelectric dam on the Gandak River. Alternatively, they may share expertise on rural development and poverty-alleviation programs as well as lower trade barriers in selected goods, as did SAARC, which is comprised of India, Pakistan, Sri Lanka, Bangladesh, Nepal, Maldives, and Bhutan. These types of loose cooperation are considered a precursor to a more formal trade agreement. The evolutionary path for the development of various forms of trading blocs is shown in Figure 1.

FREE-TRADE AREA

A *free-trade area*, which has a higher level of integration than a loosely formed regional cooperative, involves a formal agreement among two or more countries to reduce or eliminate customs duties and nontariff trade barriers among partner countries. However, member countries are free to maintain individual tariff schedules for countries that do not belong to the group. One fundamental problem with this arrangement is that a free-trade area can be circumvented by nonmember countries, which can export to the member nation having the lowest external tariff and then transport the goods to the destination member nation without paying the higher tariff that would have been applicable if the goods had gone directly to the destination nation. In order to prevent foreign companies from using this export method to avoid tariffs, method of *local content laws* are usually introduced. These laws require that in order for a product to be considered "domestic"—and thus not subject to import duties—a certain percentage or more of the value of the product should be sourced locally within the free-trade area. Thus, local content laws are designed to encourage foreign exporters to set up their manufacturing locations in the free-trade area.

A free-trade area is not necessarily free of trade barriers, among its member countries. Although it is an attempt by treaty to develop freer trade among the member countries, trade dis-

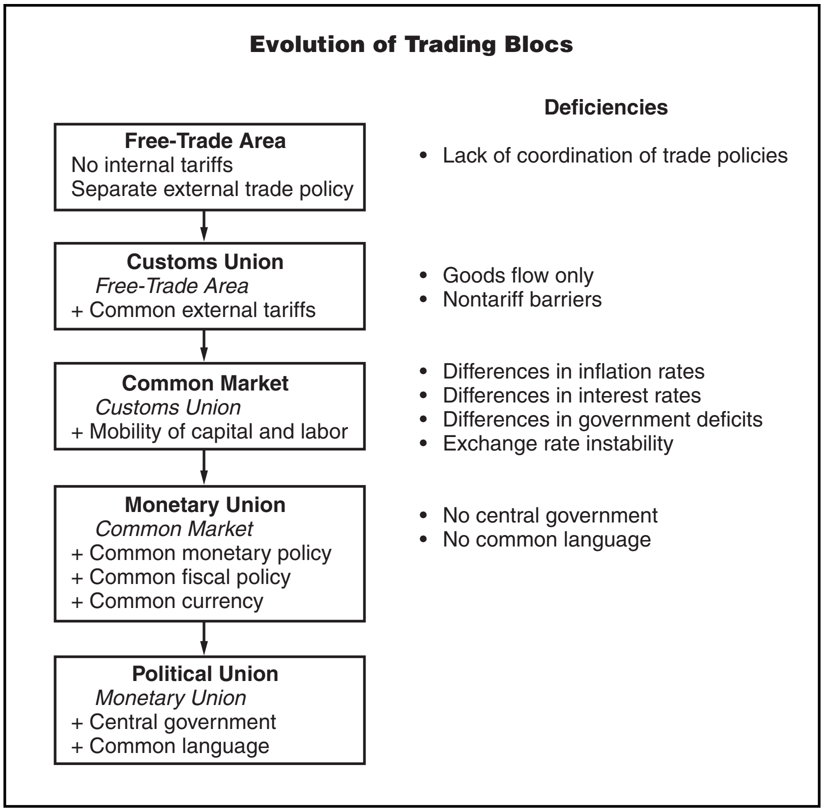
Evolution of Trading Blocs
Deficiencies
Free-Trade Area
No internal tariffs
Separate external trade policy
• Lack of coordination of trade policies
Customs Union
Free-Trade Area
+ Common external tariffs
• Goods flow only
• Nontariff barriers
Common Market
Customs Union
+ Mobility of capital and labor
• Differences in inflation rates
• Differences in interest rates
• Differences in government deficits
• Exchange rate instability
Monetary Union
Common Market
+ Common monetary policy
+ Common fiscal policy
+ Common currency
• No central government
• No common language
Political Union
Monetary Union
+ Central government
+ Common language

Figure 1

putes and restrictions nonetheless frequently occur.

The *North American Free Trade Agreement (NAFTA)*, a free-trade agreement among Canada, the United States, and Mexico, provides for elimination of all tariffs on industrial products traded among these three countries within ten years from the date of implementation of the NAFTA agreement—January 1, 1994. NAFTA was preceded by a free-trade agreement between Canada and the United States that went into effect in 1989. The United States has a free-trade agreement with Israel as well. Mexico is also negotiating with the European Union about creation of a transatlantic free-trade area without U.S. involvement. Likewise, Canada signed a trade deal with the Andean Group in 1999 as a forerunner to a possible free-trade agreement.

The three NAFTA countries are very different in their economic structure, development, and size. The U.S. economy boasted a gross national product (GNP) of $7.5 trillion and a population of 240 million in 1998. While Canada's per-capita income is similar to that of the United States, its economy is only about 10 percent that of the United States because of its much smaller population of 28 million. On the other hand, Mexico's economy is little more than 5 percent that of the United States, although it has a relatively large population of 92 million. Despite the different sizes of their economies, Canada and Mexico are the largest and second-largest trading partners of the United States. However, trade between Canada and Mexico remains insignificant, while both the Canadian and the Mexican economies are dependent on the U.S. economy as their primary export markets. Two-thirds of Canada's exports and four-fifths of Mexico's exports go to the United States. For both countries, almost half of their trade with the United States takes place on an intrafirm basis, with parent companies and their subsidiaries shipping parts and products among their own corporate units.

The European Free Trade Association (EFTA) EFTA is another well-known free-trade group, consisting of Iceland, Norway, and Switzerland. Although Austria, Finland, and Sweden, used to be EFTA member countries, they have joined the European Union (to be explained later), and Switzerland has applied to become a member. It appears that the EFTA will gradually merge into the European Union.

The Southern Common Market (*Mercado Común del Sur* or MERCOSUR) MERCOSUR is a free-trade area consisting of Brazil, Argentina, Uruguay, and Paraguay, with an automatic schedule for the lowering of internal trade barriers and the ultimate goal of creating a customs union. Chile and Bolivia also became associate members in 1996 and 1997, respectively.

CUSTOMS UNION

The inherent weakness of the free-trade area concept may lead to its gradual disappearance in the future, although it may continue to be an attractive stepping stone to a higher level of integration. When members of a free-trade area add common external tariffs to the provisions of the free-trade agreement, then the free-trade area becomes a *customs union.*

Therefore, members of a customs union not only have reduced or eliminated tariffs among themselves but also have imposed a common external tariff on countries that are not members of the customs union. This prevents nonmember countries from exporting initially to a member country that has a low external tariff with the goal of sending the exports on to a member country that has a higher external tariff. The ASEAN is a good example of a currently functional customs union whose eventual goal is formation of a common market. The Treaty of Rome of 1958, which formed the *European Economic Community*, created a customs union made up of West Germany, France, Italy, Belgium, the Netherlands, and Luxembourg.

COMMON MARKET

As cooperation increases among the countries of a customs union, they can form a *common market*, which eliminates all tariffs and barriers to trade among its members, adopts a common set of external tariffs on nonmembers, and removes all restrictions on the flow of capital and labor among member nations. The 1957 Treaty of Rome that created the European Economic Community had the ultimate goal of creating of a common market—a goal that was substantially achieved by the early 1990s in Western Europe, known as the *European Community* (Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom). German banks can now open branches in Italy, for example, and Portuguese workers can live and work in Luxembourg. Similarly, South American Countries, led by the MERCOSUR and the Andean Group, are actively seeking to create a common market of more than 300 million consumers by 2005.

MONETARY UNION

A monetary union represents the fourth level of integration among politically independent countries. In strict technical terms, a monetary union does not require the existence of a common market or a customs union, a free-trade area or a regional cooperation for development. However, it is the logical next step after a common market, because it requires the next higher level of cooperation among member nations.

In Europe, the *Maastricht Treaty*, which succeeded the Treaty of Rome and called for the creation of a union (and hence the change in name from European Community to European Union), created a *monetary union* and has the ultimate goal of creating a political union, with member countries switch adopting a common currency and a common central bank. A monetary union represents the fourth level of integration among politically independent countries.

The *European Union* (EU) consists of fifteen countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom). On January 1, 1999, the eleven countries of the so-called euro-zone (excluding EU members Denmark, Greece, Sweden, and the United Kingdom) embarked on a venture that created the world's second-largest economic zone, after the United States. The seeds for the euro were sown three decades ago. In 1969, Pierre Werner, a former prime minister of Luxembourg, was asked to chair a think-tank on how an European monetary union (EMU) could be achieved by 1980. The Werner Report, published in October 1970, outlined a three-phase plan that was very similar to the blueprint ultimately adopted in the Maastricht Treaty, signed on February 7, 1992. Like the Maastricht Treaty, the plan envisioned the replacement of local currencies by a single currency. However, the EMU was put on hold following the monetary chaos created by the first oil crisis. The next step on the path to monetary union was the creation of the European monetary system (EMS) in the late 1970s. Except for the United Kingdom, all member states of the European Union joined the Exchange Rate Mechanism (ERM), which determined bilateral currency exchange rates. Currencies of the, by then, nine member states could still fluctuate, but movements were limited to a margin of 2.25 percent. The EMS also led to the European currency unit (ecu)—in some sense the predecessor of the euro. Note the ecu never became a physical currency.

The foundations for monetary union were laid at the Madrid summit in 1989, when the EU member states undertook steps that would lead to free movement of capital. The Maastricht Treaty, signed shortly afterward, spelled out the guidelines toward creation of the EMU. Monetary union was to be capped by the launch of a single currency by 1999. This treaty also set norms in terms of government deficits, government debt, and inflation that applicants had to meet in order to qualify for EMU membership. All applicants, with the exception of Greece, met the norms, though in some cases (e.g., Belgium, Italy) the rules were bent rather liberally. These eleven countries forming the euro-zone surrendered their right to issue their own money starting in January 1999. Monetary policy for this group of countries is now run by the European Central Bank, headquartered in Frankfurt, Germany. Three of the EU member states—namely, the United Kingdom, Sweden, and Denmark—decided to opt out and sit on the fence. Stocks, bonds, and government debt are now denominated in the euro. Companies can use the euro for their transactions and accounting procedures. Until 2002, the euro will be in a "twilight zone"—existing as a virtual currency but is not yet existing physically. The Big Bang in the euro-zone will occur in 2002, when the euro becomes a physical reality and goes into circulation in all EMU member states. During the first half of 2002, local currencies and the euro will coexist. After July 1, 2002, the euro will replace local currencies, which will then no longer be accepted as legal tender.

POLITICAL UNION

The culmination of the process of integration is the creation of a *political union*, which can be another name for a nation when such a union truly achieves the levels of integration described here on a voluntary basis. The ultimate stated goal of the Maastricht Treaty is a political union. Currently, Britain remains the principal opponent of ceding any part of the sovereignty of the nation-state to any envisaged political union. Even the leading proponents of European integration—Germany and France—have reservations about a common defense and foreign policy.

Sometimes countries come together in a loose political union for reasons of common history, as with the British Commonwealth, consisting of nations that were once part of the British Empire. Commonwealth members received preferential tariffs in the early days, but when Britain joined the European Union, this preferential treatment was lost. The group now exists only as a forum for discussion and an expression of common historical ties.

The best-known political union that exists today is the United States, whose individual states went through a process similar to the evolutionary path for the development of various forms of trading blocs in the early years after declaring independence from Great Britain rule in 1776.

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MASAAKI KOTABE

TRAINING AND DEVELOPMENT

The field of training and development has changed significantly during the past several years, reflecting both its role and importance in achieving higher employee performance and meeting organizational goals. Today, this field has become more important because employees need to learn new skills, advance their knowledge, and meet the challenges of technology in achieving high performance.

BACKGROUND

Training has traditionally been defined as the process by which individuals change their skills, knowledge, attitudes, and/or behavior (Robbins and DeCenzo, 1998). In this context, training involves designing and supporting learning activities that result in a desired level of performance. In contrast, *development* typically refers to long-term growth and learning, directing attention more on what an individual may need to know or do at some future time. While training focuses more on current job duties or responsibilities, development points to future job responsibilities. However, sometimes these terms have been used interchangeably or have been denoted by the single term *performance consulting*, which emphasizes either the product of training and development or how individuals perform as a result of what they have learned (Robinson and Robinson, 1995).

To be effective, training and development must meet a number of goals. First, they must be focused on individual training needs but still reflect organizational goals in terms of desired or expected performance. Second, training and development must reflect learning goals or outcomes, outlining what will be accomplished by this process. Third, they must be based on sound learning principles, be perceived as important by trainees, and be conducted in a manner that maximizes learning. Last, they must be evaluated to determine effectiveness and to help guide change and improvement.

TRENDS IN TRAINING AND DEVELOPMENT

A number of trends have occurred that reflect the common theme of making training more effective. Some of the most significant trends include the following:

- *A greater emphasis on customized training* reflects the needs of trainees, both in terms of the skills and knowledge they currently have and those that they need, along with identifying the unique learning style of each individual. By having this focus, training can better match each individual's learning goals and needs, and thus be perceived as more relevant and appropriate by the trainee.
- *An increased development of personalized learning objectives* relates to present or future job requirements and reflects past performance appraisal information. This information can be gained, in part, by conducting a needs assessment for each trainee and can help in designing learning activities that encompass the critical skills and content areas needed for future performance.
- *A greater use of instructional technologies*, such as distance learning, allows individuals to customize learning to their job situation—such as location, time, access to technology, and so forth. The use of current training technologies

can greatly assist individuals in their learning, since training content and delivery can be standardized, quickly updated, and constructed so as to require learners to demonstrate the desired competencies as they engage in learning activities.

- *A greater integration of training and development into the workplace* links learning to job performance. Training outcomes and learning activities are linked to each individual's job requirements so that what trainees learn will be reflected in their job performance. For example, individuals who have participated in a training program on developing teamwork skills would be expected to demonstrate these skills in their future job performance.
- *A greater use of action or performance plans* requires trainees to develop a plan outlining how they will implement what they have learned and how they will determine whether this plan will, in fact, improve performance. The use of this process further links training to job performance; it can also be integrated with the performance appraisal process to measure changes or improvements in an individual's performance.

A MODEL FOR CREATING TRAINING EFFECTIVENESS

With training and development becoming more systematic, models describing the process and activities required to achieve successful training are being used more frequently to explain how training should be designed, delivered, and evaluated. One such model, as shown in Figure 1, outlines the steps that should be completed during the pre-training, training, and post-training stages. This model also presents a brief summary of each of these stages, explaining why each step should be performed carefully and accurately.

During the *pre-training* stage, information is gathered to help determine the need for training. An assessment is made regarding what improvements or changes an organization needs to make, along with an assessment of what trainees need to meet their performance expectations. From this information, a decision can be made regarding the *training gap*, for example, the difference between the performance that is desired and the performance that currently exists.

After this assessment is complete, a number of *training* activities can be completed, including developing training goals or outcomes, determining the appropriate learning activities and strategies, and achieving an understanding and commitment from the trainees for the program or activities. When these activities are performed effectively, the likelihood that the training will be successful is greatly enhanced.

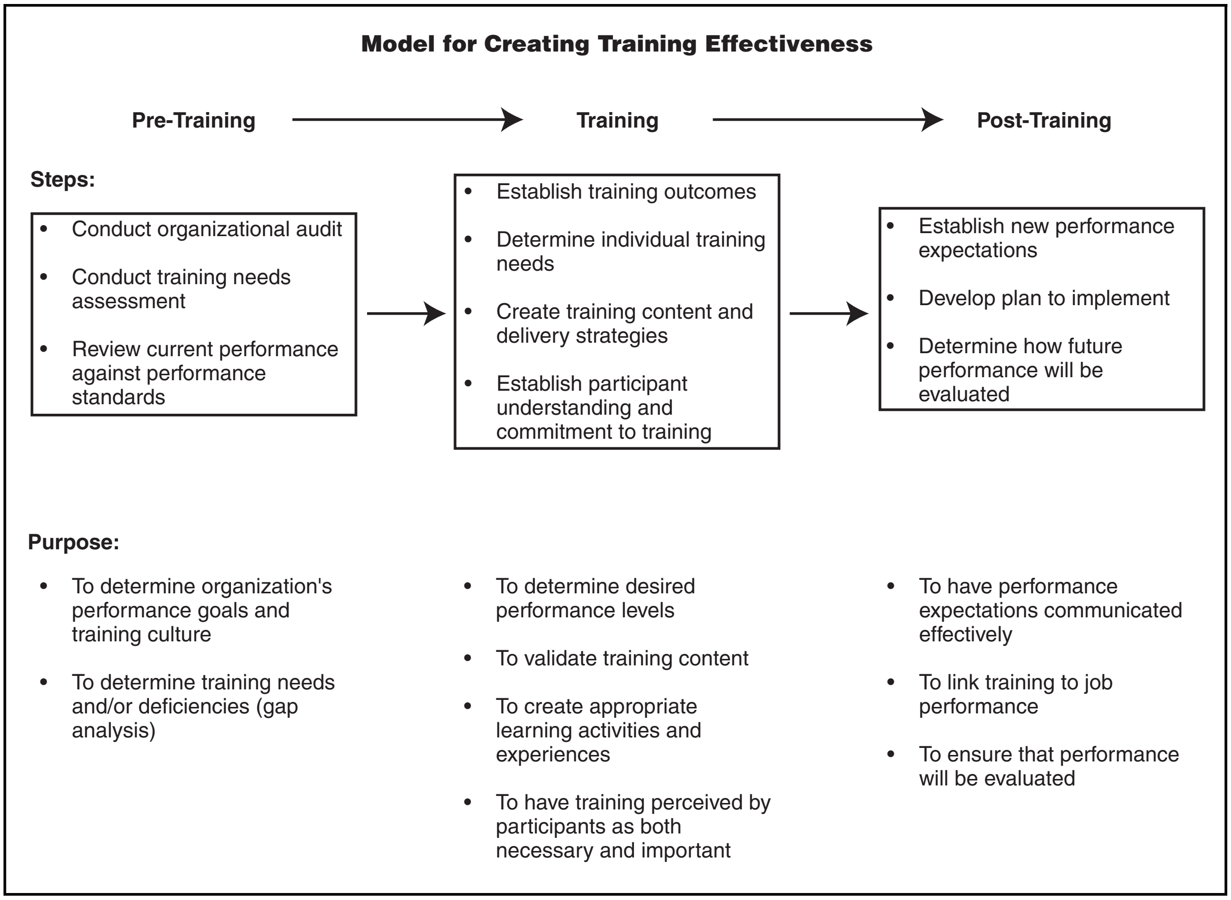
During the final stage, *post-training*, a number of activities are required to follow up on the training, ensure that it is integrated into the workplace, and measure performance changes and the effectiveness of the training. Although training can be measured through several techniques, the most important and relevant measurement is one that focuses on changes in performance rather than other factors, such as trainees' satisfaction with the training or what they have learned.

IMPACT OF TRAINING AND DEVELOPMENT ON PERFORMANCE AND ORGANIZATIONAL EFFECTIVENESS

One current method of evaluating the impact and importance of training is to examine the potential—or real—benefits to be achieved through training and development. Although not all benefits can be measured on a strict cost-benefit analysis basis, most benefits can be at least informally measured and used to determine effectiveness. The most significant direct benefits of training are the following:

- It clarifies job duties and responsibilities
- It increases an individual's job competence
- It provides the foundation for further development
- It assists in conducting an accurate performance appraisal
- It produces higher levels of performance

In addition, training may also be evaluated in terms of indirect benefits that can add additional value. These indirect benefits could include the following:



Model for Creating Training Effectiveness

Pre-Training → Training → Post-Training

Steps:

Pre-Training:
- Conduct organizational audit
- Conduct training needs assessment
- Review current performance against performance standards

Training:
- Establish training outcomes
- Determine individual training needs
- Create training content and delivery strategies
- Establish participant understanding and commitment to training

Post-Training:
- Establish new performance expectations
- Develop plan to implement
- Determine how future performance will be evaluated

Purpose:

Pre-Training:
- To determine organization's performance goals and training culture
- To determine training needs and/or deficiencies (gap analysis)

Training:
- To determine desired performance levels
- To validate training content
- To create appropriate learning activities and experiences
- To have training perceived by participants as both necessary and important

Post-Training:
- To have performance expectations communicated effectively
- To link training to job performance
- To ensure that performance will be evaluated

Figure 1

- Enhancing teamwork and team building
- Producing a strong sense of commitment to the organization
- Achieving higher levels of employee motivation
- Assisting in cross-training/job rotation

Although the impact of training can be measured in terms of individual learning and performance, another way to determine its impact is in relation to organizational growth, development, or effectiveness. As organizations have changed in recent times, there has emerged a need to study the critical elements that make organizations prosper and relate these to training and development. It is common today to view organizations in a dynamic sense, noting that they are constantly changing, renewing themselves, and in need of being reflective of current business practices. One current prospective is to view an organization as a "learning culture," reflecting its need to be constantly involved with learning how to become better and to provide significant training opportunities for employees (Senge, 1990). Accordingly, when organizations adopt this learning culture, they create a variety of training opportunities for all employees and develop performance expectations that instill in all employees the need for and value of training and development on a continual basis.

SUMMARY

Training and development have achieved a high degree of recognition for their importance in helping individuals become better performers and assisting organizations in achieving their goals. The field has become more visible, training processes more clearly defined, and the need for training more evident as societal and technological changes have occurred.

Through designing training and development activities as described in the model presented in Figure 1, the benefits outlined in this article—both direct and indirect—can be achieved. Further, when employees learn new skills and acquire new knowledge, they increase their career potential and add extra value to their employers and others whose work is impacted by their performance.

Following a well-structured plan for designing, implementing, and evaluating training and development programs is helpful in ensuring the effectiveness of the program and achieving a return on investment. To be effective, training should reflect the following guidelines:

- *It should be tied to the organization's culture and goals.* The current mission and goals should guide the development of all training and development activities. Each potential training activity should be reviewed by asking: How will this help achieve the organization's mission or goals?
- *It should be perceived as important by trainee.* Training should be viewed as important and relevant for achieving personal success and high performance levels.
- *It should be relevant to the needs of the trainees.* Some form of assessing the needs of the trainees should be completed prior to training to ensure that the program and learning activities are relevant to what the trainees need to learn or do.
- *It should be linked to the workplace.* Once training is completed, a plan should be completed by all trainees outlining how they will integrate the training results into their job. Some type of action plan—defining what activities will be completed, how they will be done, and when they will be implemented—should be used.
- *It should be applied but based on sound learning principles.* Current learning and training theories and principles should be used as the foundation for developing and delivering training programs, but the learning activities should stress how these theories and principles can be used in daily job duties.
- *It should be supported and reinforced.* If training is to be implemented effectively, support should be given by the trainees' supervisor and others who have an impact on the performance of trainees. In addition, policies and performance reward systems should help to support the training efforts and recognize when performance has improved as a result of training.

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DAVID HYSLOP

TRANSFER PAYMENTS

Transfer payments are a form of income to individuals for which no *current* good or service is expected in return. They differ from other payments to individuals for which either a service (including labor services) is performed in return for such payments or a good is exchanged.

Transfer payments can originate from either business or government sources. Business transfer payments include corporate gifts to nonprofit institutions, payments for personal injury, and taxes paid by domestic corporations to foreign governments. Far more important, both in dollar terms and policy significance, are transfer payments originating from government sources. Government transfer payments can be made by any level of government (federal, state, or local) and can take the form of either cash or in-kind benefits. Cash benefits include Social Security; government employee, military, and railroad retirement pensions; unemployment insurance; veterans' benefits; workers' compensation; cash public assistance (including Temporary Assistance for Needy Families [TANF] and Supplemental Security Income [SSI]); and educational assistance. Also included are government payments to nonprofit institutions that do not involve work under research-and-development contracts. Major in-kind government transfer payments include food stamps, medical insurance (Medicaid and Medicare), and housing assistance.

Size and Significance of Transfer Payments. The size of the U.S. government, measured as public expenditures, increased more than threefold from 1940 to 2000, and much of this increase was due to the growth in transfer payment expenditures, especially on Social Security, Medicare, and Medicaid. In the United States at the end of the twentieth century, transfer payments accounted for 44 percent of government spending by all levels of government (*Economic Report of the President*, 1999).

By their very nature, government transfer payments are excluded from the calculation of a nation's gross domestic product (GDP) since they do not represent compensation for the production of currently produced goods and services. Instead, transfer payments represent a redistribution of income, taking money away from some individuals (taxpayers) and giving it to others who are eligible for the various programs noted above. It is also important to recognize that while a considerable amount of transfer payments represent spending on public assistance—programs to aid the poor—other transfer payments are for social insurance programs (e.g., Social Security, Medicare, unemployment insurance) that bring significant benefits to the middle class. Public assistance programs are typically "means-tested," implying that the recipient must have household income below some threshold level to qualify and that the amount of the benefit decreases as household income increases.

Rationale for Transfer Payments. Government transfer payments are rationalized in various ways depending on the nature of the programs involved. Public assistance transfer payments are often justified using Richard Musgrave's (1959) "distribution function" of government. Here it is argued the market outcomes may lead to a distribution of income that in the judgment of society is "too unequal." In particular, a government safety net is needed to insure that all members of society, including children and those unable to work, have a minimally adequate standard of living. Most public expenditures on low-income programs involve in-kind benefits, rather than cash assistance, because they allow the public some control over the spending patterns of recipients.

It should be noted that this rationale for government intervention and income redistribution through transfer payments is not without critics. Some would argue that nongovernmental organizations (e.g., churches and other forms of private philanthropy) are better equipped to meet the needs of low-income individuals.

Social insurance transfer-payment programs are rationalized in several ways. One relates to private "market failure" due to the phenomenon of *adverse selection.* Consider a private firm selling unemployment insurance to individuals without knowing the details of their employment status. If the firm were able to offer an insurance policy to a large group, the firm could make a reasonable estimate of the fraction of the group that would become unemployed over some period of time and charge rates accordingly to make a normal profit. But, the firm does not have information on the employment status of any single individual. When selling an unemployment insurance policy to a single individual, the firm must assume that individuals prone to unemployment are the most likely participants in this market. Accordingly, the firm would have to charge higher rates to individuals than for the group as a whole to make a profit. The higher cost of insurance would lead many people to choose not to insure, leading to less than the economically efficient amount of insurance being provided.

Social insurance transfer payments can also be rationalized on the grounds that some individuals lack the foresight to purchase sufficient insurance. For example, in the absence of Social Security some individuals might not save adequately for retirement. Society would then be faced with either letting such individuals retire with less-than-adequate resources or coming to their aid. The possibility of the latter further reduces the incentive for individuals to save during their working years.

Effect on Economic Behavior. Critics sometimes charge that major transfer-payment programs have adverse effects on household decisions to work and save. Regarding work effort, the benefits from means-tested programs are reduced as income from labor increases; in some cases the reduction is dollar-for-dollar, implying an implicit tax of 100 percent on the wages of program participants. In 1996 Congress addressed the work disincentive for the major cash transfer-payment program to low-income persons by changing the name of the program from Aid to Families with Dependent Children (AFDC) to Temporary Assistance for Needy Families (TANF) and mandating work requirements for most program participants.

Many economists believe that Social Security contributes to lower saving rates by individuals and influences their retirement decisions. Individuals view Social Security as an alternative saving vehicle for retirement, leading them to save less than they would in the absence of this program. Nationally, this may depress the level of saving because the Social Security system is financed on a *pay-as-you-go* basis, whereby current workers pay for the benefits of current retirees; benefits are not financed out of any past saving on the part of the retiree. The potential effect that Social Security has on retirement decisions has been mitigated by legislation passed by Congress in 2000 that eliminated the implicit tax (reduced benefits) of individuals over 65 who choose to continue to work while nonetheless drawing Social Security benefits.

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MICHAEL NELSON

TRANSFER PRICING

(SEE: *International Trade*)

TRANSFORMATION

(SEE: *Operations Management*)

TRANSFORMATIONAL LEADERSHIP

(SEE: *Management/Leadership Styles*)

U

UNIFORM CERTIFIED PUBLIC ACCOUNTANT EXAMINATION

Certified public accountant (CPA) is a designation awarded by a state or other governmental jurisdiction to individuals to practice as a licensed certified public accountant. The candidate for the CPA must meet education, examination, and experience requirements.

Examinations were used as early as 1884 to test the qualifications of accountants and to issue certificates of proficiency upon passage of the examination. In the 1880s two competing organizations, the Institute of Accounts and the American Association of Public Accounts [the predecessor to the current American Institute of Certified Public Accountants (AICPA)] were issuing certificates based on satisfactory completion of an examination or years of experience as an accountant. Neither organization was able to effectively control the practice of accounting by nonmembers. Consequently, the two rival organizations cooperated to introduce legislation in New York to regulate the practice of public accounting. In 1896, New York State passed the first accountancy law, which required testing the qualifications of those who wished to practice as public accountants. The first examination was administered in December 1896. This led to the issuance of a state license to practice as a CPA and the emergence of accounting as a profession with education requirements, professional standards, and a code of professional ethics. Other states followed this lead, and eventually fifty-four jurisdictions in the United States (fifty states and four territories) enacted legislation requiring an examination of candidates for licensing as CPAs. The Boards of Accountancy of each jurisdiction are responsible for administering compliance with the public accountancy laws. Efforts are underway to make the requirements more uniform among the various jurisdictions. This would make it easier for a CPA to be licensed in multiple states, an important consideration in the interstate practice of public accounting.

By the 1960s, all the jurisdictions in the United States required CPA candidates to pass a Uniform CPA Examination that is prepared by the AICPA and graded by its Advisory Grading Services, a service it has provided since 1917. The objective of the examination is to provide reasonable assurance to the boards that candidates passing the examination have the level of technical knowledge, skills, and abilities necessary to protect the public interest. The examination insures the public that CPAs entering the profession have met appropriate minimum requirements and that they have passed an examination that has uniform content, coverage, difficulty, and grading methodology.

THE CURRENT EXAMINATION AND REQUIREMENTS

The current examination is a two-day, fifteen-and-one-half-hour examination that is given twice each year-in May and November, on a Wednesday and Thursday-in the jurisdictions using the examination. The examination is a paper-and-pencil linear examination with questions in a predetermined sequence that candidates answer manually on paper answer sheets. The questions include four-option multiple-choice questions, other objective question formats, and essay questions or problems. The examination is given and graded only in English.

The examination covers four sections:

1. *Auditing (AUDIT):* Generally accepted auditing standards and procedures
2. *Accounting and Reporting (ARE):* Federal taxation, managerial accounting, and accounting for governmental and not-for-profit organizations
3. *Financial Accounting and Reporting (FARE):* Generally accepted accounting principles for business enterprises
4. *Business Law and Professional Responsibilities (LPR):* Professional responsibilities and the legal implications of business transactions as they relate to accounting and auditing

The AUDIT, FARE, and LPR sections consist of 50 to 60 percent four-option multiple-choice questions, 20 to 30 percent other objective question formats, and 20 to 30 percent essay questions or problems. The ARE section is completely objective, consisting of 50 to 60 percent four-option multiple choice questions and 40 to 50 percent other objective formats. The candidates' writing skills are evaluated in selected essay questions in the AUDIT, FARE, and LPR sections of the examination. Calculators are provided to the candidates for the ARE and FARE sections, but not the AUDIT and LPR sections, which require minimal calculations.

Since May 1996, the examination has been nondisclosed, meaning that the candidates are no longer allowed to retain or receive their question booklets after taking the examination or to reveal questions on the examination in any manner. Prior to 1996, AICPA published the complete test with the unofficial answers following each examination, and these copies were available for purchase.

In addition to the two-day examination, several jurisdictions require a separate examination in professional ethics, which is given at a different time than the certifying examination.

All jurisdictions use the same examination, but the requirements and procedures for applying to take it differ among the jurisdictions.

Candidates must complete an education requirement, which varies among the jurisdictions. Most require at least a bachelors degree with a concentration in accounting, but a majority of the jurisdictions have legislated an education requirement of at least one hundred and fifty semester hours. Normally this includes a bachelor's degree plus thirty semester hours of advanced coursework. The date when this requirement becomes effective varies among the jurisdictions. Some jurisdictions specify the number of required semester hours or courses in accounting and related business subjects. Candidates may sit for the examination in some jurisdictions before the education requirements are completed.

Other requirements for taking the examination vary among the jurisdictions as to residency, place of employment, and U.S. citizenship.

Candidates should contact the board in the jurisdiction where they plan to sit for the examination or plan to practice for the most current education, residency, and citizenship requirements as such requirements are subject to modification.

EXAMINATION ADMINISTRATION AND PREPARATION

The board of each jurisdiction is responsible for administering an examination as part of the requirements for conferring a CPA certificate. Today, all the jurisdictions use the services provided by the AICPA to prepare and grade the examination.

A Board of Examiners (BOE), a twelve-member senior committee of the AICPA, is responsible for the preparation of the examination and issuance of grades to the boards. The BOE oversees subcommittees that are responsible for each of the four examination sections. The boards, or its appointees, are responsible for administering AICPA-prepared examinations to the candidates in their jurisdiction.

The National Association of State Boards of Accountancy (NASBA), as part of its mission to assist boards in meeting their regulatory responsibilities, provides examination administration and grade-reporting services to its member boards. The CPA Examination Services Division of the NASBA administers the CPA examination for the majority of the jurisdictions. The other boards either administer the examinations or use some other service.

The Advising Grading Services of the BOE grades the examinations for all of the fifty-four boards. The objective is to grade the examination papers fairly and uniformly. Grading bases and guidelines are developed for each examination and approved by the BOE and the section subcommittees.

Each section of the examination is graded separately and reported on a scale ranging from 0 to 100 percent, with a minimum grade of 75 percent required to pass each section. The grading process may include as many as two subsequent reviews of each examination paper. A candidates who receives a passing grade on at least two sections with a minimum grade in the failed sections may receive conditional credit for the sections passed. Candidates are allowed a limited number of additional opportunities to pass the remaining sections. A candidate who does not pass the remaining sections within a specific time must retake the entire examination. Requirements for retaking the examination vary among the jurisdictions.

The grades are mailed by the boards to candidates approximately ninety days after the examination is administered, referred to as the Uniform Mailing Date. The boards may include information on how the candidate performed on each content area of the examination in a Candidate Diagnostic Report. A review of a candidate's examination papers is provided for a board that requests such a review.

The objective of the examination is to test the knowledge and skills that a candidate needs to practice as a CPA in planning and implementing a public accounting engagement. The examination requires candidates to display evaluation, judgment, presentation, and decision-making abilities related to accounting and auditing information.

The content of the four sections of the examination is based on studies of public accounting practice. Each major content area is assigned a percentage that represents the weight assigned to that topic or content area. Candidates' technical knowledge and skills are assessed in the examination's objective sections, and their writing skills are evaluated on the essay questions.

The examination questions are obtained from a number of sources, including members of the BOE, section subcommittees, in-house examination team members, practitioners, and educators. The BOE offers question writing workshops for each examination section to train practitioners and educators interested in writing examination questions.

The AICPA made the examination nondisclosed beginning with the May 1996 exam, thus permitting the BOE to build a large database of examination questions. The nondisclosed nature of the exam also assists the BOE in pretesting and revising exam questions, maintaining a consistent level of difficulty, and enhancing reliability by discouraging the study of prior examinations.

At present the examination is a paper-and-pencil examination, but future examinations may be a computer-based test that a candidate would be able to take by appointment throughout the year rather than only twice a year at a set date.

(SEE ALSO: *American Institute of Certified Public Accountants; Certified Public Accountant.*)

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ANTHONY T. KRZYSTOFIK

UNITED STATES GENERAL ACCOUNTING OFFICE

Congress created the U.S. General Accounting Office (GAO) in 1921 as a nonpartisan office to assist with oversight of general government operations by independently auditing federal agencies. As part of the legislative branch, the GAO is independent of the executive branch. Its name is somewhat misleading in that it does not engage primarily in routine accounting activities. Rather it is responsible for overseeing the accountability of government operations to Congress.

The GAO's chief officer is the comptroller general of the United States, who is appointed by the president for a single term of fifteen years with the advice and consent of the Senate. Removal of the comptroller general from office requires the passage of a joint resolution of Congress signed by the president. The protection of office afforded to the comptroller general strengthens the independence of the GAO.

Much of the work that the GAO performs originates as requests from committees of Congress or from individual members of Congress. Other work fulfills GAO mandates or legislative requirements.

HISTORY AND ESTABLISHMENT BY CONGRESS

The GAO was established by the Budget and Accounting Act of 1921, which transferred powers previously held by the Treasury Department to the GAO. The position of comptroller of the Treasury was abolished and that of comptroller general was created. The transfer of powers outside the executive branch represented a substantial change in federal financial management. With the creation of the GAO, an office outside the executive branch had the power to audit the financial affairs of the executive branch. As the presidency became the dominant focus of government in the twentieth century, the GAO became a powerful investigative office of Congress, with authority to examine all matters related to the receipt and disbursement of public funds.

EVOLVING NATURE OF RESPONSIBILITIES

The GAO has broad responsibility for the oversight of financial activities in the executive branch and wide discretion in the application of its responsibilities. Over time the GAO's interpretation of its responsibility has evolved through four phases of dominant orientation: bookkeeping, auditing, evaluation, and systems development. Until the end of World War II, the GAO had a bookkeeping orientation. Its work consisted of checking the accuracy and legality of transactions. Operations were centralized and personnel lacked professional credentials.

Following World War II, responsibility for bookkeeping practices was transferred to executive agencies, and the GAO's orientation shifted to auditing. It began to conduct financial audits of government corporations such as the Tennessee Valley Authority and economy and efficiency audits of particular activities within selected agencies. Additionally, the GAO was aggressive in auditing defense contracts for cost overruns and other abuses. Many of the auditors were military veterans who were educated in accounting.

Starting around 1965 with the adoption of Great Society programs, the GAO's orientation shifted to program evaluation and service to Congress. Personnel with a variety of educational backgrounds were recruited for their expertise.

Since the early 1980s, the GAO's focus has centered on the development of financial and management systems. Resources have been directed to improving internal control systems and financial reporting systems, as well as advancing performance-based management systems.

NATURE OF ACTIVITIES

The GAO has broad responsibilities that include (1) audits and evaluations, (2) accounting and information management policy, (3) legal services, and (4) reporting. Although the GAO has broad powers, the U.S. Supreme Court held in *Bowsher v. Synar* (106 S. Ct. 3181, 1986) that the comptroller general could not exercise executive branch decision-making authority.

GAO audits tend to differ from private-sector financial audits. The scope of GAO audits may be broader or narrower than the scope of nongovernmental audits. To provide the necessary expertise, personnel on GAO audit teams often have academic backgrounds in fields other than accounting. GAO audits tend to be initiated by request and usually are not performed on a routine periodic basis. However, the GAO is responsible for the audit of consolidated government-wide financial statements of the executive branch.

With respect to accounting and information management policy, the GAO participates in the development of accounting principles and standards for the executive branch and advises federal agencies about fiscal policies and procedures. Additionally, it establishes standards for auditing and evaluating government programs, including standards for governmental entities subject to the Single Audit Act of 1984.

The GAO provides legal advice to Congress, reviews legislative proposals, and assists with drafting legislation. Its staff investigates possible civil and criminal misconduct arising out of audits and evaluations. Within its judicial functions, the GAO resolves bid protests that challenge government contract awards, interprets laws governing public expenditure, and adjudicates claims for and against the government.

Findings and recommendations of the GAO are published as reports to Congress, delivered as testimony to Congress, or conveyed in oral briefing. Additionally, the GAO publishes comptroller general decisions. All unclassified reports are available to the public.

To motivate improvements in the performance of federal agencies, the GAO has pursued two important initiatives. These are the High Risk Series and the Performance and Accountability Series. Preliminary work for the High Risk Series began in 1990. High-risk program areas are ones that are vulnerable to waste, fraud, abuse, and mismanagement. These reports identify high-risk program areas, assess causes of risk, recommends ways to reduce risk, and monitor the status of efforts to sustain improvement. Designation as a high-risk program area is a signal of severe weakness. Removal of the designation is recognition of improvement in financial systems and reporting.

The Performance and Accountability Series was introduced in 1999. It includes a general report and separate reports on each cabinet department and most other major independent agencies. The general report discusses the challenges that the federal agency faces in working to improve performance, management, and accountability. This series is oriented to understanding ways performance-based management can be applied to achieve economy, efficiency, and effectiveness in government operations.

The URL for the GAO is http://www.gao.gov. This location provides directions about ways to obtain reports, testimony, decisions, and other information, as well as describing indexes, catalogues, and other means for locating GAO publications.

(SEE ALSO: *Chief Financial Officers Act*; *Government Accounting*)

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JEAN E. HARRIS

UNIVERSAL VENDOR MARKETING

(SEE: *Promotion*)

V

VALUES

(SEE: *Social Responsibility*)

VARIANCE

(SEE: *Costs*)

VIDEOCONFERENCING

George Jetson, a character in the 1970s cartoon, was not terribly futuristic when he used his telephone that enabled him to see the person to whom he was talking. Videoconferencing, as it is known today, has been under development in the research labs at Pacific Bell since the 1920s. The project, referred to as "picturephone," is in the form of a desktop videoconferencing system. Videoconferencing rooms have been in existence at AT&T since the 1960s, where they are used to support large corporate meetings, including the annual shareholder's meeting.

It wasn't until the 1964 World's Fair that the "picturephone" was introduced to the public. AT&T predicted that the "picturephone" would replace the telephone by 1970. Although that prediction was wrong, the recession of the 1970s created a wider acceptance of videoconferencing by corporations that were looking for alternative ways to conduct meetings and conferences while cutting travel costs. Videoconferencing was not successful at that time, however, because the technology needed to attain personalized meetings was lacking.

With technology becoming more affordable and economically justifiable, practical and profitable applications of teleconferencing have gained popularity in the business world. With increasing competition and the need for face-to-face contact with customers, videoconferencing has become more popular because it allows face-to-face interaction without wasting travel time. Teleconferencing also allows for team meetings without the need to travel hundreds of miles.

WHAT IS TELECONFERENCING?

The earliest form of teleconferencing was the telephone conference call, in which several parties in various parts of the world could simultaneously hold a conversation. Businesspeople could talk with each other while sending and receiving faxes to provide a hard copy of the information being discussed. Today computer technology allows for synchronous, or simultaneous, sharing of data through four means: voice, video, digital whiteboard, and data files.

Several parties are able to share not only voice but also a live camera image of themselves while they talk. The size of the image can be shrunk to occupy only a small portion of the computer monitor or large display screen so that a data file can be accessed, displayed, and edited on the monitor at the same time.

Individuals participating in the conference call have the option of sharing and working with data files from either party's computer. While verbally discussing changes within the document and observing each other's body language, either party can edit the document and give immediate feedback. The digital whiteboard provides an electronic version of the dry erase board mounted on the wall. While viewing each other's actions via the computer monitor, individuals can also write on each other's whiteboard with special markers in the color of their choice. This allows professionals to make decisions and solve problems on the spot.

VIDEOCONFERENCING AND BUSINESS

This type of communicating allows people to work from their home via satellite, which increases family and/or personal time while reducing time spent commuting. It is estimated that in 1999, between 8 million and 15 million of the 120 million U.S. employees worked at home and communicated with their offices and customers using a computer and telephone lines. The number of telecommuters in America is expected to double by 2005.

Today's business environment requires most corporate employees to collaborate on a routine basis. Videoconferencing allows for face-to-face planned as well as impromptu meetings of workers who are separated by several thousand miles.

Sales presentations are an example of a profitable and easily justified business use of videoconferencing. When conducting the sales presentation at the customer's location, a sales representative with videoconferencing equipment on a laptop computer can connect the customer with specialists back at the company's offices to answer specific questions about the product being demonstrated. This allows for greater specialization, with the salesperson focusing on closing the sale and the specialists focusing on the technical aspects of the product. The salesperson is able to view the customer's body language and ask the specialist for clarification on customer objections or questions. The customer feels a sense of security by being able to see the individual instead of merely hearing a voice.

Another business application of videoconferencing is the ability to train people without actually traveling to another location. Companies can provide more frequent training to their employees in distant locations for less cost.

The Northrop Grumman Corporation implemented extensive teleconferencing for its 45,000 employees by setting up a hundred Team Communications Centers (TCCs) (teleconferencing rooms) at their offices across the United States. The TCCs are equipped with large digital whiteboards and projector screens. Groups of employees or managers from two or more locations collaborate on, discuss, and edit documents as though they were all in the same room, saving both time and money. The corporation identified airfare savings in 1998 of $150,000. These savings did not include hotels, meals, overtime, or incidentals.

VIDEOCONFERENCING AND EDUCATION

Teleconferencing can bring more educational choice and excellence to remote schools with small student bodies. Specialized courses that individual schools could not offer because of cost or limited student interest can be shared by several schools to provide cost efficiency. Flexibility in scheduling the classes to meet either an individual student's or a group of students' need is another major advantage.

Today, many universities are offering courses over the Internet or by means of other teleconferencing capabilities. This technology enables thousands of students to take college classes without leaving their community or, in many cases, their home. This technology is known as distance learning.

The nature of videoconferencing often requires distance-learning classes to present more class material, use better visuals, and show greater preparation of the teaching materials than traditional classes. These classes also hold students more accountable for their own learning. A major drawback for some students is that they must still attend classes (virtually) at preset times and progress at the pace set for the course.

Internet courses often better meet student needs by allowing them to work within their own time schedules and to progress at their own pace. Students sign into the virtual classroom (chat room) when it is convenient for them and respond to instructor questions and other student responses in much the same manner as they would in a traditional classroom discussion. The major differences are that all students must actively participate and the responses are written rather than oral.

Videoconferencing can present barriers to learning when interpersonal skills such as face-to-face interaction, eye contact, gaze, body language, and voice inflection are not transmitted. Another potential barrier is intercommunication delays when the timing of visual and audio signals, which are known to be effective in communication, are sometimes delayed.

For effective videoconferencing, the design of the room and the training of participants are critical factors. In educational settings, the classroom layout should allow all participants, including the instructor, to see and hear one another clearly. Instructors often need training on how best to project enthusiasm using this medium, how to monitor and adjust the camera and audio components, and how to prepare effective materials. Institutions must have a clear plan of how the system will be used to deliver instruction before they offer classes.

TECHNOLOGY

The three major types of videoconferencing involve conference rooms, roll-around units, and desktop units. The conference room facilities provide the user with a meeting room equipped with the audio and video technology needed to conduct an interactive conference. Roll-around units contain the needed audio and video equipment but are designed to be moveable. They provide a degree of flexibility; however the fact that the units are large often makes them impractical.

Desktop units provide desk or office videoconferencing access at the user's computer. The two essential components in addition to the computer are a small video camera, which usually sits on top of the computer, and a microphone, which can be set on a pedestal or worn as a headset. Telephone network capabilities have limited the quality of the video as well as causing delays in transmission. With the new TV cable hook-ups, however, desktop conferencing is achieving excellent video and audio quality.

Two types of desktop systems are VISIT and TMS. VISIT was an earlier desktop multimedia system integrating desktop videoconferencing, screen sharing, high-speed data transfer, electronic voice-mail access, and voice call management on a desktop computer. It required a plug-in video board; a black-and-white, fixed-focus CCD camera with an electronic auto iris; and application software.

TMS (Telepresence Media Space System), the newer system, is designed to capture the existing physical, cognitive, and social skills of users to support the same confidentiality, intimacy, and trust that develop in people who are engaged in face-to-face interaction. TMS also provides real-time document sharing and editing, video mail, video receptionist, and video recording of meetings. The technology needed for a TMS system includes a Sun workstation as the central server, computer controlled audio-video switch, PictureTel codec, Sony VCR, and camera mounted on the roof.

KEY TO SUCCESSFUL VIDEOCONFERENCING

The key to successful videoconferencing is effective communication skills. The users must be comfortable with the system, so that it appears as transparent as possible. This will allow the receiver to concentrate on the message and the sender to concentrate on making eye contact, so that participants feel included and are not just observers.

Participants in a videoconference should wear solid-colored clothing in dark or neutral colors to enhance the camera's focus. Movements should be slow and smooth, and caution should be taken not to block the camera's line of sight.

Participants should always maintain appropriate on-camera positioning, adhering to the elbows and wrists rule: When you stretch out your arms, the edge of the screen should fall between your elbows and wrists. It is important that participants see each other's facial expressions, but close-up shots should be used judiciously because the camera is sensitive to movement and will exaggerate blinking eyes, moving hands, or shifting in chairs. Videoconferencing participants will find it difficult to pay attention if the subject is not presented in an interesting and enthusiastic manner. Presenters should get beyond the "talking head" model and make the session as interactive as possible.

As in any instructional or corporate setting, the use of images, objects, and audio or video clips will greatly enhance the meeting's effectiveness. Visuals should have large, bold text with simple fonts and concise bulleted information. Time should be allowed for all participants to view the graphics. Participants should always speak in a strong, clear voice and avoid interrupting another speaker because the time delay may cause confusion.

Although videoconferencing has been available for more than seventy years, it is only now that its quality has reached the standards needed in business and educational settings. Its popularity has increased because it is able to save individuals and business both time and money, which are valuable and limited resources. As technology improves, the use of videoconferencing will increase as more businesses and individuals embrace it as an effective means of face-to-face communications.

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JAMES E. MILES

VISUAL MERCHANDISING

(SEE: *Promotion*)

VOICE MESSAGING

Voice messaging is a computerized method of storing and manipulating spoken recorded messages that is accessible to users from any touchtone phone twenty-four hours a day. A voice-messaging system can be easily accessed by local, remote, or mobile users via land-line or cellular phones. Messages may be created in a user's voice mailbox and then transported to another voice mailbox in a manner similar to the e-mail process.

Voice-messaging systems include such services as voice messages, voice-mail distribution lists, fax-in and fax-on demand in the mailbox, interactive voice response, and voice forms that any user can access anywhere in the world.

HOW VOICE MESSAGING WORKS

Person A calls Person B, who is not available to take the call. Person B's voice mailbox or answering machine takes the call, replaying it when Person B returns and accesses it. The answering machine can be precise to Person B or can be shared with multiple office personnel. If the company has either a precise or shared system, Person B may retrieve the message by using a digitized code assigned to him or her. This code is called a voice-mail number. The voice mail system is designed to transfer a person's call to another telephone automatically by using call forwarding and to prioritize messages so that a specific phone number from Person A—the recipient—is prepared to communicate to Person B—the caller—for feedback.

HOW VOICE MESSAGING RELATES TO THE COMMUNICATION PROCESS

Voice messaging relates to the communication process by increasing productivity, improving internal communication, enhancing customer service, and reducing message-taking costs. The proper implementation of a voice-messaging system could be linked directly to improved public relations in companies.

In companies where a voice system is in place, users can easily change their greeting and the information in it and invite callers to leave their name, number, and any desired information. Voice-messaging systems in some companies permit users to call from any telephone in the world to change their greeting and to retrieve messages at any time of the day or night. Using a voice-message system ensures accurate messages, reduces the need for receptionists to take messages, and frees users from time zone dependence.

Many different types of companies—ranging from investment services to manufacturers, could possibly attain significant benefits in a short period of time, by using a voice-message system for internal communication between remote sites by means of such of integrated features as fax/voice mailboxes and pager notifications. It appears that the more voice messaging a company uses, the more benefits and revenue savings could be realized.

When using a voice-messaging system, users should especially careful to make their communication clear, concise, complete, and unambiguous. A voice-messaging system can create a "first and lasting" impression for users. Therefore, the following do's and don'ts may should be observed.

THE DO'S

- Communicate with departments to obtain support.
- Consider training classes for company users so they can effectively handle incoming calls to the voice-messaging system.
- Communicate with customer service representatives about proper handling of calls.
- Test and navigate through the various options in the system to improve or streamline the messages.

THE DON'TS . . .

- Be careful not to overlook company customers. Be sure to know how they want their calls handled.
- In communicating, avoid being insular. Consider what your company's competition is doing and how you can apply their success to your company.
- Don't revise the system unnecessarily. Inquire about added features/applications only if you have maximized the use of those in existence.

VOICE-MESSAGING PRIVACY

As voice messaging become more prevalent, the issue of privacy becomes critical. Companies need to be as protective of their voice-mail system as they are of their computer system. Potential abuses of voice-messaging systems include fraudulent long-distance charges, malicious system intrusion, and corporate espionage. Many such abuses can be prevented by establishing certain policies and procedures that can enhance security, such as making it easy for users to change their passwords, establishing a system of automatic random password creation for new mailboxes, and having a flexible password structure. Nine to eighteen digit passwords are advised.

Two components prevalent to voice messaging are a user's outgoing personal greeting recorded in his/her own words and their message left for a receiver's response.

TIPS ON OUTGOING PERSONAL MESSAGES

- When recording a greeting, speak in a slow, clear, and concise fashion.
- Once a greeting has been recorded, call yourself to see how you sound and to determine whether you should re-record the message.
- Keep the recording to eight to twelve seconds.
- With your best voice, speak in a friendly tone of voice.
- If you will be unavailable for an extended period of time, change your message to let your callers know the time of your return and the name and phone number of someone who can help them until then.

TIPS ON LEAVING A MESSAGE

- Be sure to have a message in mind when you place a call in case you have to leave a message.
- Get to the point: Explain who you are and why you have called. Avoid rambling and repeating yourself.
- If you want to speak with someone about a specific topic that could be long and detailed. leave a "subject-matter-only" message; for example, "Allen, I need to speak to you about the XYZ Project at your convenience." Do not leave a long, drawn-out message.
- Do not leave bad-news messages of a personal nature on the voice-mail system. Such messages are inappropriate.
- Be careful of what you say and how you say it, lest you regret the message later. Because most voice-mail systems allow messages to be forwarded to others, you never know who might hear your message. Many voice-messaging systems do not allow you to eliminate a message once it's sent.
- While it may not be necessary to give the date and time of your message, it is wise to leave a date and time when you will be available if you want a callback.

ADVANTAGES AND DISADVANTAGES

With the increasing prevalence of voice messaging, both its advantages and disadvantages have begun to surface.

ADVANTAGES

- It provides twenty-four-hour-a-day answering capability.
- It enhances efficiency and boosts job productivity.
- It saves and generates money for the company.
- It improves the accuracy of message content.
- It enables one to send multiple messages to people.
- It allows messages to be easily updated.
- It reduces the need for administrative/receptionist/secretarial support.
- It serves as an important medium for business communication.
- It makes transferring of phone calls from department to department easier and more efficient.

DISADVANTAGES

- Many people are resistant to technological advancement.
- It can be difficult if users are not trained to use voice-messaging systems.
- A voice-messaging system can be less economical for smaller companies.
- People can "hide behind their mailbox" and not return calls.
- Many people dislike not being able to reach a live person.
- Concern for sender of message "confusing message" and "lack of instructions."
- Too many voice-messaging options may make it difficult for people to recall which options they used previously.

WHEN TO USE VOICE MESSAGING

Voice messaging has become a viable alternative to e-mail and fax systems as a business communicating tool, each of these three methods having specific advantages in different situations. (1) If users need to ensure privacy, deliver information quickly, get a quick response, add a personal touch, or send messages quickly, voice messaging is more desirable than e-mail or fax. (2) If users need to send information to many persons, outside the company, e-mail is most desirable. (3) If users want to edit or attach comments, forward messages to others, send information to many persons outside the company, keep or providing a hard copy, and provide a quick review of information, a combination of voice mail and e-mail is most desirable. (4) If users want to keep or provide hard copies of documents and distribute complex, lengthy information, the fax system is most desirable. (5) If users want to ensure privacy, edit or attach documents, and distribute complex or lengthy information, a combination of voice and fax systems is desirable.

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CHRISTINE M. IRVINE

W

WHOLESALING

Wholesaling refers to all of the transactions in which products are bought for resale, for the making of other products, or for general business operations. A wholesaler is the individual or organization that facilitates these wholesaling activities by buying products and reselling them to yet another reseller, government agency, or an institutional user. As of 1999, there were approximately 512,000 wholesaling companies in the United States (1998), with more than half of all products sold in the country passing through these wholesaling firms. There were approximately 400,000 independent firms that handled close to $2 trillion worth of merchandise and employed close to 6 million workers.

Wholesaling is an important aspect of a company's marketing-channel strategy because it essentially involves the planning associated with industrial customers that need to distribute their products to manufacturers, retailers, government agencies, schools, hospitals, and other wholesalers.

SERVICES PROVIDED BY WHOLESALERS

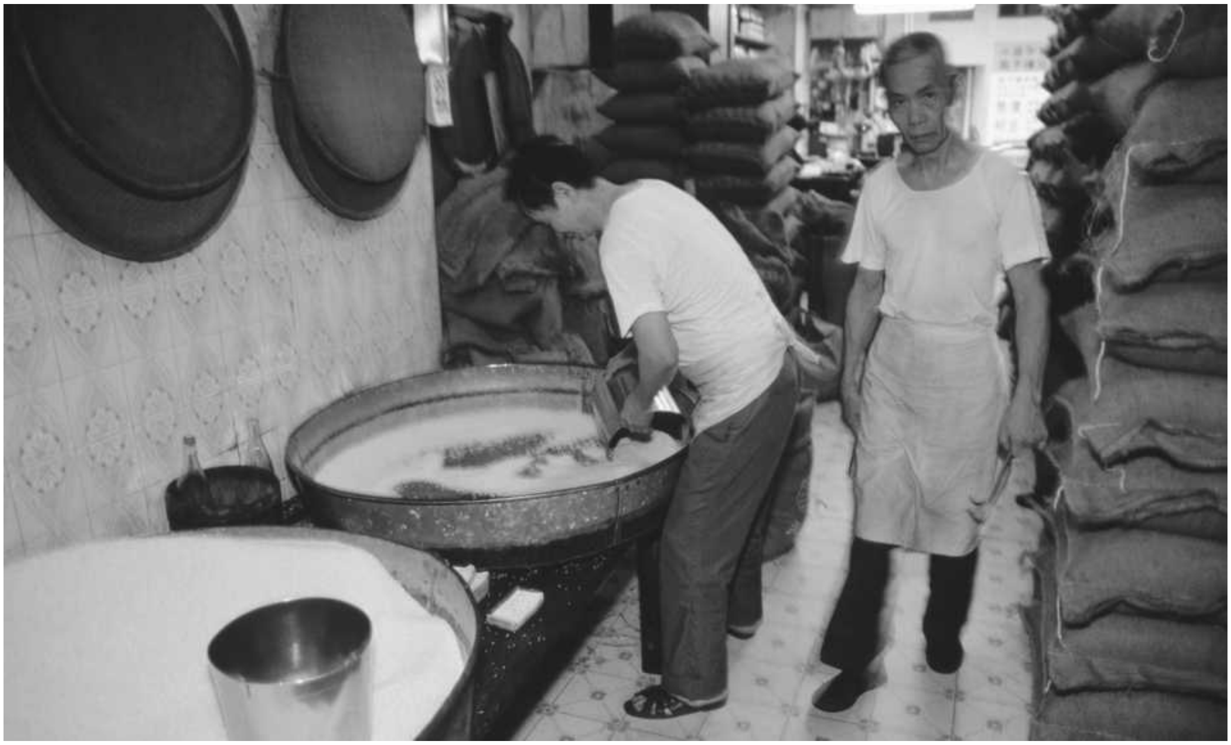
Because wholesalers are in the business of buying in large quantities and delivering to customers in smaller amounts, they are able to perform physical distribution activities more effectively, including materials handling, warehousing, and inventory management. They often offer quick and frequent pick-up and deliveries, as needed, which allows both the producers of the goods and wholesale customers to avoid the risks associated with holding large inventories.

Wholesalers support retailers by assisting them in their overall integrated market planning through pricing and promotion assistance. In addition, because they enter into sales contracts with a producer and because they can sell different amounts of the product to retailers, wholesalers serve as an extension of the producer's work force. They often provide financial assistance and extend credit as needed.

Keeping producers up to date on market conditions is a critical component of wholesalers' services. Their assessment and analysis of changing market conditions are important for producers that are concentrating on market development and strategies for growth.

Because of their position in the marketing channel, wholesalers have closer contact with retail customers than do producers. Wholesalers can spread their sales costs over more products than can most producers, which results in lower costs per product. Because of this, many producers shift their financing and distribution activities to wholesalers. Because they are often specialists in understanding market conditions and experts at negotiating final purchases, wholesalers are a critical component in retail distribution strategies.

The distinction between services performed by wholesalers and those provided by other busi-



Rice wholesalers.

nesses has changed in recent years. Retailers are discovering that they may be able to deal directly with producers and they may also be able to perform wholesalers' functions themselves. Because of the increased use of computers, retailers have been able to expedite ordering, delivering, and handling of goods more effectively than in the past. However, not all functions of wholesalers can be eliminated; these functions still have to be performed by some member of the marketing channel—producer, retailer, or wholesaler—because they are vital components of supply-chain management.

TYPES OF WHOLESALERS

There are three basic categories of wholesalers: merchant wholesalers; agents, brokers, and commission merchants; and manufacturers' sales branches and offices.

Merchant wholesalers are independent wholesalers that take title to the products they sell. This type of wholesaling accounted for 83 percent of all wholesale establishments in the United States in 1998. Since merchant wholesalers take title to the products that they resell, their earnings are obtained through markup of these goods. Merchant wholesalers are often called distributors and can be categorized as either full-service or limited-function wholesalers (Figure 1).

Full-service wholesalers often provide a wide range of services to the customers for which they purchase products. Customers rely on them for product availability, suitable assortments, breaking of large quantities into smaller ones, financial assistance, and technical advice and service. Although full-service wholesalers often earn higher gross margins than other wholesalers, their operating expenses are also higher because they perform a wide range of functions.

There are four types of full-service wholesalers: general-merchandise wholesalers, limited-line wholesalers, specialty merchandise wholesalers, and rack jobbers. General-merchandise

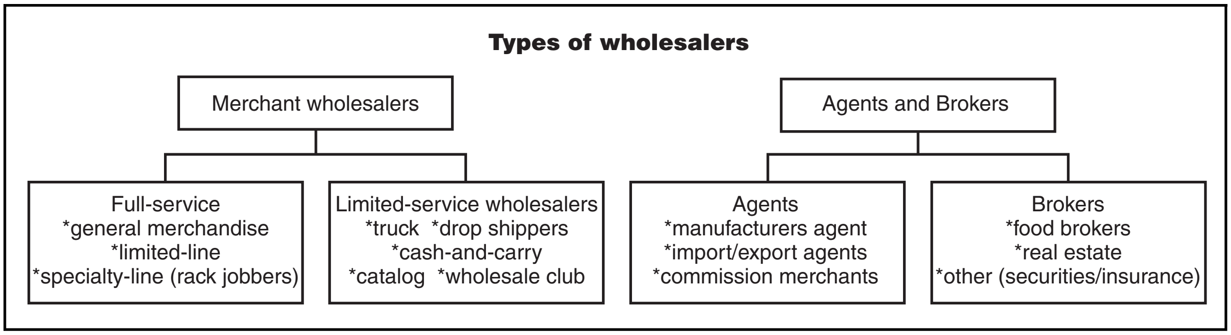

Types of wholesalers
Merchant wholesalers
Agents and Brokers
Full-service
*general merchandise
*limited-line
*specialty-line (rack jobbers)
Limited-service wholesalers
*truck *drop shippers
*cash-and-carry
*catalog *wholesale club
Agents
*manufacturers agent
*import/export agents
*commission merchants
Brokers
*food brokers
*real estate
*other (securities/insurance)

Figure 1

wholesalers carry an extensive line of products and provide a wide variety of services. Although these wholesalers may carry many different product lines, they do not carry an extensive variety within them. Most general-merchandise wholesalers deal in such products as drugs, nonperishable foods, cosmetics, detergents, and tobacco.

Limited-line wholesalers carry only a few product lines—such as groceries, lighting fixtures, or oil-well drilling equipment—but offer an extensive assortment of products within those lines. They also offer fewer marketing services than general-merchandise wholesalers because they specialize in just a few functions that are associated with the product lines they carry. Limited-line wholesalers often take title to the products, but they may not deliver merchandise, grant credit, provide essential marketing information, or store inventory. This results in smaller profit margins as compared to general-merchandise wholesalers. The decision as to whether a company should use a limited-line wholesaler depends on the structure of the marketing channel and the need to manage the supply chain in order to obtain a competitive advantage i.e. do a "good" job so that competitors don't "steal" the business. Although the number of limited-line wholesalers is relatively small, they are important in the distribution of such products as specialty foods, perishable items, construction materials, and coal.

Specialty-line wholesalers carry the most narrow product assortment, usually consisting of a single product line or part of one. Because specialty-line wholesalers are product experts; they can offer extensive sales and product support.

Rack jobbers, sometimes considered a subcategory of specialty-line wholesalers, concentrate on retail stores. They set up and maintain displays and stock them with goods that are sold on consignment. Retailers depend on rack jobbers for the provision of health and beauty aids, hosiery, books, greeting cards, and magazines.

The five types of limited-function wholesalers are truck jobbers, drop shippers, cash-and-carry wholesalers, catalogue wholesalers, and wholesale clubs. Producers of fast-moving goods, especially those that are perishable and need frequent replenishment, often use truck jobbers because they deliver only within a particular geographic region in order to maintain product freshness. Truck jobbers are often chosen as the wholesaling method because they offer quick and frequent delivery, which is especially crucial for such items as bakery goods, meats, and dairy products.

Drop shippers arrange for shipments directly from the factory to the customer; although they do not physically handle the product, they do take title and responsibility for all the risks associated with the transport of goods. In addition, they offer the necessary sales support for the products they distribute. They operate in a wide variety of industries, including chemicals, industrial packaging, lumber, petroleum, and heating products.

Cash-and-carry wholesalers are intermediaries whose customers are usually small businesses that pay cash and have to arrange the delivery of these products themselves. Cash-and-carry wholesalers usually carry a limited line of products that have a high turnover, such as groceries, building materials, and electrical or office supplies. They do not deliver the products they sell, nor do they extend credit, but they are a vital intermediary for those small businesses that would be unprofitable for larger wholesalers to service.

Catalogue wholesalers are an alternative to cash-and-carry wholesalers that serve both major population centers and remote locations. Prepayment for goods is required, and delivery is arranged through delivery services such as UPS. A wide range of competitively priced products are offered, such as office furniture and equipment, packaging materials, and shelf and storage systems.

Wholesale clubs are organizations that offer customers a fee-based membership that entitles them to make tax-free purchases at below-retail prices. This particular concept is a growing phenomenon in the United States because of the success of such wholesale clubs as Costco and Sam's Club.

The second category of wholesalers is agents and brokers (Figure 1). Agents represent either buyers or sellers on a permanent basis, whereas brokers are middlemen that buyers or sellers employ temporarily. Both agents and brokers perform fewer functions than limited-service wholesalers but they are usually more specific in their product selection, and thus can provide valuable sales expertise. Using agents and brokers allows companies to benefit from the expertise of a trained sales force, which results in a decrease in personal selling costs. Often called functional middleman, agents and brokers perform a limited number of services in exchange for a commission that is based on the selling price.

One type of agent is called a manufacturer's agent; this type accounts for half of all agent wholesalers. They are independent middlemen who represent more than one seller and offer complete product lines. A manufacturer's agent is restricted to a particular territory and sells and takes orders year-round. There is a contractual agreement between the agent and the manufacturer that outlines territories, selling prices, order handling, delivery, service, and warranties. In service-based manufacturer's agent companies, the more services that are offered, the higher the commission. These types of agents are commonly used in the sales of apparel, machinery and equipment, steel, furniture, and automotive products.

Two other types of agents, import and export agents, specialize in international trade. Import agents find products in foreign markets and sell them in their home countries. In many countries, it is extremely difficult and sometimes illegal to try to sell products from another country without going through an import agent. Export agents locate and develop markets abroad for products that are manufactured in their home countries. As of 1998, there were more than five-hundred export agents in the United States who were paid commissions by the companies they represented.

Selling agents are middlemen that market a whole product line or a manufacturer's entire output. They perform all the functions of wholesaling, except that they do not take title of the product. Frequently, companies opt to use selling agents in place of marketing departments. To avoid conflicts of interest, selling agents represent noncompeting product lines and have the authority for pricing, promotion and distribution of those products.

Finally, there are commission merchants. These are agents who receive goods on consignment and negotiate sales in large central markets. Their specialty is securing the best price possible under market conditions. These agents are primarily found in agricultural industries, taking possession of truckloads of commodities and arranging for grading, storage, and transportation. Commission merchants deduct commission and the expense of making the sale, and then turn over the profits to the producer. Although they provide planning and assistance with credit, they do not provide any promotional support.

Since brokers are the intermediaries that bring buyers and sellers together, they are paid a commission on the transaction. Brokers do not enter into contracts for extended time periods; rather they work on a transaction-by-transaction basis. There were approximately 9,000 wholesale brokers in the United States in 1998, and most of them concentrated in food and agricultural industries. Brokers are especially useful to sellers of supermarket products and real estate. Food brokers, for example, sell food and general merchandise to retailer-owned stores and merchant wholesalers, grocery chains, food processors, and organizational buyers. Since brokers perform fewer functions than other intermediaries, they are not involved in financing, physical possession, pricing, or risk taking. What they offer instead is expertise in a particular commodity and a network of established products.

There were more than 35,000 manufacturer-owned wholesalers operating in the United States in 1999. About two-thirds of these were manufacturers' sales branches. These wholesalers maintain inventory and perform a wide variety of functions, such as providing delivery, credit, market feedback, and assistance with promotional planning. Manufacturers sales offices are the other type of producer-owned wholesaler. They do not maintain inventory, but they assist with sales and service, market analysis, and the billing and collection of funds for products sold. Both sales branches and sales offices are located away from the manufacturing plants and closer to customers because the producers are attempting to reach their customers more effectively in an attempt to create a competitive edge in the marketplace.

DEVELOPMENTS IN WHOLESALING

In the early 1990s, wholesaling gross profits declined. Because of the economic recession, a decrease in new store construction, and competition, wholesaling growth declined. Chains, which usually prefer to buy directly from manufacturers, grabbed a larger part of the market in areas such as home-improvement products. But, while tough economic conditions can affect wholesalers adversely, a booming economy can do the same thing. Retailers, experiencing rapid sales growth, may opt to buy directly from manufacturers, thus cutting wholesalers from the supply chain.

Both retailers and producers are eager to improve their profitability, and the wholesalers are caught in the middle. Industry observers see the power in the channel shifting more toward the retailer, who may choose to reevaluate the current supply-chain members.

Because of these changing market conditions, wholesalers are concentrating on strategies to improve service by adding more value-added concepts. Even though wholesaling has traditionally involved the handling of goods, the activities and functions of wholesalers are being applied more and more in service industries. Access Graphics in Boulder, Colorado, for example, takes an active role in pursuing new business for its vendors by providing them with customer databases that help resellers in identifying sales prospects. In addition, it also provides in-house graphic departments that produce the promotional materials needed by resellers and their customers. Access Graphics believes in adding value to its supply-chain relationships; as a result, it has established a staff of system engineers who help resellers with installation, system design, and computer-memory testing.

Tough market conditions in the United States have forced many wholesalers to adopt a global perspective. Wholesalers have been encouraged by the North American Free Trade Agreement (NAFTA) to expand their operations into Mexico and Canada. It is expected that by 2010, 25 percent of wholesalers' business will come from foreign markets.

International wholesalers will experience stages of growth depending on the economic development of foreign economies. All-purpose wholesale merchants will dominate in simple economic conditions, while an expanding economy will see the emergence of interregional wholesalers. As foreign economic conditions mature, there will be a growth of specialized wholesalers, with product-line and functionally specialized wholesalers dominating the chain. In an advanced economy, channels become controlled by large-scale retailers and manufacturers; thus causing a decline in the need for conventional wholesalers.

Wholesalers that expand through globalization will face the challenge of competition against current wholesalers, new languages, an array of different legal systems and a multitude of cultural differences. However, a decision to stick with domestic markets only could hamper the growth of a wholesaler.

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PATRICIA A. SPIROU

WORD PROCESSING

Word processing is the term applied to the computerized production of text-based documents. Documents that are often produced by word-processing systems include memos, letters, mailing labels, reports, proposals, manuals, and basic newsletters. The following sections review the history, components, and features of word processing.

HISTORY OF WORD PROCESSING

Throughout most of the twentieth century, business and government documents were produced with typewriters, first manual and then electric ones. In the mid-1970s, however, computer technology made its way into the typewriter arena, and computerized typewriters were created. Adapting the term *data processing*, which had been used to refer to computers whose main function was to process data, developers coined the term *word processing* to refer to the new computerized typewriters.

The earliest word processors were very expensive and not financially feasible for most traditional secretarial situations. Because of word-processing systems' expense and limited capability, cost-benefit studies had to be conducted to determine if the investment could be economically justified. Thus many secretarial positions were moved into centralized secretarial pools, called *word-processing centers*, so the word-processing equipment could be used more efficiently.

In the early 1980s, the introduction of the personal computer made it possible to perform multiple functions on the same machine—data processing, word processing, graphic creation, and more. This advancement made systems easier to cost justify, which greatly increased sales. As sales escalated, the cost of computer hardware and software declined, because of competition and economies of scale. With less expensive hardware and more powerful software, businesses and private households purchased personal computers at an even faster pace, and the demand for word-processing software skyrocketed. The increased power and capability, coupled with plummeting costs, largely eliminated the need for many word-processing centers, and many of today's managers and professionals have computers at their own workstations and perform their own word-processing tasks. Keying information directly into a word-processing program, rather than handwriting text, can double or triple the efficiency of document production.

COMPONENTS OF A WORD-PROCESSING SYSTEM

Word-processing (WP) technology requires both hardware and software components. WP hardware consists mainly of a computer and a printer for producing paper documents. However, because electronic mail, or *e-mail*, is such a major means of communication today, systems will benefit from a *modem*, or a link to a network for transmitting word-processing documents electronically.

The computer monitor should be large enough for easy reading of the text. Word-processing software can also enlarge the documents on the screen, which greatly helps those who are visually impaired. Word processors can display text and graphics on the computer screen the same way they will appear when printed on paper. This feature is described by the acronym WYSIWYG (pronounced *wizzie wig*), which stands for *what you see is what you get*. The keyboard and mouse should be situated for comfortable use. *Carpel-tunnel syndrome*, a condition causing discomfort and numbness in the arms and hands, can result from frequent use of a keyboard that is not properly aligned with the operator's body.

Because today's documents often include graphics, which require extra computer power and storage space, computers used for word processing should have fast processors and plenty of hard-disk space. WP systems also should include a laser or ink-jet printer to output professional-looking documents. Color printers are needed in situations requiring color output. Also, for applications involving graphically rich documents, a desktop scanner and digital camera may be added.

Word-processing software usually comes bundled with several other software packages, including *spreadsheet* and *slide show* software. Other parts of the package may include photo-editing and graphics software, plus clip art and photographs.

WORD PROCESSING FEATURES

The following word-processing features can greatly contribute to the processing of documents.

Text composition: Text can be entered into a new document by typing on a keyboard or copying it from other documents. With newer voice-recognition software, you can even speak into a microphone and have the software turn your spoken words into text. Word processors include a thesaurus to assist you in selecting words to use as you compose the message. They also include automatic outliners to assist in organizing the basic structure of the text, as well as counters to calculate the number of words in a document.

Text editing: Once a first draft is created, you can easily add and delete characters. With the cut-and-paste feature, text blocks can also be moved from one part of a document and placed in another location. Further, word processors include spell-checking and grammar-checking features to help identify and fix writing errors. They will not catch all errors, however, so human editing and proofreading are still required. The search-and-replace feature will find all occurrences of selected words or characters and replace them with something else.

Typography: Word processors can print text using any of thousands of different typefaces, commonly called *fonts*. Times Roman, Arial, Century Schoolbook, Garamond, and Helvetica are well-known fonts. In addition to choosing different fonts for text, you can modify the size, color, case, and style of the text. The height of type is measured in units called points, with one point being equal to 3⁄72 of an inch. Thus, 72-point type is approximately one inch tall. The type in documents to be read by general audiences should usually be from 10 to 12 points tall. Colored text should be used judiciously, making sure the color complements the message.

Case refers to whether the text is displayed as small letters (lowercase), capital letters (uppercase), or small caps (all letters are capitalized, in a type size slightly smaller than that of the surrounding text, but with the first letter of words that would normally be capital larger, in the type size of the surrounding text). Additionally, changes can be made in the style, such as using italics, boldface, and underlining.

Spacing: The amount of space between words, characters, and lines of text can be modified as needed. Word processors can adjust to any measurement, such as 1.2, 2, or even 5 lines of spacing between lines.

Line formatting: By adjusting left and right margins, you can increase or decrease the length of a line of text (from a readability standpoint, the ideal line length is approximately forty characters). Further, you can create multiple columns of text on a page, such as is common in most newsletters.

Text can also be left justified (all text lines are aligned on the left), right justified (all text lines are aligned on the right), or fully justified (all text lines are aligned on the left and right). Left-justified text is perceived to be less formal; fully-justified text is more formal. Text can also be horizontally centered, which is useful for titles and headings.

Styles: Another feature of word processors is *styles*, which consists of a number of text or formatting specifications that can be automatically applied anytime it is needed. For example, you might create a style called Main Heading, consisting of the following characteristics: Helvetica, 18-point, boldface, italics, and centered. After the style is created, you can apply it to any heading in a document, instead of having to go through the tedious process of selecting the text and then specifying all the characteristics one at a time.

Reference tools: Selected words can be electronically coded for inclusion in a table of contents or index, and the table of contents or index can then be automatically created. Footnotes and endnotes can be created in a similar manner.

Document formatting: Page-layout features are extremely flexible, giving numerous arrangement options for brochures, newsletters, cards, menus, business cards, invitations, and more. By modifying margins, column widths, paper size, and different page subdivisions, you can create a wide variety of documents.

Organizational elements: Word processors provide features to organize information and guide readers through the text. Page-organizing elements can include borders, page numbers, a dropped capital letter at the beginning of a paragraph, and vertical lines between columns. You can also put a colored background behind a block of text to set it off from the rest of the text on a page.

Other layout elements include bulleted lists, numbered lists, and highlighted text, all of which make the associated text more visible and accessible. Further, headers and footers can be typed once and then automatically generated on subsequent pages.

Tables: The tables feature is used for placing text elements in columns and rows, separated by horizontal and vertical lines. Financial information, sales information, telephone lists, and any other similar data can be quickly and effectively organized with the tables feature.

Graphics: Word-processing systems permit the addition of various types of graphics, such as bar charts, line charts, organization charts, clip art, and photographs. Communication can often be greatly enhanced by a combination of text and graphics, instead of just text alone. For example, the last two years' quarterly sales figures are much easier to read and compare in a bar chart than in written text.

Output: In addition to printing word-processed documents in paper form, either in color or black-and-white, these documents can also be output as electronic documents and placed on the Internet as Web documents. The process of creating Internet documents with word-processing software consists of creating the text and graphics in the usual manner and then using the software's Web features to convert the document to a Web-compatible format.

Database tools: Word processors contain tools for creating basic databases, such as address lists, and then generating mailing labels and mass mailings from those lists. The lists can also be searched for text items that match certain criteria, and the text can then be sorted according to various criteria.

Word-processing systems are a critical component of almost any business operation that requires the creation, editing, printing, and mailing of text. Their features will continue to evolve in the years ahead.

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WILLIAM H. BAKER

WORK GROUPS (TEAMS)

Competition in business today has created a desire and need for work groups. The delegation of duties is occurring through this redesign of the work process. The delegation process is in turn creating team environments in organizations. The redesign of the work process is also due to downsizing, a collapsing of the organization's ranks, and the retiring of employees. David Cleland (1996) states that "the traditional model of organizational design is an endangered species" (p. vii). As teams are more readily seen as an effective way to involve employees and solve problems, they have modified the organizational design of many businesses. Consequently, teams are noted as the "common denominator of organizational change" (Cleland, 1996, p. 9).

The team philosophy has become prevalent throughout business. Teams, which began as social-technical-business experiments as part of the total quality management concept, have become an accepted norm in a majority of organizations today (Ozols, 1996). Teams can be categorized as steering teams, project teams, task forces, cross-functional teams, and so forth. Villis Ozols (1996) notes that 51 percent of all employees are on teams of one sort or another.

The role of a team is to improve a situation or solve a problem. Teams were initiated because it was believed that "employees will best respond (be productive) when they have a high feeling of self-worth and of identification with the success of the organization" (Ketchum and Trist, 1992, p. 18). Reengineering, empowerment, and restructuring strategies can all give employees more control or hands-on involvement in dealing with their changing jobs. Traditional jobs do still exist; however, "jobs are increasingly a patchwork of responsibility fitting into an overall mosaic" (Cleland, 1996, p. 21). Jobs are becoming a collection of responsibilities, and employees need to be more flexible and responsive to changing demands. As individual jobs are changing, so is the manager's role. The manager is not only becoming more of a coach or facilitator but is also charged with developing the self-motivation of employees. These employees should not only set goals for themselves but also evaluate their efforts (Zenger et al., 1992). Employees are still individually important, but they are more important when they contribute to the whole—to the team.

Elisa Mendzela (1997) notes that although groups and teams are not necessarily synonymous, many people refer to almost any work group as a team. Teams have many definitions, including the following:

1. A unified, interdependent, cohesive group of people working together to achieve common objectives (Recardo, 1996, p. 6)
2. People with complementary skills, committed to a common purpose approach, who work together effectively and hold themselves mutually accountable (Mendzela, 1997, p. 62)
3. A number of persons associated together in work or activity (*Merriam-Webster Online Dictionary*, 1999)

Not all individuals necessarily possess team skills. Because American society is an individualistic one, individuals will need to suppress traditional communication methods and learn new ways to function effectively within a team (Pucel and Fruehling, 1997). When team members receive the necessary training to learn needed skills, the team becomes more effective and the individual employee wins as well (Ozols, 1996).

TEAM DEVELOPMENT PROCESS

"Team development is the process of unifying a group of people with a common objective into an effectively functioning unit" (Shonk, 1982, p. 1). The team development process includes defining, analyzing, planning, acting, and evaluating. A combination of these stages will help to produce a productive team.

An organization must first define the team and decide whether the team format is the way to proceed. Analyzing team performance and planning for improvement are essential steps in the team development process. Planning for improvements, implementing actions, evaluation, and follow-up should be designed to work in a circular pattern so as to achieve team improvement and productivity. (See Figure 1.)

ADVANTAGES OF TEAMS

Teams are helpful in dividing and organizing work. Advantages include breaking down departmental or branch barriers, improving service, providing more time for other duties, identifying issues, obtaining feedback from others, and, of course, dividing up work duties and responsibilities. These are all obviously advantageous to any company.

Teams have also been known to decrease error rates, cut order-processing time, increase manufacturing productivity, and decrease theft and absenteeism (Ozols, 1996). However, even with all these benefits, Mendzela (1997) notes that 60 percent of teams fail.

TEAM FAILURE

Reasons for team failure include internal competition, companies' failure to recognize team performance, lack of clear goals or common cause, a team being inappropriate for a situation, and negativity. The team should not be in competition with the individual; the team works through individuals toward a common goal.

When team members are confused about the team's goal or objective, they are basically saying the following three things:

> 1. *They don't believe in the outcome.*
> 2. *They don't believe the outcome is reachable.*
> 3. *They can't figure out what the boss really wants as an outcome.*
>
> (Robbins and Finley, 1995).

Several myths, noted by Harvey Robbins and Michael Finley (1995), lead to unsuccessful teams. The idea that people enjoy working together is not necessarily true. Many people need their own space and feel confined when assigned to a specific group. It is also untrue that a team can solve any problem. This is not the case if the team is not focused on and knowledgeable about the problem. Just because a manager or the company president is overzealous about teams doesn't mean that a team approach can immediately or totally solve a problem. Assigning everything to teams and assuming "the more the merrier" does not work in all situations.

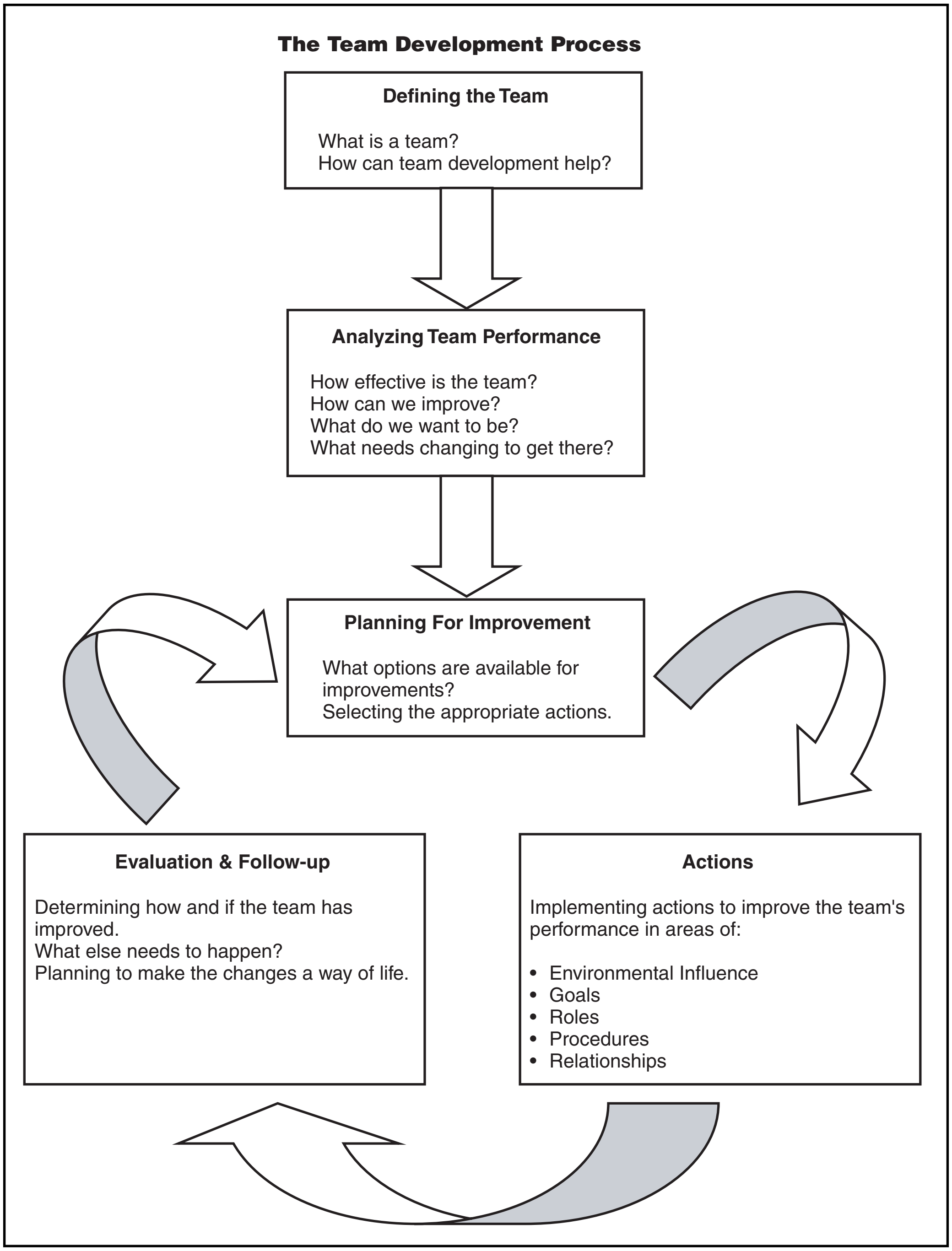
Ozols (1996) states that the major reason for team failure is that teams are set up only to achieve management results, not to answer the employee question "What's in it for me?" Employee job satisfaction, recognition, and so forth are essential in reducing team failure.

SUCCESSFUL TEAMS

Characteristics of successful teams include open-mindedness, involvement, ability to deal with conflict, responsibility, trust, respect for others, effective listening, and full participation. Rob Heselbarth (1997) notes that "a strong team is built by distributing responsibility, authority, and information" (p. 5). The individuals working as a team, as well as the team itself, must possess these characteristics. These characteristics can be evaluated through Pollar's (1997) five categories of team evaluation:

1. Purpose and direction
2. Problem solving and decision making
3. Communication
4. Participation
5. Leadership

A major advantage of the team approach is that employees are happier and more productive when they are grouped and, in turn, have input



The Team Development Process
Defining the Team
What is a team?
How can team development help?
Analyzing Team Performance
How effective is the team?
How can we improve?
What do we want to be?
What needs changing to get there?
Planning For Improvement
What options are available for improvements?
Selecting the appropriate actions.
Evaluation & Follow-up
Determining how and if the team has improved.
What else needs to happen?
Planning to make the changes a way of life.
Actions
Implementing actions to improve the team's performance in areas of:
• Environmental Influence
• Goals
• Roles
• Procedures
• Relationships

Figure 1

into or control over a certain problem in their organization (Sashkin and Sashkin, 1994). The result of the team's work has a direct impact on the individuals and their jobs; therefore, they are more interested in their work. Teams are successful when their individual members are successful.

Many companies have had success with teams. A few examples are noted by Cleland (1996).

- *Federal Express and IDS*: 40 percent boost in production
- *Motorola Corporation*: Teams dedicated to improving quality, cutting costs, and reducing cycle time
- *IBM*: Technology assessment teams to review current and emerging technologies
- *General Electric Company*: Best-practices assessment to determine the basis of the success of competitors

Marilyn Manning and Patricia Haddock (1996) note seven steps to help manage teams:

> 1. *Communicate the mission of the company.*
> 2. *Make sure each team member knows what is expected.*
> 3. *Encourage open communication among team members.*
> 4. *Resolve conflicts quickly and fairly.*
> 5. *Encourage interaction among teams.*
> 6. *Support your teams.*
> 7. *Motivate and reward.*
>
> (pp. 59-60)

These steps work well in the management of teams and can be incorporated into the team development process.

DISADVANTAGES OF TEAMS

Disadvantages of teams are not always acknowledged. However, when a company is deciding whether to develop teams, the disadvantages, such as potential internal conflict and individual loss, must be weighed against the advantages. (Individual loss refers to individual team members' giving up personal gain; they must share the success.) Power struggles are likely to arise from internal conflict disagreements.

Common problems that may arise include overbearing, dominating, or reluctant participants; floundering; a rush to accomplish goals; digression; acceptance of opinions as facts; and feuding members (Scholtes, 1988). The result will be a lack of focus on the common goal.

PRIOR TO TEAM BUILDING

Because weighing the advantages and disadvantages of teams is important, specific questions must be asked. Certain situations do not call for a team and may be better served by another work mode. Mendzela (1997) offers four specific and demanding questions to help companies determine whether a team approach is best:

1. Why would a team approach be helpful?
2. What is unsatisfactory about the current situation?
3. What are possible causes and solutions?
4. Will your organization really support a team approach?

If a team is deemed beneficial and worth implementing, a mission or purpose statement must be carefully developed. It is important that the team be clear and knowledgeable about its purpose to be able to meet the team goal and, in turn, the objectives and goals of the organization.

CONCLUSION

Teams can be effective or ineffective depending on the team environment. Minda Zetlin (1996) notes the following helpful and hindering habits for teams. Helpful habits include open-mindedness, open and immediately dealing with conflict, respect for others' time, listening, low defensiveness, and full participation. Hindering habits include negative body language, false participation, complaining about other team members rather than discussing problems with them directly (triangling), two-way arguments (cross-talk), accumulating grievances (stamp collecting), speaking at length in too much detail (going deep), and destructive humor.

Whether to use teams is an important organizational decision. Advantages and disadvantages in developing and utilizing teams must be researched. Team outcomes are dependent on an effective design and efficient work with recognition of the teams' efforts.

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TENA B. CREWS

WORK MEASUREMENT

Work measurement is the careful analysis of a task, its size, the method used in its performance, and its efficiency. The objective is to determine the workload in an operation, the time that is required, and the number of workers needed to perform the work efficiently. Work measurement helps to determine the time spent performing any process and offers a consistent, comparable methodology for establishing labor capacities.

Work measurement can be extremely effective at informing supervisors of the working times and delays inherent in different ways of carrying out work. The purpose of a measurement method is to achieve full coverage of the work to be measured.

A good work measurement system has many benefits. It helps to reduce labor costs, increase productivity, and improve supervision, planning, scheduling, performance appraisal, and decision-making.

WORK MEASUREMENT COMPONENTS

A work measurement system has three components: preferred methods, time values, and reporting. *Preferred methods* are not always the most efficient or fastest way to do a task. They should enhance safety, quality, and productivity. Safety for the employee and for the product should be considered. Quality is equally important; it has been proven that good performance and good quality go hand in hand. People who are trained in the proper method and follow that method will produce high-quality work and perform at an acceptable performance level. *Time values* and *reporting* should also be considered. The time that a job should take is determined not on the basis of speeding up the motions a worker normally makes but on the normal pace of the average worker, taking into consideration allowances for rest periods, coffee breaks, and fatigue. A reporting system is important to the success of any work measurement method. Supervisors and managers must have access to labor-management information that is both timely and complete. Timely information can be used to manage and shift labor hours to areas where they are needed and to correct problems or at least prevent them from becoming a crisis. Personal computers help to apply work measurement more effectively and more cheaply and provide immediate feedback to the workers, supervisors, and managers.

WORK MEASUREMENT METHODS

Work measurement programs involve the use of a number of techniques, each selected to cover an appropriate part of the task. The purpose of measurement is to collect real data about actual events. To obtain time standards, the data are usually converted to target data or data that apply under known conditions. All work measurement systems are based on the same, simple three-stage procedure: analysis, data collection and measurement, and synthesis. They differ in the nature and degree of analysis, the nature and level of data collection and measurement, and the nature of the synthesis process. However, the three-stage procedure remains common.

Before measurement begins, the task to be measured is *analyzed* and broken down into convenient parts that are suitable for the chosen measurement technique. The purpose of the measurement technique is to derive a "basic time" for each of these activities, elements, or motions. At the *measurement* stage, it is necessary to collect descriptive or qualitative data on the nature of the task, the conditions under which it is performed, and other factors, which may have a bearing on the time that the task takes to be complete. When repetitive jobs are measured, data are collected over a number of representative cycles of a job to obtain a "mean" or "typical" value. An analysis of the results can be done using statistical techniques to determine the number of observations that must be made to provide a given level of confidence in the final results.

At the *synthesis* stage, the various parts of the task and their associated basic times are combined together in correct sequence and with the correct frequency to produce the time for a complete job. During this stage, the basic time will be adjusted for allowances to become the standard time for the task.

There are four work measurement methods, each of which has strengths and weaknesses. The *historical data* method shows the time it actually took to complete a task. Such data have the advantages of being easy to collect, understand, and communicate, but they provide no information for future improvement. For the *work sampling* method, a large number of random observations are made of the task to determine the steps in its normal performance. This method is easy to learn and use, and it provides more operational detail than historical data. The disadvantage of work sampling is that it requires thousands of samples to establish an accurate measure for each step.

The *time study* method uses continuous and snapback approaches to record the elapsed time of a task. The snapback approach requires a stopwatch with a reset button that allows the observer to read and record the time at the end of each work element then reset (snapback) the watch to zero. Although popular, the time-study method is subjective and relies heavily on the experience of the time-study analyst. A computerized data collector provides more accurate timing than the stopwatch. However, converting actual time to the expected or normal time remains a problem.

The *predetermined motion/time systems* method is based on the premises that all work consists of basic human motions and that times can be assigned to these motions if they are defined and classified in a systematic way. A film or videotape records what a job entails and how long it takes. This technique is used most frequently in studying high-volume settings such as a workstation or an assembly line. An observer measures a job by watching and analyzing it into its basic constituent motions. This method requires substantial training and practice to acquire and maintain accuracy. It enables all types of tasks to be assigned time/duration values that can then be extended into cost values. The results are not easy to communicate, but when properly executed, this method yields very accurate times.

(SEE ALSO: *Performance Appraisal*)

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NASHWA GEORGE

WORKPLACE SAFETY

(SEE: *Occupational Safety and Health Administration (OSHA)*)

WRITING SKILLS IN BUSINESS

Business writing has seven purposes:

1. Convey information
2. Explain a situation
3. Request action
4. Seek information
5. Persuade
6. Reply to communication previously received
7. Convey an attitude

The goal of business writing is to have readers understand the message completely, clearly, and accurately. A few recommendations by authorities follow.

EFFECTIVE WRITING

Effective writers use correct grammar, spelling, and punctuation.

Effective Grammar.

1. Use first person personal pronoun (*I*) to indicate who is stating the action: *Sally and I visited the museum.* (not *Me and Sally*)
2. Use parallel construction: *Managers' days are spent completing reports, interviewing personnel, and attending meetings.* (not *in meetings*)
3. Make each sentence complete: *Please read the article; you will find it a truly moving experience.* (not *Please read the article. A truly moving experience.*)
4. Don't run sentences together: *Enter the competition. I think you'll win.* (not *Enter the competition I think you'll win.*)
5. Make the meaning of sentences very clear. Assume you wish to declare limits on your work times. *I work only in the mornings.* (not *I only work in the mornings.*—concentrates not on work times, but on activities.)
6. Use *don't* only with first person (*I*) or second person (*you*). Substitute *doesn't* with third person (*he*, *she*). *I don't have any quarters. He doesn't have any quarters.*
7. Double negatives are illogical. *I don't want any more carrots.* (not *I don't want no more carrots.*).
8. The use of *lie* and *lay* determines their meaning. *I need to lie down.* (not *lay* down) *She lay in the sun for an hour.* (here *lay* is past tense of *lie*) *Lay the book on the table.* (here *lay* means to set something down)
9. The past tense of know is *known. I have known her for a year.* (not *knowed*)
10. The word *from* usually follows *different. Today is different from yesterday.* (not *than*)

Effective Spelling. Spell all words correctly. Following are correct spellings of words often misspelled:

- accommodation
- judgment
- I dropped the tire off of *its* mounting.
- *It's* Friday.
- E-mail is now *accessible.*
- Will you *accept* my invitation?
- I'm afraid I'll *lose* my notes.
- The nail came *loose.*
- My light is brighter *than* a spotlight.

- I *then* saw my customer.
- I am *grateful* for your assistance.

Effective Punctuation. Use periods to end sentences that:

1. State fact or opinion: *I'm flying United Airlines.*
2. Suggest or order action: *You should visit Dorothy.*
3. Request action in question form: *Will you please go.*
4. Are indirect questions: *She asked when school started.*
5. End with an abbreviation: *She lives on Palm Ave.*

Use question marks to end sentences that:

1. Ask questions of fact or opinion: *Are students admitted?*
2. Close with abbreviations: *Is it 7:00 p.m.?*

Use exclamation points to end sentences showing strong opinions: *Your house is on fire!*

Use commas:

1. After introductory parts of sentences: *After studying, she got an "A" grade.*
2. After prepositional phrases: *During the meeting, everyone talked.*
3. Before and after "interruptors" within sentences: *Please enter, Mrs. Alexander, before guests arrive.*
4. To separate two independent clauses in one sentence joined by a conjunction. *I saw her Friday, but she's home now.*
5. To separate series of three or more words, phrases, or clauses: *Germans, Russians, and Spaniards were there.*
6. Before and after non-essential interruptors, where meanings would be clear without interruptors: *This clock, as you might have guessed, is an antique.*
7. Do not use commas around interruptors that are essential to the meaning: *The automobile parked in Stall C-16 is mine.*

Semicolons join independent clauses not joined by coordinating conjunctions: *Spring is here; it's finally warm!*

Use colons where:

1. Series of items follow: *Four brothers stand before you: Abraham, Benjamin, Charles, and Herman.*
2. Long quotations follow: *The mayor said: ". . . Never before have I experienced the joy of knowing that one of our citizens was elected governor . . ."*

Use quotation marks at beginning and end of:

1. Direct exact quotations: *"Holidays," said one speaker, "are students' friends."*
2. Titles of book chapters, poems, or magazine articles: *The chapter is entitled "Computers and Clocks."*
3. Terms possibly unfamiliar to readers: *An IRA is an "Individual Retirement Account."*

Rules exist for punctuation related to quotation marks:

1. Periods and commas go inside quotation marks: *"I am listening, Father," said Robert, "I am listening."*
2. Colons, semicolons, exclamation points, and question marks go outside quotation marks unless part of the quoted material: *You said, "No one can solve this puzzle"; I found three who could.*
3. Do not use quotation marks around indirect quotations: *He said he'd leave before 3:00 p.m.*
4. Use single quotation marks for quotations within quotations: *Virginia said, "I saw the movie 'Titanic.'"*
5. Use underscore, all capitals, or italics (but not quotation marks) for titles of books; pamphlets, long poems, magazines or newspapers; or performing, musical, literary, or visual art pieces.

Apostrophes have two major rules:

1. To show possession for nouns, not pronouns: *The composer's melody is beautiful.*
2. To substitute for missing letters in "contractions": *You're the winner!*

Some major rules for capitalization are:

1. Capitalize first words in sentences. *Eighty-five books were purchased.*
2. Capitalize names: *Finally Marie visited Portland, Maine.*
3. Capitalize and abbreviate titles: *Here's Mr. Blake.*

EFFECTIVE SENTENCES AND PARAGRAPHS

Writing effectively requires skillfully transforming correct grammar, spelling, and punctuation into sentences and paragraphs.

Effective Sentences Main ideas can be emphasized by placement in independent clauses at ends of sentences: *From shrewd investments, Martin achieved overwhelming success.* Emphasis also comes by comparing or contrasting: *He speaks with the force of a thunderbolt.* Connecting words emphasize ideas: *She's inexperienced; however, look at her sales reports.* Positive attitudes increase sentence effectiveness: *We appreciate your thoughtful reply. We will study it carefully.* (versus *We cannot understand your reply.*)

Effective Paragraphs. Place a central core thought in each paragraph. Central core thoughts may come first followed by supporting sentences:

> *We're concerned about declines in sales and profits. Two years ago, sales reached $260 million. Last year they dropped to $214 million. Two years ago, our profit rate was 13% on sales. This past year, it dipped to 8%.*

Ending paragraphs with central core thoughts are equally effective:

> *Two years ago, sales reached $260 million. Last year they dropped to $214 million. Two years ago, our profit rate was 13% on sales. This past year, it dipped to 8%. We're concerned about declines in sales and profits.*

Skillful repetition makes a paragraph effective:

> *Bosses forgive occasional tardies. They even overlook mistakes. But they never condone a negative attitude.*

Climatic paragraphs can generate excitement by sequencing events in order of occurrence:

> *On June 14, two girls carrying shopping bags entered our men's furnishings department. While one girl talked to a sales associate, the other slipped around quietly loading her shopping bag. Soon, they left by the front door. However, our security patrol spotted them. When the two girls got outside, security nabbed them and called the police.*

VISUAL ASPECTS

Whether transmitted via letter, FAX, e-mail, or inter-office communication, appropriate formats create favorable impressions.

Business Letters. Business letters are mailed to persons outside the writer's company:

- One-inch margins give clean, open appearances.
- Indent first lines of paragraphs five spaces.
- Use 10- or 12-point font sizes for most letters and memos.
- Except for extremely short letters, use single spacing.
- Most business stationery is 8.5 by 10 inches.
- On envelopes, place return address at upper left and addressee's address in approximate vertical and horizontal center.

Business Memos. Memos go to persons within the writer's company. Their format, often informal, is similar to that of business letters.

Facsimilies Business faxes (Facsimiles), business letters, and memos have similar formats. Faxes, however, have attached cover sheets listing name, title, organization, address of company, and fax number of both addressee and writer. Also shown is number of pages, counting cover sheets.

E-Mail Formats for e-mail are less formal than for letters.

- Avoid capitalizing all words. (It's equivalent to shouting.)
- When replying to an earlier e-mail, include a copy of the earlier message you received.
- Always include subject lines.
- Make grammatical structures, typing, numbers, and technical information accurate and clear. Compose lengthy messages off-line.
- Confidentiality cannot be guaranteed with e-mail.

Good Impressions. Always convey a good impression.

- Write sincerely and courteously.
- Avoid big words. Don't try to impress.
- Aim communications to the reader's level
- Have appropriate-length messages. Short messages may be curt; long messages may lose readers.
- Be correct. If the meeting is Wednesday, November 30, don't write Thursday, November 30.
- Messages should flow smoothly from beginning to end and reach logical conclusions.
- Get to the point early.
- Don't pretend to know readers when you actually don't.
- Avoid sex stereotyped communications.
- Correctly convey company policy. Consult with colleagues if necessary.

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G. W. MAXWELL

Y

YUPPIES

(SEE: *Lifestyles*)

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