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**A CAREER AS AN
ECONOMIST**

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A CAREER AS AN

ECONOMIST

**WITH A DEGREE IN ECONOMICS, YOU WILL BE
PREPARED FOR AN EXCEPTIONAL VARIETY OF
EXCITING AND REWARDING CAREERS**

THE EXISTENTIALIST FRENCH WRITER ALBERT CAMUS ONCE DEFINED ECONOMICS as “the art of trying to satisfy infinite needs with limited resources.”

Cynical, perhaps, but more than a little bit true.

Economics is the name of the social science that examines how products are manufactured and services are administered, and how they are disseminated among a given population.



“Products and services,” mean anything that can be bought or sold. Products are generally understood to be tangible articles and include baby buggies, ears of corn, nail clippers, Swiss chalets and industrial refrigerants. Services are activities that involve the provision of something useful, desirable or necessary; examples include babysitting, retailing, giving manicures, selling real estate, police protection and entertainment.

In order to produce goods and services, resources are needed.

Resources represent the actual or potential wealth of an individual or a nation. Farms, factories, land, machinery, raw materials, workers, cash and capital are all examples of resources. Resources are by their very nature in limited supply; in many cases, they’re positively scarce.

- Governments strive to allocate resources (such as money raised by taxing the people) to hundreds or thousands of initiatives and causes.
- Businesses must decide whether to spend discretionary sales revenues on, say, advertising, employee recruitment or information technology upgrades.
- Newlyweds may sacrifice vacations to save money for a down payment on their own home.
- Youngsters learn to defer instant gratification such as candy by saving their allowance for something they really want.

Therefore, as Monsieur Camus suggested, economics is indeed involved in the tug-of-war between infinite needs and limited resources. Economics is the study of choices.

ENTER THE PROFESSIONAL ECONOMIST

ECONOMISTS EXAMINE THE WAYS IN WHICH LIMITED RESOURCES SUCH AS LAND, labor, raw materials and equipment are allocated to manufacture products and create services. They perform research and monitor trends in areas such as inflation, interest rates, taxation, international trade, energy costs, management and labor relations, wages and prices, economic growth and development, income redistribution and unemployment rates. They use sampling techniques and mathematical models to help them collect and analyze data and to predict how a modification in one area of the economy might bear on other areas.

Armed with the data they have collected, economists make recommendations to businesses, government agencies, philanthropic organizations and others. Forecasting is one of the most critical and difficult tasks of an economist. By projecting the effects of proposed tax legislation on unemployment rates, for example, economists help the government make policy. By monitoring the nature and length of business cycles, they help corporations plan strategic transactions.

Economists study how resources, goods and services are produced, distributed and consumed by a society. They analyze the relationship between the supply of goods and services and the demand for them. And they determine the costs and benefits of making, distributing and using resources in a particular way for maximum efficiency.

An important part of the economist's job is the preparation of the proposals and reports that help them communicate their findings and recommendations to their colleagues, their clients or the general public. Economists strive to articulate clearly their analyses and forecasts, and the thought processes that produced them. Language should be as simple and concise as possible; statistical data represented by graphics such as charts and tables should be easy for non-economists to grasp.

Economics is a multi-disciplinary field. It involves elements of mathematics, politics, writing, marketing, statistics, psychology, philosophy and more. Specialties range from high finance to human health to environmental decay. And economists' varied callings may be described as anything from mercenary to missionary.

Yes, the focus of economics is material wealth. But since material wealth includes the three necessities to human survival – food, shelter and clothing – its applications are both fundamental and vast.

PREPARING FOR THIS CAREER

THERE ARE SEVERAL STEPS YOU CAN TAKE RIGHT NOW TO BEGIN PREPARING FOR a career as an economist, while simultaneously trying it on to see how it fits.

You probably spend more time on school-related activities than on any other single endeavor, so let's start there.

Economics is considered a social science. As a social discipline, economics addresses the individuals, groups and institutions that combine to form human society, and examines the way they behave and interact.

As a science, though, economics seeks to be quantified. All social sciences attempt to analyze observed information and collected data in order to formulate principles that explain and predict human behavior. Therefore, practitioners of such disciplines rely heavily on statistics and mathematical models. Economists possibly depend even more on numerical data than other social scientists, since the currency of their profession is – currency. The bottom line – and anybody who works with money and finance always wants to know the bottom line – is that aspiring economists must be partial to mathematics.

Take whatever math courses your school offers, to the most advanced level possible (ideally, calculus or trigonometry). Also take statistics if it's available.

Obviously, if your school has courses in microeconomics or macroeconomics, or just economics in general, you should take them. (Macroeconomics is the study of the aggregate behavior of the economy as a whole, including production and economic growth, price levels and inflation and employment/unemployment rates. It is contrasted to microeconomics, the branch of economics that examines the behavior of individual consumers and manufacturers.)

If not, consider courses in other social sciences as an alternative. Social sciences focus on how people behave and live with other people; besides economics, they include anthropology, politics, psychology and sociology.

The definition of a social science can even be extended to include such disciplines as history, criminology, law, ethics, education and philosophy. And even certain specialties in fields such as biology, geography, medicine, art and linguistics might be considered social sciences.

Definitely sign up for whatever College Board Advanced Placement (AP) classes you think you can handle. AP gives students an opportunity to take college-level courses and exams while still in high school. AP classes are intellectually invigorating; students and teachers tend to be exceptionally enthusiastic; and the experience will better prepare you for the challenge of the serious academic work you'll face in college. Additionally, your college or university may give you academic credit toward your degree if you take the AP exam and achieve a certain score. (The required score differs by institution.)

AP classes and exams are currently available for Calculus AB, Calculus BC, Computer Science, Economics, Psychology, Government and Politics, Statistics, World History (current) and US History. You can obtain more information online by visiting www.collegeboard.org/ap/

The Houston, Texas school district offers courses over the Internet, including Advanced Placement macroeconomics and microeconomics. If your school doesn't offer these courses, it might be worth investigating your "virtual" options. Here is the link to more information

<http://hs.houstonisd.org/virtuelschool/>

Here's another alternative: *The Senior Economist* is published by the National Council on Economic Education and is designed to supplement teaching activities in high school economics courses. If your school doesn't have classes in economics, consider spending \$14.95 for a year's subscription. You can subscribe at this Web address [Http://ecedweb.unomaha.edu/sr-econ.htm](http://ecedweb.unomaha.edu/sr-econ.htm).

While you are there, be sure to click on K-12 Resources.

Economists have to convey their findings to a wide range of people, so any classes you take or clubs you could join that would help you develop your communication and presentation skills would be helpful. These include English, speech, journalism, composition, drama and debate.

Many economists say they were inspired to make this their career choice after reading a book by one of the great thinkers in the field. Excellent choices include Adam Smith's *The Wealth of Nations*; *Das Kapital* and *The Communist Manifesto* by Karl Marx; John Maynard Keynes' *The General Theory of Employment, Interest, and Money* and anything by the influential American economist Milton Friedman. These classics should all be on your personal reading list.

The Internet is a great tool for your further investigation of this career. The Web site of the Mackinac Center for Public Policy www.mackinac.org has an online economist feature to answer students' questions (askecon@mackinac.org) about economic principles and their implementation in the real world. There's also an archive so you can see what other young people are asking and how the virtual faculty answered.

Here is the link to the Internet Economist, a tutorial on Internet information skills for economists. It also features links to key Internet sites.

www.economics.ltsn.ac.uk/interneteconomist/

There are many professional publications for the various specialties in this field, but the one you might enjoy most is the British magazine *The Economist*. It is written for the general public in a lively and entertaining manner and reading it gives you an idea of how very broad the applications of economic thought and theory are.

HISTORY OF THIS CAREER

ALTHOUGH THE ACCUMULATION OF PERSONAL WEALTH, INTERNATIONAL commerce and the government playing a role in the welfare of its citizens are concepts that have been contemplated, practiced and debated since the ancient civilizations, the first formal economic theories weren't developed until the 16th century.

This was the age of *mercantilism*, a system of trade practiced by major European countries such as England and France. Mercantilists believed a nation's wealth should be judged entirely by its supply of gold and silver. Since the world's stock of these precious metals is limited, nations lacking gold or silver mines had to depend on foreign trade to become rich. By these standards, one country could accumulate wealth only at the expense of another. To achieve a favorable balance of trade, a nation's exports would have to exceed its imports, and mercantilists called for high tariffs and other restrictions on imports to ensure such a balance. Mercantilist regimes strictly regulated agriculture, industry and trade and encouraged population growth, domestic industry and colonization as instruments of amassing riches.

In the mid-1700s, a group of French writers, led by François Quesnay, introduced the notion of *laissez faire*. Meaning “allow to do,” *laissez faire* was a theory of economic policy that held that governments should not interfere with the natural course of things in an open, competitive market. These early economists, known as *physiocrats*, believed that people should be free to pursue their private financial interests and that mercantilism actually hindered the growth of trade. They also believed that land and agriculture, not money, defined the worth of a nation. The physiocrats engaged in the first systematic study of economics as a social science.

Adam Smith, a Scotsman, became the father of modern economics as an academic discipline with the 1776 publication of his book *An Inquiry into the Nature and Causes of the Wealth of Nations*. The book advocated individualism, free trade, the pursuit of self-interest and a self-regulating economy as the way to foster social order and human progress.

Smith believed that neither land nor money, but rather labor, was the source of a nation’s value as well as its final measure. He said that the basic needs of workers should determine wages and the productivity of land should determine rent. Profit, the difference between the cost of labor and rent, would be used to increase production which, in turn, would create more jobs, boosting the income of the nation in question. Government should take a “hands off” stance regarding business, said Smith, and focus instead on law and order, justice, national defense and the few social needs that couldn’t be met via a free market.

Smith’s theories greatly influenced economic policy during the critical era of the Industrial Revolution. Britain gradually evolved from a mercantilist government into the first *capitalist* economy, and other leading trading nations followed suit. Capitalism, also known as free enterprise, is an economic model that gives individuals and privately owned businesses control of the economy. In other words, people are permitted to participate in economic activities under a minimum of government interference.

However, abuses of power by factory owners, the horrible conditions under which many factory workers labored and lived during the Industrial Revolution, as well as the deepening chasm separating the “haves” and “have nots” led to a re-thinking of economic policy. The governments of industrialized countries began to regulate economic activities more rigorously and to implement legislation

intended to alleviate such socioeconomic ills as poverty and unemployment. Key changes in United States economic policy would take place during and after the Great Depression of the 1930s.

Another voice calling attention to the struggle between the ruling class and the working class was that of radical German philosopher Karl Marx. Marx felt that economic forces were oppressive rather than liberating. In *Communist Manifesto*, published in 1848, Marx and co-author Friedrich Engels promoted an economy in which all property and means of production were owned equally by all the people collectively, not certain individuals or companies. When economic needs were taken care of and financial equality was established, they theorized, people would be free to follow their ideals and would voluntarily make contributions to their communities.

In the later volume *Das Kapital*, Marx predicted that the free enterprise system would bring about economic cycles of inflation and depression and ultimately incite the proletariat (working class) to rise up against the bourgeoisie (owners of the means of production). Revolution, said Marx, was the only way a nation could be converted from a capitalist system to Communism.

The social sciences – particularly political science, sociology and economics – have been profoundly influenced by Marx’s theories. While many of his notions may seem radical, naive or impracticable, some of his criticisms of capitalism are thought relevant even today.

By the beginning of the 20th century, scholars were studying economics in an increasingly methodical fashion. They were employing scientific methodology to analyze economic problems; using mathematical models to describe the relationships and interactions between and among each sector of an economy; tracking “boom” and “bust” trends; and using the new analytical methodology known as *statistics* to test their theories.

A number of events conspired to culminate in the Great Depression: disastrous financial circumstances for farmers due to plummeting prices for their products; bank failures, particularly in agricultural regions; and the miserably low wages paid to coal, railroad, textile and industrial workers were among them.

But perhaps more important than the question of what caused the Depression, is what the Depression caused. Some of the far reaching effects include:

- New laws that gave the US government much more power than ever before, including federal control over financial institutions and the stock market.
- The government was also given much more authority for providing financial assistance for the needy. Eventually, this would extend to such programs as Medicaid and Medicare, which provide hospital and medical insurance for the poor and elderly.
- The government was given the power to authorize price and wage hikes when necessary to stabilize the ever-rising cost of living.
- To support President Franklin Roosevelt's New Deal initiative, the government began spending more money than it collected (deficit spending) for job creation and other initiatives. This has been a common practice in the years since then. But before that, the government made an effort to spend the same amount it accumulated each year.

Accordingly, public attitude shifted: titans of industry could not be trusted to manage and maintain the national economy; the government could. While other nations reeling from economic hardship turned to dictators, the New Deal renewed Americans' faith in democracy.

It was during the Depression that economists began to hold key positions in the federal government; and businesses began to hire economists in large numbers after World War II. Since then, economic theories have continued to come into and go out of fashion. John Maynard Keynes, a prominent British economist, believed in a very active hands-on government. He argued that during a Depression, the government should increase its spending and/or cut taxes to stimulate the economy. Keynes was influential enough so that numerous governments adopted his ideas. But many such nations experienced the crippling combination of high inflation and high unemployment during the 1970s, and a group of thinkers called *monetarists* (notably, the American Milton Friedman) blamed Keynesian policy. The monetarists have called for a return to *laissez-faire* policies.

Less controversially, Keynes' work laid the foundation for modern macroeconomics.

Today, economics is a fully integrated social science with applications from areas of human endeavor ranging from education to family life to environmental policy.

WHERE YOU WILL WORK

ECONOMICS IS A FIELD THAT HAS APPLICATIONS IN A VAST RANGE OF DIFFERENT areas, so employment is available all over the world, for all types of employers and in all types of enterprise. With a degree in economics, you will be prepared for an exceptional variety of exciting and rewarding careers.

Where you work geographically may be determined by the kind of work you choose to do. For example, there is a growing demand for environmental economists in developing countries.

Academia is one of the principal employers of economists, who teach and do research at colleges and universities all over the globe. Governments are another key source of employment. The US Departments of Agriculture, Commerce and Labor are the largest federal employers of economists. Other agencies that employ economists include the Environmental Protection Agency; Department of Energy; Peace Corps; Office of Management and Budget; and Department of the Interior (including National Wetlands Research Center, Northern Prairie Wildlife Research Center, US Fish and Wildlife Service, Bureau of Indian Affairs and National Park Service).

State and local government agencies also need economists, as do nonprofit organizations such as the Alliance to Save Energy, Greenpeace, Nature Conservancy, Sierra Club, the World Wildlife Fund and trade associations that represent the interests of various industries. International organizations that employ economists include the World Bank, The World Conservation Union, International Food Policy Research Institute and United Nations Development Program.

In the private sector, businesses and industries that utilize economists include manufacturing, mining, transportation, communications, banking, insurance, retailing, securities, aerospace, tourism, petroleum, health care, human resources management, labor relations, public utilities, market research, engineering, construction and publishing – to name but a few.

Also, many economists are self-employed. Usually, they run their own practices, contracting their services on a project basis as consultants to clients in the private and public sectors.

THE WORK YOU WILL DO

ECONOMICS IS A VERY BROAD DISCIPLINE; ACCORDINGLY, MANY PROFESSIONALS IN this field do not work under the title of “economist.” A person with an undergraduate or graduate degree in economics might be hired as an actuary, demographer, institutional research director, auditor, insurance executive, efficiency expert, bond trader, securities broker, technical writer, healthcare administrator, market research analyst, credit analyst, information scientist, public utilities manager or under another title.

Here are typical duties of economists employed in different fields:

Corporate economists working for multinational conglomerates shoulder an array of research, analytical, forecasting and even lobbying responsibilities.

An economist working for an American vehicle manufacturer might make five-year projections of sales of new automobiles for the countries in which the firm does business. Factors to be kept in mind during this forecasting project would be the rate at which the company is expanding overseas and the percentage of sales that occur in North America compared to other countries. Forecasts of domestic markets may be made as often as once a month for a large and dynamic market.

Forecasts are used to formulate near-term plant production schedules as well as long-term business plans. Economists may break down the forecasts into several segments – in this case, by model or type of vehicle (sub-compact, SUV, e.g.). The forecasts are shared with personnel in sales, marketing, design and other departments. Even human resources managers might want to know whether the workforce is likely to expand or shrink in the near and distant future.

Corporate economists also perform detailed analyses of topics that are relevant to the employer in particular or the industry in general. The economist employed by the automaker might study income trends and how they affect the perceived affordability of new cars and trucks, as well as factors determining the going prices for used vehicles. They may also conduct studies of products and markets that their company depends on, such as industrial fasteners. They may perform market research, as well, to determine anything from why consumers prefer their competitor’s pickup truck to what’s the best color for the upholstery of a new sports car model.

Finally, corporate economists analyze public policy issues so they can advise the members of their team who actively lobby elected officials. They may also be asked to keep track of regulations covering issues like air bags, vehicle emissions, occupational safety and “truth in advertising.”

An economist employed as a city planner for a municipal government helps officials decide on the best use of land to promote livable, harmonious and prosperous communities. City planner-economists also consult on budgets for things like road re-paving and new libraries.

Financial writers work for consumer and trade publications and in public relations firms writing about commodities markets, foreign exchange and economic policy.

Forensic economists use computer models and read copious amounts of material to prepare for litigation analysis, in which they help attorneys prepare testimony for expert witnesses testifying in business regulation trials.

Econometricians specialize in the application of mathematics and statistics to economic theory in the attempt to analyze and predict economic activity.

Public utilities employ economists to make supply-side analyses (forecast demand for the industry’s products and services), study industry regulations, evaluate competition, develop and defend the utility’s rate structure and participate in debt management.

Economists working in bond trading firms on Wall Street monitor, analyze and disseminate information to the company’s trading and sales personnel. Relevant information would include:

- Economic indicators (consumer expenditures, farm income, corporate profits, employment rates, new construction, manufacturers’ shipments, consumer credit)
- Projections of the borrowing needs of the U.S. government, which issues securities every week
- Official statements from the White House, the Federal Reserve and eminent bond market authorities

Private philanthropic foundations employ economists to review proposals from nonprofit organizations seeking donations and oversee the provision of grant money.

Petroleum economists advise their companies' executives on the economic effects of various pricing strategies.

Economists working in the field of human resources management are responsible for distributing labor within the firm, executing effective incentive structures and fringe benefits packages for employees, and implementing procedure for hiring and promotion.

The duties of natural resource-environmental economists vary based on the project. They may be called upon to:

- Settle upon a compensation figure for marine natural resources damaged by spills of oil and hazardous substances and vessel groundings
- Develop cost-effective methods and procedures for conducting natural resource damage assessments
- Prepare a report helping policymakers understand the monetary value of an intact environment and the costs associated with environmental degradation.

Careers in the field of labor and industrial relations have economists participating in contract negotiations, handling labor grievances and settling day-to-day conflicts between labor and management.

Lawyers who have undergraduate degrees in economics are valuable to law firms interested in the underlying principles behind government regulation of businesses, the function of property rights in a market economy, the nature of institutions and *externalities*. (Externalities is an economics term involving effects that the activities of consumers or producers have on each other; the term also refers to the unforeseen side effects of premeditated courses of action.)

In market research firms, economists use econometric and statistical techniques to track and predict consumer behavior, particularly the relative likelihood that people would purchase a particular product or service at a particular time at a particular price. They use database, spreadsheet and statistical software to conduct surveys, examine demographic and sales data, and monitor sales trends.

In the United States government, the Departments of Labor, Agriculture and Commerce are the largest federal employers of economists. In the first case, the Department's Bureau of Labor Statistics (BLS) seven regional offices demonstrate the most demand for economists to collect data to support the Bureau's statistical programs. In addition, 28 other US metropolitan areas currently have BLS full-time economists stationed in them; and part-time staff are stationed in 83 cities across the U.S. Employees report and evaluate data in such areas as wages and industrial relations, prices and living conditions, employment, productivity, safety and health and economic conditions impacting industry in the region studied.

The professional interests of agricultural economists include the cost-effective operation of farms as well as development of government policy in terms of trade, price and the interaction between agriculture and other sectors of the economy. Additionally, they deal with the production and distribution of agricultural products; the relationship between production and profit; and the purchase, processing and sale of agricultural by-products.

Many economists are employed in the different divisions of the Commerce Department. For example, duties of an economist in the Bureau of the Census, Housing and Household Economics Statistics Division may perform research on policy requests originating from the Department of Housing and Urban Development, other cabinet agencies and Congress. Additional tasks might be conducting economic analyses using the American Housing Survey and other household survey micro-data and reviewing housing programs to evaluate their effectiveness.

National Marine Fisheries Service economists – depending on which division they're employed by – may undertake research in support of the economic analysis of fisheries management and protected resource policies. Duties and responsibilities might include:

- Designing models and putting them into practice to investigate and evaluate economic and environmental impacts on groundfish fisheries, aquatic habitats, ecosystems and other user groups
- Designing and overseeing economic data collection programs
- Developing bio-economic models
- Publishing research analyses

Economists and statisticians employed by the US Healthcare Financing Administration estimate and project the cost of healthcare for the nation, including how much is spent for medical services and products and who pays for it. They develop and maintain cost indexes used in calculating annual updates to provider payments, and research and prepare analyses of the healthcare system that has a direct bearing on the agency's policies.

Economists work as consultants, either for their own firms or for private research firms, consultancies or think tanks. Any of the employer types described is a potential client for an economic consultant.

Many economists also work in colleges and universities. They often split their time between teaching and other student-related activities, pursuing research interests and writing. Economists are prolific writers, particularly of scholarly material for journals and textbooks. They must also be prolific readers of professional journals to keep up with developments in the field.

It's not uncommon for a professor of economics to maintain a private consulting practice, which nicely unites all features of this career!

The Federal Reserve System An independent agency of the United States government that helps oversee the nation's banking system, the Fed employs hundreds of economists. Three divisions at the Federal Reserve Board conduct economic research and policy analysis on domestic and international issues: the Division of Research and Statistics, the Division of Monetary Affairs (domestic) and the Division of International Finance. This being a bureaucracy, the three divisions are further broken down into subdivisions and various specialties. Here are the overall responsibilities of each division and the economists who staff it.

Economists Working for Research and Statistics investigate the markets for corporate and municipal bonds, and public and private equity, and cover the outlook for the financing of small businesses and agriculture enterprises.

They also analyze and forecast vital macroeconomic elements such as personal consumption, residential and business fixed investment and business inventories. They investigate the various determinants of consumption and saving, housing activity, and business capital spending.

Some economists in this division conduct research on the activities of pension funds, mutual funds, insurance companies, finance companies and thrift institutions and on the financial behavior of individual consumer households. Others analyze policies on the risks (such as price fluctuation) associated with trading securities, commodities and other financial instruments. Still others specialize in labor developments and wage and price inflation.

The staff's projections and analyses are presented to the Federal Reserve Board and the Federal Open Market Committee (FOMC) for internal use. The FOMC directs the conduct of open market operations by the Federal Reserve Bank of New York with the aim to fostering price stability and sustainable economic growth and also establishes policy in the foreign exchange markets.

Staffers With the Division of Monetary Affairs investigate issues relating to the development and execution of monetary policy. They estimate, project, analyze and publish banking and money market statistics. Some economists in this section are experts in bank asset and liability management and bank profitability. Others undertake theoretical and applied research at the macroeconomic level, looking at issues such as money demand and the formulation of monetary policy strategies.

Economists With the Division of International Finance report and analyze events and progress in foreign exchange markets as well as contributing to the scrutiny of a wide range of other international financial markets. This division analyzes innovations in international banking and their effect on other financial markets. Some economists are specialists in the emerging economies of Asia, Latin America, Eastern Europe or the former Soviet Union. This section communicates its findings to the Board via daily memos and weekly briefings.

Reserve Board economists also produce numerous working papers, contribute substantially to the papers delivered at professional meetings or published in major journals and help Board members to prepare congressional testimony and other presentations.

ECONOMISTS TELL YOU ABOUT THEIR CAREERS

I'm a Senior Agricultural Economist for the USDA

"I have an MS degree in agriculture from the University of Tehran in Iran; an MS in agricultural economics, international development from Cornell University; and a PhD in agricultural economics, marketing from Washington State University.

My area of work is related to renewable fuel, biomass feedstock, biobased products, economic and policy analysis of biofuel and biobased product manufacture in the United States. I am responsible for economic and policy analysis of renewable fuel production and how it impacts commodity prices, farm income, balance of trade and greenhouse gas emission. I also perform net energy balance and lifecycle analyses of biofuels such as ethanol and biodiesel.

We have many clients who call us or send e-mail to get information about renewable fuels, energy used in agriculture and economic data. In addition, I am invited to many workshops and conferences to speak about these subjects. Sometimes we receive requests from a member of the Senate or House of Representatives to look at specific issues. My department subscribes to a lot of publications related to energy, and renewable energy, and I have to read them to keep up to date.

I love my job and I enjoy what I am doing. Believe me, I don't leave the office during my workday, not even for lunch! Every day I learn something new. The most rewarding thing about my job is when clients call me for information. I love to share my knowledge with clients.

I am a member of the American Agricultural Economic Association (AAEA) and the International Economic Association (IEA). AAEA has an annual meeting every year that I attend. Presenters at the meeting share analyses and study results related to agriculture, environment, economy, trade, etc. by researchers in academia and government agencies. Attending and participating in the AAEA conference allows me to learn about the latest

research. Attendees of the IEA meeting are from countries all over the globe and the conference covers numerous research topics related to developing countries.

My advice to young people interested in becoming economists? Please join us! The United States needs young economists with a lot of energy and new ideas. I think you'll find the work very satisfying."

I Am a Staff Economist With the Mackinac Center for Public Policy

"I fell in love with economics when I read *Free to Choose* by Milton Friedman, as well as several issues of *The Economist* magazine, while working as a file clerk in a Los Angeles law office. After reading the Friedman book, when I was 19, I knew my life had taken a distinct turn in favor of economics, public policy and the freedom movement in general. I began taking economics courses at Santa Monica College in California and was blessed with talented teachers who made the subject come alive.

Currently, I have several job titles, one of them being staff economist. My employer is the Mackinac Center for Public Policy. We are a free-market research and educational institution located in Midland, Michigan.

My specialties are economic development and privatization. But, because economic models can be superimposed on virtually every aspect of life, I am often called to work in many different areas on a moment's notice. The positive side is that you know your job is secure if everyone needs your help.

In my work, I develop areas of research, conduct or direct the research, and then write or edit a paper for release to the press, politicians and general public in an attempt to influence public opinion. Almost every day is different, and that is wonderful. Sometimes I start my day by fielding economics questions from college and high school students by e-mail; other times I am giving a speech; and still other times I am answering questions from the press about Federal Reserve rate cuts or the effect of Washington's latest so-called economic stimulus package.

What I like best about this work is that every day is different. Also, because economics is not an easy subject, mastery of it yields a degree of respect that I might not have achieved with some other profession.

What I like least is the esoteric nature of many economics publications. Mathematical economics has taken the humanity out of a wonderful social science, but it remains a necessary component of your work if you want to be taken seriously.

The frustration I experience in my job tends to stem from politicians' apparent inability to understand even the simplest ideas. For instance, the second most basic proposition of the economic science is the inverse relationship between price and quantity demanded. Despite this truth, politicians continue to mandate prices, especially for labor, thinking this helps people. It doesn't; it just makes things more expensive and often sends transactions into an illegal market.

If you want to become an economist, take a lot of math and be prepared to apply it. I recommend two semesters of calculus and two semesters of statistics minimum before starting a graduate program."

**I Am a Senior Associate With the Political
Economy Research Center (PERC) in
Bozeman, Montana**

"I became interested in economics indirectly through my interest in policy studies of natural resource and environmental issues. In 1985, I was hired by PERC, a nonprofit think tank that applies market solutions to environmental problems. My interest in property rights theory and public choice theory took root at this time. My specialties with this employer are public land policy and marine fisheries.

I received my bachelor's degree in mathematics in 1970 and a master's degree in statistics in 1972. I have supplemented my education with various university courses in economics.

For my job, I carry out statistical research on the effectiveness of various natural resource and environmental policies. For example, one project was to compare receipts and costs of state

land management and Forest Service management of timber sales in Montana. Another was to analyze economic performance before and after individual transferable quotas were applied to the Alaska halibut fishery.

In addition, I am author and co-author of several books describing the theory and application of free market environmentalism and numerous journal articles and op-ed articles. I also make presentations on the subject to business leaders, students, journalists and policy makers.

On a typical day on the job, I spend one to two hours reviewing articles pertinent to my research, one to two hours conducting research studies, one to two hours writing on various subjects and one to two hours communicating with various contacts in the public and private sector.

What I like most about the job are the opportunities it provides to conduct scholarly research and to improve my communication skills. And I like the opportunity to learn from the leaders in the field of natural resource economics. Most rewarding is making an impact in extending our understanding of how natural resource and environmental policy can be improved.

Drawbacks are that the work is very time-consuming and the pay is not as high when you work for a nonprofit as it would be in academia. It's a challenge trying to communicate ideas to a broad range of people. And close-minded people frustrate me to no end.

I'm a member of the North American Fisheries Economists, which has helped me develop important business contacts.

If you think you might want to become an economist, you should look for internship programs at places like PERC so you can become experienced with the type of problems that economics addresses."

I'm a Professor of Economics at New York University

"I happened to read some books on economic subjects in high school, and decided it was a field that benefitted society, was interesting and entailed the sorts of analyses I enjoy.

I have a bachelor's degree from the College of the City of New York and a PhD from the London School of Economics. As professor of economics, I specialize in a number of fields, including analysis of economic growth and antitrust economics.

My principal responsibilities in my job are to give lectures and carry out research. There is no typical day in the life of a college professor, but most days involve a good deal of writing as well as meeting with students in my office.

I've written, contributed to or edited more than two dozen books on such subjects as economic dynamics, welfare economics, microeconomics, economic policy, economic theory and public and private enterprise. I've written about economic implications in the performing arts, environmental policy, the utility industry and the information age, as well. In addition, I have published some 400 articles in professional journals.

I've served as president of the American Economic Association, Association of Environmental and Resource Economists, Eastern Economic Association and Atlantic Economic Society. I'm sure this has helped me achieve recognition for my writings.

My main advice to young people interested in becoming economists is to get a solid foundation in math and to start thinking very early on about topics they'd be interested in researching in depth."

PERSONAL QUALIFICATIONS YOU WILL NEED

ECONOMISTS ARE ASTUTE OBSERVERS OF HUMAN BEHAVIOR WITH A BROAD interest in social matters. They're curious about the way the world works and enjoy mentally taking it apart and piecing it back together in different configurations.

Often, an economist will possess a seemingly instinctive ability to look at a stack of facts or figures and immediately be able to "read" the story (or one of many stories) the data tell.

To develop and apply quantifiable laws of something as elusive as human behavior, economists also need rigorous analytical skills, a gift for insightful interpretation and a trait that might be called enlightened objectivity.

Economists must communicate and share complex concepts (such as the results of their research) with others, including peers; company executives who may not have backgrounds in math, statistics or economics; clients and customers, lawmakers, company stockholders, students and the general public. Therefore, a talent for communicating in a clear and simple, yet compelling and persuasive, manner is essential. So is the ability to make presentations that are creative, clever, meaningful and effective.

Other helpful qualities include the ability to juggle a multitude of tasks at once (especially in understaffed government agencies), a respect for deadlines and reverence for accuracy, patience and persistence, good judgment and an appreciation for other cultures.

Economists often work with sensitive or confidential data, so your reputation for integrity should remain immaculate throughout your career.

ATTRACTIVE FEATURES OF THIS CAREER

AN ECONOMIST PLAYS A VALUABLE ROLE IN ANY ORGANIZATION BECAUSE THE skills and knowledge base are so specific and yet they can be applied to so many problems and situations. As one economist interviewed for this report put it, "Because economic models can be superimposed on virtually every aspect of life, I am often called to specialize in many different areas on a moment's notice."

The economist also serves as an emissary and may be the only staff member with the world view and insight to justify to outsiders the activities and decisions of a company or organization. For these reasons, economists command respect all over the globe.

Accordingly, salaries are good. Benefits add significantly to the total compensation package and typically include health and life insurance, vacation and sick leave and some kind of retirement plan. College and university faculty also enjoy such perks as the use of campus facilities, housing allowances, free tuition at the school for family members and paid leave (sabbatical) for tenured, full-time professors.

Depending on the specialty, economists may have the opportunity to travel, visit exotic field sites, natural habitats and animal sanctuaries; socialize with powerful people in government and industry or make significant improvements in the lives of an under-served population.

The intellectual challenges an economist faces are exciting and rewarding. Although there are always red tape and delays when dealing with a bureaucracy, as so many economists do, deadlines are real, budgets are real and mandates are real. All of this means economists make decisions that get things done, and that's very satisfying.

The practice of economics also calls upon solutions to problems that have never been solved before, because they've never existed until circumstances conspired to culminate in this particular moment. Until September 11, 2001, who thought the United States would ever have to grapple with the economic impact of a massive terrorist attack?

Economics draws on a variety of disciplines; it deals with the whole spectrum of human activity, and its students have and hone many talents: looking at problems in a logical way, but solving them creatively. They enjoy communicating persuasively and making compelling presentations, incorporating new information into what is already known without missing a beat. Economists can quantify almost anything by applying economic analyses and models to education, lifestyle, politics.

Consequently, a background in economics is widely appreciated as solid preparation for a variety of careers in business, public policy, the law and elsewhere. In other words, economics is a degree that travels well, and is easily translated.

UNATTRACTIVE FEATURES

AS AN AMBASSADOR TO THE WORLD AT LARGE, ECONOMISTS MAY EXPERIENCE the frustration of explaining things to people who don't, or don't want to, understand. It's a challenge and not always a pleasure, especially when dealing with people who know far less than you do yet cling to their wrong-headed beliefs.

The work can be intense, stressful and time-consuming. You may have to switch gears quickly and often.

There can be a fairly substantial pay gap between the highest-paid and lowest-paid economists who are otherwise equal in terms of education and experience. This can seem especially unfair given that salaries of those who are doing the most altruistic work, such as teaching or working in environmental preservation, are on the low end of the scale, while those furthering the aims of corporate capitalism earn the most. But even a first-year economics student understands that salaries are governed by the laws of supply and demand!

Economics professors may feel the pressure of the phenomenon known in academia as "publish or perish." They may feel they neglect their responsibilities to students somewhat to generate the original research, articles and books the university expects them to produce in order to reflect prestige and glory back onto the school.

EDUCATION AND TRAINING YOU WILL NEED

IN MOST CASES, A BACHELOR'S DEGREE IS THE MINIMUM ACADEMIC requirement for aspiring economists, and some employers and positions may require advanced degrees. Among the exceptions are federal agencies such as the National Marine Fisheries Service and the Health Care Financing Administration, which allow applicants for positions as economists to demonstrate a combination of education and experience equivalent to an undergraduate major in economics. Nevertheless, a college degree in the subject is greatly preferred.

Economics majors can count on having to take four fundamental classes. One will be called something like Principles of Economics and is an introduction to the fundamentals of the discipline.

The second is historical in nature and might be called History of Economic Thought or Comparative Economic Systems. Despite different sounding titles, the course provides an evaluation of thinkers and theories, from capitalism through socialism and communism, with respect to how effectively each allocates resources. The third and fourth will be microeconomics and macroeconomics, at both an introductory and an intermediate level. Electives for a major in economics might include:

Forecasting Theory

Economics of the Public Sector

Developing and Emerging Economies

Government Regulation

Industrial Organization

Econometrics Concepts

Labor Economics

Law and Economics

Money and Banking

Natural Resources and Environmental Economics

Public Finance

Classes in statistics, accounting, calculus and computer science are very useful and may be required.

In addition to your core curriculum for the major, you may have the opportunity to take classes that more directly address your interests and intended area of specialization. Law school admissions boards, for example, look for a broad mix of classes in literature and the humanities, including logic, philosophy, English, political science and communications.

If you'd like to become an actuary, evaluating risk and formulating payment structures for insurance firms, you should major in mathematical economics and take some classes in banking. Similarly, individuals who would like to enter the field of human resources should make sure their curriculum includes classes in management and labor law; and those intending to seek employment with brokerage firms should study finance.

You could even major in a different discipline such as mathematics or business administration to prepare for a career as an economist. You could double major in economics and another subject such as government or women's studies. It all depends on your individual ambitions and objectives.

Increasingly, universities maintain experimental economics laboratories, which reproduce the results seen in natural markets and enable researchers to study economic behavior and test economic theories. These laboratories may also be part of an undergraduate curriculum. They don't feature test tubes and laboratory mice, but they do involve experiments and lab reports that allow students to get a hands-on introduction to the ideas and theories economists have developed to explain how individuals and societies make choices.

Senior economics majors may be expected to prepare and present an original thesis or a research paper on a topic agreed upon by the student and an instructor or advisor. Sometimes this opportunity to conduct independent research is an honor conferred only upon very successful students who demonstrate exceptional intellectual promise and boast outstanding academic records.

Graduate School

Many positions in the public and private sectors require graduate school training in economics. In addition, most two-year colleges require their faculty to have at least a master's degree, and four-year colleges and universities generally prefer to hire PhDs or doctoral candidates.

Your graduate school curriculum will be determined by your personal goals and interests and will be much more narrowly focused than your undergraduate experience. According to the National Association of Business Economists, the following are the courses that business economists say they found valuable in graduate school, wish they had taken and/or look for in the people they hire:

- Microeconomic Theory
- Macroeconomic Theory
- Statistics/Econometrics
- Business Cycle Analysis/Forecasting
- History of Economic Thought
- Monetary Policy
- Fiscal Policy
- International Economics
- Tax and Regulatory Issues
- Accounting
- Finance
- Marketing
- Organizational Behavior
- Human Resource Management
- Operations Management

Internships Internships can and should be a key part of your education as an economist. An internship is supervised work performed for a sponsoring organization that has been approved by your college or university. Internships may or may not be required as part of your education; they may be paid or unpaid; and you may or may not receive academic credit for your labor. Nevertheless, you should make every effort to participate in this invaluable experience.

As is true of many professions, the trade associations that serve the field of economics offer numerous opportunities for continuing education after you have started your career. The National Association of Business Economists, for example, sponsors countless seminars to help practitioners hone their communications, presentation and analytical skills.

WHAT YOU WILL EARN

ECONOMISTS TEND TO BE VERY WELL COMPENSATED, BUT INDIVIDUAL SALARIES vary according to experience, area of specialty and employer. Education is a more significant factor in earnings levels than it is for many other professions.

On the low end of the scale are the government and academia. For the federal government, an entry-level position for an economist with a bachelor's degree pays around \$22,500. If your academic record is exceptional, you could be offered as much as \$28,000.

Applicants with a master's degree could qualify for federal positions paying \$34,000 a year; those with doctorates begin at between \$41,500 and \$49,500, depending on experience (if any). The median base salary for economist positions in government is approximately \$75,000.

The federal government takes the cost of living of various regions and metropolitan areas into serious consideration in adjusting salaries somewhat higher or lower.

Faculty members in four-year colleges and universities earn between \$55,000 and about \$70,000. The median base salary of an economist in academia is roughly \$70,000. Full-time professors earn the most; instructors, the least. Economists with a specialty that would pay top dollar in the private sector may be paid a premium as an inducement to accept a professorial position instead. Faculty can also receive additional earnings from consulting, publishing or other projects related to their work.

Business economists are usually the highest paid. A recent survey conducted by the National Association for Business Economics found that business economists have a median base salary of \$85,000 per year.

Business economists engaged in consulting enjoy a median base salary of \$100,000, with additional compensation from bonuses and other incentives of around \$20,000. Business economists employed by manufacturing firms have a median salary of roughly \$115,000, with additional compensation from their employers of \$35,000 or so.

Economists in the securities and investments sector boast a median base salary of approximately \$100,000 to \$120,000, plus \$50,000 to \$60,000 additional in bonuses.

OUTLOOK FOR THIS CAREER

ECONOMICS IS A VALUABLE BACKGROUND FOR THOSE WHO WANT TO GET involved in public policy; and opportunities for employment in US government will remain steady. State and local employment opportunities may have more ups and downs , depending on circumstances and need.

Competition for jobs in academia will remain as keen as it has traditionally been. The best and the brightest will get the most desirable posts.

The greatest opportunities will be found in the private sector, due largely to the growing complexity of domestic and international economics. Economic relations are increasingly complex as a result of the globalization of the marketplace and the emerging economies of certain nations and regions in the former Soviet Union, Eastern Europe, South America and elsewhere. Private firms will need economists to analyze and advise on trade policies, domestic and international regulations and other issues.

As the competitive environment becomes more intense, there's a growing need for numerical and statistical analyses of everything from sales trends to consumer behavior. Individuals with reliable forecasting skills are especially sought after. Given that economists are experts at quantifying the unquantifiable and predicting the future in the midst of uncertainty, the job market of the future is a promising one.

Smaller firms may require the services of an economist, while lacking the budget for a full-time staff of economists. Or, a company may need an economist to provide insight and guidance on a single project. Independent research, testing and consulting firms are able to meet these needs, contracting out their services on an as-needed basis. Therefore, opportunities for employment in stand-alone outfits of this nature will be plentiful.

Because it emphasizes structured thinking, abstract reasoning, creative problem-solving and excellent communications skills, and because it draws upon so many disciplines, a degree in economics is applicable to many different career fields. If you decided to switch careers midstream, you'd have a solid background for a totally different career in business, government or law.

GETTING STARTED

IF YOU INTEND TO BECOME AN ECONOMIST, NUMBERS MATTER. AND SO DO grades. Good grades in high school will help you get into college, as you know. Good grades in college will help jump-start your entire career.

Economics students who have the best grades have the best chance of landing the most desirable internships during college. And internships are highly recommended as a way to learn, set career goals, put skills into practice and also make contacts. It's not unusual for beginning economists to land their first real job with an outfit they interned for.

Moreover, many employers, including the U.S. government, require a job applicant to have a certain minimum grade point average.

The best thing you can do right now is to cultivate excellent study habits, so you can learn to get good grades.

Meanwhile, look for colleges and universities with solid economics departments with coursework that addresses your interest.

The State University of New York (SUNY) campus in Oswego has put together an excellent resource featuring different career options for economics majors and the classes that should be taken for each. You can review it on their website at

www.oswego.edu/~economic/career.opt.htm

Of course, the classes listed apply only to SUNY Oswego, but you'll get an idea of what types of course offerings to look for when you're researching colleges and universities.

Another thing to keep in mind while doing your research is whether the school offers an internship program that intrigues you. Various schools provide varying degrees of support and allow students varying degrees of autonomy. One large state university makes over 100 internship opportunities available, both in the United States and abroad. Students need prepare only by registering a semester in advance and by attending an orientation meeting. However, students are responsible for contacting employers themselves. They receive a course book on internships and are given academic credit at completion.

If you've found the perfect school, but its internship program isn't to your liking, you can get an internship independently. The Federal Reserve Board, for one, offers unpaid summer internships. You should have no difficulty finding books at your local library about the various opportunities available and the best way to approach organizations and businesses that sponsor internships.

Economics is a social science that is ever evolving. It has ramifications that affect the lives of every one of us, every single day. Economics is a profession that has almost limitless applications. If you have a way with numbers and people alike, this could be an exciting, rewarding and profitable career choice.

Good luck!

ASSOCIATIONS AND ORGANIZATIONS

- **American Agricultural Economics Association**
www.aaea.org/
- **American Economic Association**
www.aeaweb.org
- **American Law and Economics Association**
www.amlecon.org
- **Association of Environmental and Resource Economics**
www.aere.org/
- **International Environmetrics Society**
- **International Society for Ecological Economics**
www.ecologicaleconomics.org/
- **National Association for Business Economics**
www.nabe.com
- **National Association of Business Economists**
www.uta.edu/student_orgs/nabe/nabe1.html

■ **National Council on Economic Education**
www.indiana.edu/~econed/sponsors/ncee.htm

■ **National Economists Club**
www.national-economists.org/

PERIODICALS

■ **Agricultural and Resource Economic Review**
www.cals.cornell.edu/publications/arer/arer.html

■ **American Journal of Agricultural Economics**
www.aaea.org/fund/pubs/ajae/index.cfm

- **Barron's**
- **Business Economics** www.nabe.com/pubs.htm
- **Ecological Economics**
- **Environment and Development Economics**
uk.cambridge.org/journals/ede/
- **Environmental and Resource Economics**
- **Industrial Economist** www.indeconomist.com/
- **Journal of Agricultural and Applied Economics**
www.agecon.uga.edu/~jaae/jaae.htm
- **Journal of Environmental Economics and Management**
www.academicpress.com/www/journal/ee.htm
- **Land Economics** www.wisc.edu/wisconsinpress/journals/landecon.html
- **Marine Resource Economics**
www.uri.edu/cels/enre/mre/mre.htm
- **Resource and Energy Economics**
www.elsevier.nl/homepage/sae/econbase/resen/
- **Review of Agricultural Economics** www.ingenta.com
- **The Economist** www.economist.com/
- **The Senior Economist** www.ecedweb.unomaha.edu/sr-econ.htm
- **The Wall Street Journal**