Cultural Roots of Economic Performance: A Research Note

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CULTURAL ROOTS OF ECONOMIC PERFORMANCE: A RESEARCH NOTE

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Cultural values, measured from Western and Eastern perspectives, are factors in economic performance which explain more than half the cross-national variance in economic growth over two periods for samples of 18 and 20 nations. Performance seems facilitated by 'Confucian dynamism'—stressing thrift, perseverance, and hierarchical relatedness, but not traditions impeding innovation. Cultural 'individualism' seems a liability, while the propensity for work in cohesive groups is an asset for economic performance. With business becoming more international, effective strategic management requires accounting for fundamental national differences such as those of culture identified in this study.

INTRODUCTION

Interest in international comparative analysis has increased as some nations such as the United Kingdom and the United States—once thought to embody the characteristics most conducive to modern economic development—have experienced much lower growth rates than others. Differences in economic performance may result, at least partly, from differences in national culture. Indeed, consideration of culture has become important because empirical studies of more tangible factors such as education, population growth, nutrition, capital investment, and technological innovation fail to explain performance differences (see Denison, 1980; Forester, 1989; Franke, 1973; Franke and Barrett, 1975; Hagen, 1968; Hagen and Hawrylyshyn, 1969; O'Hearn, 1989; Schlefer, 1989). Nor is it necessarily poorer nations with the potential for

adapting and catching up which grow more rapidly (the convergence hypothesis of Baumol, 1986; cf. Yang, 1988), since correlations of economic position with growth typically are modest. But recent quantitative analysis suggests that historically important cultural variables such as ascetic Protestantism (Weber, 1904) and the achievement motivation related to it (McClelland, 1961) no longer contribute to more rapid development (Franke, 1987; Hofstede, 1980: 170–171).

In recent publications, Michael Porter (1990a, b) popularizes the idea that nations have competitive advantages. Unfortunately he stops short of the key question of why certain nations develop competitive advantage and others do not. The present study seeks answers to this question, building upon three comparative studies providing measures of national culture. Our thesis is that differences in cultural values, rather than in material and structural conditions, are ultimate

determinants of human organization and behavior, and thus of economic growth. Through empirical analysis of growth rate differences over 1965–80 and 1980–87, we seek to identify cultural factors which seem, at least in recent decades, to be at the root of economic performance.

CULTURAL MEASURES: THREE PRIOR STUDIES

The book, *Culture's Consequences* (to be referred to as 'CC'; Hofstede, 1980), presents cultural indices developed from surveys of 72,215 IBM employees in 40 nations between 1967 and 1973. Further data were obtained from IBM employees in 10 additional nations and three regions (Hofstede, 1983; Hofstede and Bond, 1988). Four important cultural measures were found. Two, individualism and masculinity, resulted from factor analysis; while two others, power distance and uncertainty avoidance, derived from theoretical concepts. All four indices were based on responses to questions framed by Western social scientists.

In CC, measures of national culture were shown to be related to 1960–70 economic growth, but only for rich nations, yielding a negative correlation for individualism and a positive one for uncertainty avoidance (Hofstede, 1980: Fig. 7.10). However, in a study building on these findings it was argued that subsequent rather than prior economic growth should be considered. This analysis showed that a quarter of the variance in 1970–80 economic growth could be explained by cultural variables for 39 of the 40 nations (with economic data lacking for Iran; cf. Franke, Mento, and Brooks, 1985). Specifically, individualism (a non-collectivistic orientation) and political instability (an index of political deaths during 1968–72) were found to be negative factors, both indicators of low social cohesion which might inhibit effective economic enterprise.

A second instrument developed from a Western point of view, Rokeach's Value Survey ('RVS'), was administered in 1979 to about 1000 college students in nine nations, yielding five cultural factors (Ng *et al.*, 1982). Hofstede and Bond (1984: Table 5) related the national RVS factor scores to the four CC measures listed above, and found that each of four RVS factors correlated significantly with a CC measure. Thus, both appraisals of culture—one developed from IBM

employees, the other from college students— seem to tap similar cultural information in the six Western and Eastern countries common to the studies (Australia and New Zealand, Hong Kong, India, Japan, and Taiwan). Due to the small sample of common RVS nations and the very high correlations of variables with those in the CC study, further analysis will employ only CC measures as cultural indices based upon Western perspectives.

A third study, not based on Western social science but on a list of 40 'fundamental and basic values for Chinese people', was conducted by Michael Bond with the input of seven Chinese social scientists in Hong Kong (The Chinese Culture Connection (to be referred to as 'TCCC'), 1987: 145; see also Hofstede and Bond, 1988, and Bond and Hofstede, 1988). Between 1983 and 1985, about 100 students in each of 22 nations (Western as well as Eastern) answered a questionnaire derived from this list, the Chinese Values Survey (to be referred to as 'CVS'). Student responses yielded four cultural factors which were labelled Confucian work dynamism, integration, human-heartedness, and moral discipline. As shown by TCCC (1987: Table 4), cross-sectional comparison for the 20 nations and regions in common with the CC study showed significant correlations of three of the four CVS factors with three of the four CC measures. Both Western uncertainty avoidance and Eastern Confucian dynamism were statistically independent of other CC and CVS measures. Confucian dynamism was noted to be correlated with national economic growth rates and was suggested as an index of the social philosophy hypothesized to be responsible for 'the stunning economic development of Oriental cultures with a Chinese heritage' (TCCC, 1987: 154–155).

MEANING OF CULTURAL VARIABLES

Factor analysis and constructs of IBM employee data from 40 nations yielded the following four CC indices (Hofstede, 1980). The *power distance* index (PDI) can be seen as a society's endorsement of inequality, and its *inverse* as the expectation of relative equality in organizations and institutions. *Individualism* (IDV) is the tendency of individuals primarily to look after themselves and their immediate families, and its *inverse* is the integration of people into cohesive

groups. *Masculinity* (MAS) is an assertive or competitive orientation, as well as a sex-role distinction, and its *inverse* is a more modest and caring attitude toward others. Finally, the *uncertainty avoidance* index (UAI) taps a feeling of discomfort in unstructured or unusual circumstances, while the *inverse* shows tolerance of new or ambiguous circumstances.

Factor analysis of the CVS responses from 20 nations yielded the following four indices (TCCC, 1987: Table 2): *Confucian dynamism* (CONDYN) is an acceptance of the legitimacy of hierarchy and the valuing of perseverance and thrift, all without undue emphasis on tradition and social obligations which could impede business initiative. *Integration* (INTEG) is an index of the degree of tolerance, harmony and friendship a society endorses, at the expense of competitiveness; it has a 'broadly integrative, socially stabilizing emphasis' (TCCC, 1987: 150). *Human-heartedness* (HUMHT) is open-hearted patience, courtesy, and kindness. *Moral discipline* (MORDIS) is rigid distancing from affairs of the world.

SAMPLE AND DATA

Eighteen nations are common to the CC and the CVS studies. For these nations, CC IBM employee data from 1967–73, CVS university student data from 1983–85, and World Bank economic data for 1965–80 and 1980–87 are available. Half of the 18 nations were 'rich' in 1965 (measured in current U.S. dollars), according to Hofstede's (1980) criterion of $1300 per capita gross national product, and half were 'poor'. The nine rich countries are Australia, Canada, West Germany, Japan, the Netherlands, New Zealand, Sweden, the United Kingdom, and the United States, with 1965 GNPs per capita between $1693 (New Zealand) and $3710 (U.S.A.). The nine poor countries include those which were very poor, with 1965 GNPs per capita between $60 and $119—India, Pakistan, the Philippines, and Thailand—, and those closer to the rich/poor dividing line of $1300—Brazil, Hong Kong, South Korea, Singapore, and Taiwan. Also covered in the CVS study are two African nations with low GNPs per capita, Nigeria and Zimbabwe, while an extension of the CC study (Hofstede, 1983) contains two regional clusters: West Africa and East Africa. Using the IBM scores from these

clusters to represent Nigeria and Zimbabwe in relationships with CVS variables requires the assumption of similarity between these countries and regions. Comparison across the 18 nations excluding Africa therefore is technically purer. On the other hand, conclusions about factors which affect economic development but do not include Africa would disregard information from an important part of the world for which some data do exist. Present calculations are for samples of 18 and 20 nations, the one excluding and the other including the two nations and regions of Africa. Cultural and economic data are presented in Table 1.

RELATIONSHIPS AMONG CULTURE AND LEVEL OF GNP/CAPITA VARIABLES

Table 2 shows the intercorrelations among cultural variables (Western and Eastern) and initial levels of GNP per capita (1965 and 1980). Two measures of correlation were used, with Spearman rank-order coefficients serving to check Pearson product–moment correlations since relatively small sample sizes might allow outlier distortion (McCall, 1980; Siegel and Castellan, 1988). The four (Western) CC measures are unrelated except for a negative correlation between *power distance* and *individualism*, a relationship earlier signalled by Hofstede (1980). Overlap of these two variables could limit interpretation of multivariate relationships, since it exceeds an *r* or rho of 0.50, which would indicate low multicollinearity, but it does not reach the 0.80 or 0.90 intercorrelation where problems of severe multicollinearity might occur (e.g. sign reversals and diminished coefficients; cf. Franke, 1980: 1011, 1014).

The four CVS measures are unrelated to one another, and the factor of *Confucian dynamism* is unrelated to any of the Western measures. Each of the remaining three CVS variables is correlated significantly although not overwhelmingly with one or more Western variables. CVS *integration* has variance overlaps of about 40 percent with CC *power distance* and with *individualism*, for the former a negative and for the latter a positive relationship, suggesting that the tolerance, harmony, and friendship exemplified by INTEG is inconsistent with organizational inequality but consistent with a focus upon

Table 1. Cultural and economic data

Nation	Culture's Consequences (*ca.* 1970)				Chinese Value Survey (early 1980s)				GNP per capita, 1987	Economic Growth ΔGDP %/year	
	PDI	IDV	MAS	UAI	CONDYN	INTEG	HUMHT	MORDIS		1965–80	1980–87
Australia	36	90	61	51	31	0.75	0.87	−0.50	11,100	4.2	3.2
Brazil	69	38	49	76	65	0.65	0.75	−0.66	2,020	9.0	3.3
Canada	39	80	52	48	23	0.60	1.09	−0.66	15,160	5.0	2.9
Germany, W.	35	67	66	65	31	1.34	0.50	0.07	14,400	3.3	1.6
Hong Kong	68	25	57	29	96	0.10	1.08	−0.17	8,070	8.6	5.8
India	77	48	56	40	61	−0.72	0.27	−0.02	300	3.7	4.6
Japan	54	46	95	92	80	0.81	1.42	0.14	15,760	6.3	3.8
Korea, S.	60	18	39	85	75	0.26	0.45	0.68	2,690	9.5	8.6
Netherlands	38	80	14	53	44	1.06	−1.09	−0.34	11,680	4.1	1.5
New Zealand	22	79	58	49	30	0.78	0.95	−0.67	7,750	2.5	2.9
Pakistan	55	14	50	70	0	−0.65	0.39	0.33	350	5.1	6.6
Philippines	94	32	64	44	19	0.42	1.10	1.04	590	5.9	−0.5
Singapore	74	20	48	8	48	0.21	0.80	−0.32	7,940	10.1	5.4
Sweden	31	71	5	29	33	0.60	0.49	−0.77	15,550	2.9	1.3
Taiwan	58	17	45	69	87	−0.19	0.58	−0.07	4,189	9.8	7.6
Thailand	64	20	34	64	56	−0.02	0.49	−0.08	850	7.2	5.6
U.K.	35	89	66	35	25	0.75	1.01	−0.66	10,420	2.4	2.6
U.S.A.	40	91	62	46	29	0.44	1.00	−0.71	18,530	2.7	3.1
Additional Nations											
Nigeria	77	20	46	54	16	−0.13	0.79	−0.21	370	6.9	−1.7
Zimbabwe	64	27	41	52	25	0.13	0.96	−0.74	580	4.4	2.4

Culture's Consequences and CONDYN data from Hofstede and Bond (1988: Exhibit 2). Other CVS data from The Chinese Culture Connection (1987: Table 3). GNP per capita in 1987 (U.S. dollars) and real growth of GDP (ΔGDP), %/year, for 1965–80 and 1980–87 from World Bank (1989: Tables 1 and 2); levels of GNP per capita in 1965 and 1980 (not presented, computed in 1987 U.S. dollars) from these data adjusted for population (Table 26). For Taiwan, growth rates from Council for Economic Planning and Development (1989: Table 3-1); level of GNP/capita in 1987 and earlier years using data from this source (Tables 2-2 and 3-3), from Department of Commerce (1989:822), and from Council of Economic Advisers (1990: Table C-3). For Nigeria (West Africa), CC data include Ghana, Nigeria, and Sierra Leone; for Zimbabwe (East Africa), they include Kenya, Ethiopia, Tanzania, and Zambia (cf. Hofstede, 1983).

the individual. CVS *human-heartedness* overlaps nearly 50 percent with CC *masculinity*, indicating an odd compatibility of assertiveness and sex-role specificity with the Chinese index's endorsement of patience, courtesy, and kindness (cf. comments by TCCC, 1987: 152). Finally, the Chinese measure of *moral discipline*, indicative of a rigid set of values, overlaps about 40 percent with CC *power distance*, indicating acceptance of inequality, and is negatively correlated with *individualism*.

Relationships with economic level presented in Table 2 suggest that persons in *richer* nations tend to accept less inequality in organizations (have lower PDI), that they focus more on the individual (higher IDV), that they are more tolerant and harmonious (higher INTEG), and

do not adhere to a rigid set of rules (lower MORDIS). Only the correlation of level of GNP per capita in 1965 with the CC variable of IDV exceeds a level of 0.80 signalling severe multicollinearity, which could make conclusions drawn from multiple regression coefficients ambiguous.

CORRELATIONS OF CULTURAL VARIABLES WITH ECONOMIC GROWTH

In Table 3 the four Western and four Chinese measures of culture, plus levels of per capita GNP, are related to growth rates of gross domestic product over the periods 1965–80 and

Table 2. Pearson and Spearman correlation coefficients for independent variables (sample of 18 nations)

	PDI	IDV	MAS	UAI	CONDYN	INTEG	HUMHT	MORDIS
IDV	−0.75**							
	−0.61**							
MAS	0.13	0.05						
	−0.13	0.37						
UAI	−0.02	−0.23	0.23					
	−0.03	−0.31	−0.02					
CONDYN	0.35	−0.46	0.05	0.24				
	0.35	−0.40	−0.29	0.22				
INTEG	−0.56*	0.63**	0.09	0.06	−0.16			
	−0.67**	0.64**	0.37	0.17	−0.18			
HUMHT	0.11	−0.01	0.70**	−0.04	0.04	0.03		
	−0.01	0.27	0.67**	−0.20	−0.14	0.26		
MORDIS	0.63**	−0.64**	0.21	0.37	0.11	−0.31	−0.02	
	0.54*	−0.67**	0.13	0.42	0.18	−0.32	−0.13	
GNP/CAP, 1965	−0.78**	0.85**	−0.01	−0.19	−0.36	0.65**	0.05	−0.59**
	−0.72**	0.77**	0.20	−0.23	−0.20	0.69**	0.28	−0.63**
GNP/CAP, 1980	−0.71**	0.76**	0.06	−0.17	−0.22	0.68**	0.10	−0.56*
	−0.70**	0.71**	0.23	−0.16	−0.18	0.68**	0.36	−0.59**
Mean	52.72	51.39	51.17	52.94	46.28	0.40	0.68	−0.19
S.D.	19.33	29.16	20.08	21.32	26.40	0.54	0.54	0.51

Notes: Pearson above Spearman correlation coefficient. GNP per capita for 1965 and 1980 is expressed in constant 1987 U.S. dollars.
*$p < 0.05$, **$p < 0.01$, two-tailed.

1980–87. In defining dependent and independent variables an assumption had to be made about cause and effect. It is here assumed that culture and wealth (GNP per capita) affect economic growth, i.e., that they are the independent variables and growth is the dependent variable. This seems appropriate if one wishes to determine whether it is culture that affords those competitive advantages which Porter (1990a,b) discussed. It also is justified by stability of the cultural measures (cf. Hofstede, 1980: ch. 8; Hofstede and Bond, 1988: 6–7, 17) and of the level of per capita GNP which, as the cumulative result of past growth, is less volatile than growth rates (cf. Franke and Barrett, 1975: 343, 347–349). Cultural indices and level of GNP per capita at the beginning of a growth period serve as potential independent variables for the dependent variable of economic growth.

In Hofstede's study (1980: Fig. 7.10), a strong and positive correlation was found between the cultural index of individualism and level of GNP per capita, but none at all (across all 40 countries) with 1960–70 economic growth. This supports an interpretation of individualism as a dependent variable, a cultural quality determined by economic attainment but not by recent changes in it. In the present analysis, individualism shifts from a dependent variable role to that of an independent variable, so that its explanatory power can be tested along with the other cultural variables available.

If our assumption about causality is correct, then cultural factors should be associated with *subsequent* economic growth. The CC data collected from business employees over 1967–73 and measures of economic growth over 1965–80 and 1980–87 largely satisfy this requirement. The CVS data were collected from college students in 1983–85, and thus should be reflected in the economic growth of their countries in the 1990s or later. However, apparent stability over time for the most important CVS variable (CONDYN) makes strict accounting for time lags less crucial. Analysis of economic growth data over the two periods (1965–80 and 1980–87) allows evaluation of relationship stability.

Simple (zero-order) correlations as shown in

Table 3. Pearson and Spearman correlations for dependent variables with independent variables (samples of 18 and 20 nations)

| Independent variables | Dependent variables: Growth rate of gross domestic product | | | |
| | Sample of 18 Nations | | Sample of 20 Nations† | |
	1965–80	1980–87	1965–80	1980–87
PDI (*ca.* 1970)	0.64**	0.24	0.62**	0.05
	0.70**	0.46	0.66**	0.20
IDV (*ca.* 1970)	−0.81**	−0.65**	−0.77**	−0.40
	−0.78**	−0.69**	−0.78**	−0.51*
MAS (*ca.* 1970)	−0.05	−0.04	−0.04	0.01
	−0.37	−0.27	−0.34	−0.10
UAI (*ca.* 1970)	0.19	0.29	0.19	0.25
	0.30	0.35	0.33	0.28
CONDYN (*ca.* 1984)	0.66**	0.53*	0.61*	0.58**
	0.59*	0.56*	0.46*	0.59**
INTEG (*ca.* 1984)	−0.33	−0.64**	−0.33	−0.42
	−0.46	−0.66**	−0.45*	−0.44*
HUMHT (*ca.* 1984)	0.09	−0.01	0.08	−0.05
	−0.02	−0.23	−0.04	−0.20
MORDIS (*ca.* 1984)	0.36	0.21	0.37	0.21
	0.49*	0.39	0.46*	0.39
GNP/capita, 1965	−0.68**	−0.55*	−0.64**	−0.32
	−0.53*	−0.59**	−0.48*	−0.32
GNP/capita, 1980	−0.53*	−0.49*	−0.48*	−0.24
	−0.47*	−0.54*	−0.42	−0.27
Mean	5.68	3.88	5.68	3.53
S.D.	2.72	2.36	2.61	2.57

Notes: Pearson above Spearman correlation coefficient.
* $p < 0.05$; ** $p < 0.01$, two-tailed.
† See Table 1 notes.

Table 3 are strongest—though negative—for *individualism* in the period 1965–80 and, for the 18 countries excluding Africa, over 1980–87, meaning that less individualistic countries experienced more growth. When the two African countries are included, the relationship between IDV and economic growth is considerably weakened for the 1980–87 period. *Confucian dynamism* is significantly correlated to economic growth for both periods and samples, suggesting that CONDYN is a potent and stable cultural characteristic. Since the relationships are positive, it appears that economic organizations benefit when perseverance tempered by flexibility and respect for hierarchy and thrift are accepted values.

In Table 3, for each growth period, the initial *level of GNP per capita* is less strongly related to economic growth than is one or more of the measures of national culture—calling into question the strength of Baumol's (1986) economic convergence model by comparison with cultural relationships. In particular, the two cultural factors most consistently related to economic growth, IDV and CONDYN, are not so strongly related to one another (Table 2) as to economic growth, so that their joint effects upon growth in multiple relationships should be complementary. For one or the other economic growth period, there are also relationships of growth to PDI (positive) and INTEG (negative). Still, there is a tendency for less developed nations to grow more rapidly, and since Table 2 shows that IDV, PDI, and INTEG are strongly related to level of GNP per capita, it is

prudent to consider *convergencee* as a secondary contributing factor in any correlation or regression model for economic growth which includes one or more of these cultural variables.

Table 4 shows results of stepwise multiple regression using controls for significance ($p <$ 0.05) and multicollinearity (tolerance $>$ 0.19). The computer program (SPSSx) selects independent variables from cultural data and initial level of GNP per capita, in order of strongest relationship to growth rate as the dependent variable. Results indicate that for both economic growth periods, 1965–80 and 1980–87, and for the 18 as well as the 20 nations, more than half of the variance in economic growth rates is explained by differences in cultural measures. The one variable appearing in all four equations as a factor affecting economic growth is Confucian

dynamism (CONDYN), while individualism (IDV) is a factor in all but the 20-country regression for 1980–87. Other cultural variables which enter one or another regression model are power distance (PDI) and integration (INTEG).

CONCLUSION

This study has utilized cultural measures to evaluate differences in economic performance at the level of nations. Cultural indices derived from Western and Chinese investigations of people's values explain more than 50 percent of the international differences in economic growth rates for the periods 1965–80 and 1980–87, employing samples of 18 and 20 nations. Empirical

Table 4.   Regression equations for economic growth

For sample of 18 nations

1965–80 Economic growth
Economic growth = 7.048
 − 0.060 IDV + 0.038 CONDYN
$t = -4.62$ $t = 2.60$
$(p = 0.0003)$ $(p = 0.0199)$
$R^2 = 76.8\%$, adjusted for number of variables = 73.7%, $F = 24.85$ $(p < 0.00005)$.

1980–87 Economic growth
Economic growth = 10.355
 − 0.053 IDV − 0.083 PDI − 2.355 INTEG + 0.034 CONDYN
$t = -2.98$ $t = -3.60$ $t = -3.29$ $t = 2.69$
$(p = 0.0106)$ $(p = 0.0033)$ $(p = 0.0059)$ $(p = 0.0186)$
$R^2 = 80.3\%$, adjusted for number of variables = 74.2%, $F = 13.21$ $(p = 0.0002)$.

For sample of 20 nations

1965–80 Economic growth
Economic growth = 6.723
 − 0.058 IDV + 0.040 CONDYN
$t = -4.94$ $t = 3.14$
$(p = 0.0001)$ $(p = 0.0060)$
$R^2 = 74.4\%$, adjusted for number of variables = 71.4%, $F = 24.77$ $(p < 0.00005)$.

1980–87 Economic growth
Economic growth = 5.383
 + 0.062 CONDYN − 3.119 INTEG − 0.063 PDI
$t = 3.95$ $t = -3.34$ $t = -2.39$
$(p = 0.0011)$ $(p = 0.0042)$ $(p = 0.0295)$
$R^2 = 61.1\%$, adjusted for number of variables = 53.8%, $F = 8.37$ $(p = 0.0014)$.

Notes: Stepwise regression variables in order of entry, with constraints set at $p < 0.05$ and tolerance > 0.19 (cf. Franke, 1980: fn. 9). At entry, all independent variables were at $p < 0.05$ and tolerance > 0.31.

analysis shows the potential of cultural determinants in explaining economic phenomena.

Two cultural measures, whose sources and values are quite different, account for most of the variance in national economic growth rates. Confucian dynamism—a measure extracted from a questionnaire developed by Chinese scholars, which stresses the dynamic rather than the static values traditionally found in Confucianism—has the most consistent explanatory power. This index appears to explain the relative success of East Asian economies over the past quarter-century. The second cultural variable with strong explanatory power, based on data collected within subsidiaries of IBM around the world, is individualism—a liability in a world in which group cohesion appears to be a key requirement for collective economic effectiveness. In addition, in multiple regressions for the period after 1980, economic growth seems to be aided by relative equality of power among people in organizations (lower power distance) and by a tendency toward competitiveness at the expense of friendship and harmony (lower integration).

The finding that national differences in dominant cultural values exist and affect economic life is, of course, a common-sense insight. Until now, however, these differences had not been identified, measured, and interpreted so that their relationships to economic performance could be appreciated. The present study links culture and economy, suggesting that values fostered in a nation's families, organizations, and political life are reflected in its economic statistics.

With business becoming more and more international, profiles of national culture can become tools for strategic choices in corporate boardrooms. Sensitivity to cultural variables will be needed for decisions as to what to do in which country. However, national cultural differences often are treated at the level of gut feelings, sometimes even as cocktail-party jokes. Our findings suggest that we should view human values as serious business. Indeed, studies now should be undertaken to determine whether organizations which differ in terms of these cultural characteristics also differ in economic performance.

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