# CAN CULTURE EXPLAIN ECONOMIC GROWTH? A NOTE ON THE ISSUES REGARDING CULTURE-GROWTH STUDIES

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## ABSTRACT

*The notion that culture affects economic development and therefore explains growth has pre-occupied social scientists for decades. Studies have shown mixed results, some supporting that economic growth is shaped (at least in part) by cultural factors while others conclude otherwise. Intuitively, culture should affect growth since culture defines the belief systems of the people making up the economy and thus would ultimately affect economic growth. But the question is how do we show that empirically?*

*This paper attempts to answer that question by reviewing literature and examining more recent studies on the culture-growth dilemma then proceeds with summarizing issues regarding such studies as how they can possibly be resolved.*

## INTRODUCTION

Intuition will tell us that economic growth is affected by culture. History supports us in this as it shows how civilization with distinct culture was able to develop and grow economically. The ruins in Machu Picchu of Peru, Pyramids in Egypt, and the Angkor Wat in Cambodia are just but some evidence that we can see. In this modern age, we are again challenged to show this empirically using data rather than ruins. This is a challenge for most researchers and this paper summarizes the issues and provides some resolutions moving forward regarding this significant phenomenon.

## LITERATURE REVIEW

Traditionally, literature presents culture and its different constructs and economic determinants of growth as separate and distinct. Political economists and political sociologists, even social psychologists, view their respective methodologies as mutually exclusive perhaps primarily due to the level of analysis employed by each and the underlying assumptions about human behavior. After all, culture is all about behavior and how it *changes* over time – on a collective basis. Additionally, there is the issue of inadequate measures of cultural factors because until these factors enter into a quantitative analysis, the hypothesis that it affects growth (or vice versa) cannot be tested.

Previously, studies attempting to establish the role of culture either infer culture from economic performance or estimate cultural factors from impressionistic historical evidence such as the obvious results of the industrialization and the Protestant Ethics to growth. We can see from history that all cultures of virtually all pre-industrial societies are hostile to social mobility and individual economic accumulation. These cultures are mostly influenced by religious beliefs. Both medieval Christianity and traditional Confucian culture stigmatized profit-making and entrepreneurship. Hence, there is some degree of hostility to social mobility and indirectly, growth. That may be the case until a Protestant version of Christianity played a key role in the rise of capitalism and much later, a modernized version of Confucian society which encourages economic growth through its support of education and achievement. As constructs, these are represented by values on thrift (which affects investment and savings), achievement motivation and post-materialism.

Motivational literature stresses the role of culture on economic achievement. It grows out naturally of Weber's Protestant Ethic thesis which gave rise to historical research by Tawney (1926, 1955), case studies by Harrison (1992), empirical work by McClelland et all (1953) and achievement motivation by McClelland (1961). In the 1970s, this was expanded by Inglehart (1971, 1977, 1990) by examining the shift from materialist to post-materialist value priorities which illustrate how culture can change and can thus explain a more dynamic phenomena called economic growth.

In the preceding arguments, culture is viewed as a system of basic common values that help shape the behavior of the people in a given society. This value system in most pre-industrial times takes the form of a religion and thus changes very slowly. But with industrialization and accompanying processes of

modernization, these worldviews tend to become more secular, rational and open to change and thus dynamic and variable enough to be quantified.

## VARIOUS CULTURAL MODELS

Extant literature shows that there are five important and significant models and concept of culture which are mostly cited in studies on culture and growth – Kluckhohn and Strodtbeck (1961), Hofstede (1980, 1983, 1993), Rokeach (1960), Bond (1988) and Trompanaar (1993).

### Model 1: Kluckhohn and Strodbeck

The work of Kluckhohn and Strodtbeck (KS)(1961) is one of the earliest cultural comparative models designed where they hypothesized that people of different cultures tend to have different orientations toward the world and people who are different from themselves. Hence, people of different cultures can be compared and differentiated using their orientation towards such dimensions as people, nature, relationship, human activity and even concept of space. Table 1 summarizes the details of the KS model.

| Table 1: Kluckhohn and Strodtbeck's Cultural Orientation Model | |
|---|---|
| Concerns / Orientation | Possible Responses |
| *Human nature:*<br><br>What is the basic nature of people? | *Good.* Most people are basically good at heart; they are born well. *Evil.* Most people can't be trusted; they are basically bad and need to be controlled. *Mixed.* There are both eveil and good people in the world; you have to check people out to find out which they are; they can change with the right guidance. |
| *Man-nature Relationship:*<br><br>What is the appropriate relationship to nature? | *Subordinate to nature.* People really can't change nature; life is largely determined by external forces, such as fate and genetics; fatalistic – what happens was meant to happen. *Harmony with nature.* Man should, in every way, live in harmony with nature. *Dominant over nature.* It is the great human human challenge to conquer and control nature; everything from air-conditioning to the "green revolution" has resulted from having met this challenge. |

| Table 1:  Kluckhohn and Strodtbeck's Cultural Orientation Model | |
| --- | --- |
| Concerns / Orientation | Possible Responses |
| *Time sense:*<br><br>How should we best think of time? | *Past.* People should learn from history, draw the values they live by from history and strive to feel life has been worthwhile.<br>*Present.* The present moment is everything; let's make the most of it; don't worry about tomorrow, enjoy today.<br>*Future.* Planning and goal setting make it possible for people to accomplish miracles, to change and grow; a little sacrifice today will bring a better tomorrow. |
| *Activity:*<br><br>What is the best mode of activity? | *Being.* It is enough to just "be"; it is not necessary to accomplish great things to feel your life has been worthwhile.<br>*Becoming.* The main purpose for being placed on this earth is for one's own inner development.<br>*Doing.* If people work hard and apply themselves fully, their efforts will be rewarded; what a person accomplishes is a measure of his own. |
| *Social relations:*<br><br>What is the best form of social organization? | *Hierarchical.* There is nature order to relations, some people are born to lead, other to follow; decisions should be made by those in charge.<br>*Collateral.* The best way to be organized is as a group where everyone shares in the decision process; it is important to not to make important decisions alone.<br>*Individual.* All people should have equal rights, and each should have complete control over one's own destiny; when we have to make a decision as a group, it should be "one person one vote" |
| Kluckhohn, C. and F.L. Strodtbeck (1961). *Variation in value orientations.* Evanston, Illinois. Row, Peterson. | |

The KS model proposes that it is possible to distinguish cultures based on how they each address these five common human concerns but these are not an exhaustive list. Furthermore, it is the rank order of responses that gave a culture its character and uniqueness. These five concerns are often called "value orientation" or "core values".

It is relevant to note that from economic growth viewpoint a culture's concept of time (i.e. affects decisions relating to savings and delayed gratification), human activity, and social relations (political culture perspective).

**Model 2: Hofstede**

In the early 1980's, Gert Hofstede published a book, *Culture's Consequences,* which presents results of his study on values in many countries through his work at IBM. In the said work, Hofstede presented cultural indices developed from surveys of 72,215 IBM employees in 40 countries between 1967 and 1973. Further data were then obtained from 10 additional regions (Hofstede, 1983, Hofstede and Bond, 1988). Hofstede found four important cultural measures, two (individualism and masculinity) resulted from factor analysis, while the other two (power distance and uncertainty) were derived from theoretical concepts. All indices were based on responses to questions framed by Western social scientists. Later on in a further study (1993), he would add a fifth dimension which is time.

Interestingly, in his 1983 study Hofstede related his measures of national culture with economic growth but his study shows significance only for rich countries yielding a negative correlation for individualism and a positive one for uncertainty avoidance (Hofstede, 1980). However, in a related study (with economic data lacking for Iran; cf. Franke, Mento, and Brooks, 1985) 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 1979-80 economic growth could be explained by cultural variables for 39 of the 40 nations. 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.

**Model 3: Rokeach**

In his landmark work *The Nature of Human Values* (1973), Milton Rokeach emphasized that value is an enduring belief that a specific mode of conduct (or behavior) or end-state of existence is personally or socially preferable than an opposite or converse mode of conduct or end-state of existence. In addition, a value system is an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance. He concludes that to say that a person has a value is to say that he has an enduring prescriptive or proscriptive belief that such specific mode of conduct or end-state of existence is preferred to an opposite mode of behavior or end-state. This belief, he further stressed, transcends attitudes toward objects and toward situations; it is a standard that guides and determines action, attitudes toward objects and situations,

ideology, presentations of self to others, evaluations, judgments, justifications, comparisons of self with others, and attempts to influence others. Instrumental values (which refers to the values associated with a mode of behavior) and terminal values (which relates to end-states), are related yet are separately organized into relatively enduring hierarchical organizations along a continuum of importance. Table 2 shows the result of his extensive study on human values and value categories.

| Table 2: The Rokeach Value Survey - Terminal and Instrumental Values | |
| --- | --- |
| Terminal Values | Instrumental Values |
| A comfortable life *(a prosperous life)* | Ambitious *(hard-working, aspiring)* |
| An exciting life *(a stimulating, active life)* | Broadminded *(open-minded)* |
| A sense of accomplishment *(lasting contribution)* | Capable *(competent, effective)* |
| A world at peace *(free of war and conflict)* | Cheerful *(lighthearted, joyful)* |
| A world of beauty *(beauty of nature and the arts)* | Clean *(neat, tidy)* |
| Equality *(brotherhood; equal opportunity for all)* | Courageous *(standing up for your beliefs)* |
| Family security *(taking care of loved ones)* | Forgiving *(willing to pardon others)* |
| Freedom *(independence, free choice)* | Helpful *(working for welfare of others)* |
| Happiness *(contentedness)* | Honest *(sincere, truthful)* |
| Inner harmony *(freedom from inner conflict)* | Imaginative *(daring, creative)* |
| Mature love *(sexual and spiritual intimacy)* | Independent *(self-reliant, self-sufficient)* |
| National security *(protection from attack)* | Intellectual *(intelligent, reflective)* |

| Table 2:  The Rokeach Value Survey - Terminal and Instrumental Values | |
|---|---|
| Terminal Values | Instrumental Values |
| Pleasure<br>        *(an enjoyable, leisurely life)* | Logical<br>        *(consistent, rational)* |
| Salvation<br>        *(saved, eternal life)* | Loving<br>        *(affectionate, tender)* |
| Self-respect<br>        *(self-esteem)* | Obedient<br>        *(dutiful, respectful)* |
| Social recognition<br>        *(respect, admiration)* | Polite<br>        *(courteous, well-mannered)* |
| True friendship<br>        *(close companionship)* | Responsible<br>        *(dependable, reliable)* |
| Wisdom<br>        *(a mature understanding of life)* | Self-controlled<br>        *(restrained, self-discipline)* |
| Rokeach (1973). *The Nature of Human Values*. New York. The Free Press. pp 359-361 | |

Using Rokeach's Value Survey (RVS), by rank ordering value importance to an individual, culture could be compared. Hofstede and Bond (1984), on the other hand, related the national RVS factor scores to the Hofstede's four cultural dimensions and found that each of the four RVS factors correlated significantly with Hofstede's measure. Thus, both appraisals of culture seem to tap similar cultural information in six Western and Eastern countries common to the studies (i.e. Australia, New Zealand, Hong Kong, India, Japan and Taiwan). From here we could infer that culture is indeed more rigid and unchanging.

**Model 4: The Chinese Culture Connection (TCCC) by Bond**

Another cross-cultural model, this time not based on Western social science was proposed by Bond (1988) as he worked with other Chinese social scientists which he called the "The Chinese Culture Connection" (TCCC) or more popularly referred to in literature as the Chinese Value Survey (CVS). Perhaps motivated by the phenomenal growths exhibited by Eastern countries mostly Asia, Bond's study focused on unique value structures (thus cultural dimensions) of Asian countries. His model lists 40 "fundamental and basic values for Chinese people" and yielded four cultural factors: Confucian work dynamism, Integration, Human-heartedness,

and Moral Discipline. A cross-sectional comparison of 20 nationals and regions in common with the Hofstede study showed significant correlations of three of the four CVS factors with three of the four Hofstede measures. Both Western uncertainty avoidance and Eastern Confucian dynamism were statistically independent of the two measures. Confucian dynamism was noted to be correlated with national economic growth 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.

## Model 5: Trompenaar's Cultural Dimensions

A fifth, more recent cultural model and a deviation from a single-point of view models of culture, is the one proposed by Trompenaars (1994). He argued that culture can be examined on different levels: individual, organizational and national. On an individual level, culture can be viewed as the way people share and express their values. On an organizational level, it can be looked at as the way in which people within an organization express attitudes, and on a national level, it is as away in which attitudes are expressed in a particular country or geographical region.

Moreover, he asserts that every culture distinguishes itself from others by the specific solutions it chooses to certain problems which reveal themselves as dilemmas. It is convenient to look at such problems under three areas: those which arise from relationships with other people, those which come from the passage of time, and those which relate to the environment.

Trompenaars' cross-cultural dimensions allow us to further breakdown our unit of analysis for cultural variables into the individual, organization and nation. This allowed researchers to have a more flexible definition of a cultural unit other than an independent state. In the era of globalization or even localization, the concept of defining and measuring culture beyond the boundary of political economies becomes more significant.

## Common elements of the cultural construct

The five models of culture present two elements which allowed culture to be compared or even related to growth. The first is that it defines culture into dimensions which not only describes a specific country's culture but provides a way to distinguish it from the other. This discriminatory aspect of measuring culture allowed more robust tests to be conducted to explain growth. Next is that culture as

presented by the five models are both descriptive (past and present) and predictive (future). This aspect of culture allows it to be tested against economic variables such as growth.

However, it is very curious to note how the models constructs culture using different components, dimensions or elements but does not provide a holistic measure of culture.

## CULTURE-GROWTH STUDIES

With the development of cross-cultural models, studies relating culture to growth started to take off. Notable studies in this area are those of Franke, Hofstede and Bond (1991) and Granato, Ingelhart and Leblang (1996).

Franke, Hofstede and Bond (1991) linked culture and economy, suggesting that values fostered in a nation's families, organizations, and political life are reflected in its economic statistics. In the said study, they utilized cultural measures (predominantly Models 3 and 4) to evaluate differences in economic performance at the level of nations (3rd level according to Trompanaars). Cultural indices were derived from Western and Chinese investigations of people's values explained more than 50% of the international differences in economic growth rates for the period 1965-80 and 1980-87, employing samples of 18 and 20 nations. Empirical analysis further shows the potential of cultural measures in explaining the growth phenomenon. According to their regression equation, 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).

Their 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 better appreciated.

In a more recent study of Granato, Ingelhart and Leblang or GIL (1996), they used the two dimension of culture in their multivariate analysis and a more dynamic endogenous growth model of Levine and Renelt (1992). They build on their thesis on culture from motivational literature which stresses the role of cultural emphasis on economic achievement. This school of thought primarily grew out of Weber's (1904-1905) Protestant Ethic thesis. In trying to measure culture, GIL came up with an achievement motivational index using the World Values Survey (WVS) which sums up the percentage in each country emphasizing autonomy and economic achievement such as "thrift", "saving money and things", and "determination" minus the percentage emphasizing conformity to traditional social norms such as "obedience" and "religious faith". A given society's emphasis on thrift and determination **over** obedience and religious faith has a strong bivariate linkage with its rate of economic growth over the past three decades ($r = .66; p = .001$).

While GIL's cultural construct does not reflect an authoritarianism dimension of culture, it reflects the balance between emphasis on two types of values. One set of values thrift and determination-support economic achievement; while the other-obedience and religious faith-tend to discourage it, emphasizing conformity to traditional authority and group norms. These two types of values are not necessarily incompatible: some societies rank relatively high on both, while others rank relatively low on both. But, the relative *priority* given to them is strongly related to its growth rate.

In light of this data structure, GIL interestingly posits the question "Do cultural factors lead to economic growth, or does economic growth lead to cultural change?" They then argue that the causal flow can work in both directions. For example, there is strong evidence that post-materialist values emerges when a society attains relatively high levels of economic security. In this case, economic change reshapes culture. On the other hand, once these values become widespread, they are linked with relatively low subsequent rates of economic growth. Here, culture seems to be shaping economics - a parallel to the Weberian thesis, except that what is happening here is, in a sense, the rise of the Protestant Ethic in reverse.

They admit though that demonstrating causal connections is always difficult. In connection with the achievement motivation index, the obvious interpretation would be that emphasis on thrift and hard work, rather than on obedience and respect is conducive to economic growth. The two most sensitive indicators of this dimension are thrift, on the one hand, and obedience on the other.

For some time, economists have been aware that a nation's rate of gross domestic investment is a major influence on its long term growth rate. Investment, in turn, depends on savings. Thus, a society that emphasizes thrift produces savings, which leads to investment, and later to economic growth. We provide evidence below that this is probably the case. This does not rule out the possibility that economic growth might be conducive to thrift but this linkage is less obvious.

Emphasis on obedience is negatively linked with economic growth, for a converse reason. In pre-industrial societies, obedience means conformity to traditional norms, which de-emphasize and even stigmatize economic accumulation. Obedience, respect for others, and religious faith all emphasize obligations to share with and support one's relatives, friends and neighbors. Such communal obligations are strongly felt in pre-industrial societies. But from the perspective of a bureaucratized rational-legal society, these norms are antithetical to capital accumulation and conducive to nepotism. Furthermore, conformity to authority inhibits innovation and entrepreneurship which leads to increased economic activity and growth.

The motivational component was also tapped by materialist/postmaterialist values, with postmaterialism having a negative relationship with economic growth. The achievement motivation variable is only modestly correlated with the materialist/postmaterialist dimension *(r=-.39; p=*.0581). Though both dimensions have significant linkages with economic growth, they affect it in different ways. The achievement motivation dimension seems to tap the transition from pre-industrial to industrial values systems, linked with the modernization process.

The materialist/postmaterialist dimension reflects the transition to postindustrial society, linked with a shift away from emphasis on economic growth, toward increasing emphasis on protection of the environment and on the quality of life more generally. Previous research demonstrates that:

(1)     a gradual shift from materialist toward postmaterialist goals has been taking place throughout advanced industrial society;

(2)     this shift is strongly related to the emergence of democracy (r = .71); but

(3)     it has a tendency to be negatively linked with economic growth (Abramson and Inglehart 1995).

This brings GIL to consider more dynamic growth models such as *endogenous growth* models. At the heart of the endogenous growth literature is an emphasis on the productivity of the population (Lucas 1988; Romer 1990). Unlike the "old" neoclassical models, endogenous growth models show that reproducible capital need not have decreasing returns to scale. Growth can be sustained in endogenous growth models. In particular, they assume constant returns to scale to a broad range of reproducible inputs, including human capital.

The two leading schools of thought, however, differ in their emphasis. Romer (1990), argues that Research and Development (R&D) spending is the key to new technological developments, which result in increasing social returns to social knowledge. Alternatively, Lucas (1988) argues that expansion of human capital in terms of both education and "learning by doing," also plays a pivotal role in economic growth.

Empirical endogenous growth models invariably are of the following form:

$$Y_i = \beta I_{i,o} + \Pi X_i + \varepsilon_i \qquad [1]$$

where $Y$, is output growth (per capita) for country i, $I_{i,o}$ is a set of economic variables measured at the beginning of the time period for country i. These variables include initial levels of wealth and investment in human capital, and are included because studies by Barro (1991), Helliwell (1994), Levine and Renelt (1992), and Mankiw, Romer, and Weil(1992) all find that they have a robust and positive partial correlation with economic growth. X, is a set of "other variables" including a constant, physical capital investment rates (as a percent of GDP usually), and whatever other variables the investigator is interested in exploring. Obviously, given the preceding discussion, variable X will include achievement motivation and post-materialism.

GIL used the model of Levine and Renelt (1992) because they found that in Levine and Renelt's model, the initial level of per capita income, the initial level of human capital investment, and the period share of investment to GDP have robust correlations with economic growth. They find that most other exogenous variables are fragile to alterations in the conditioning set of information. Thus, the conclusions of most empirical work rest on parameter estimates that fluctuate at a magnitude large enough to make scholars wary. Furthermore, Levine and Renelt's (1992) work is also informative in that they provide a straightforward way to evaluate the sensitivity of the cultural variables.

Following Equation [I], GIL then regressed a nation's rate of per capita economic growth i on its initial level of per capita income and human capital investment (education spending) as well as on its rate of physical capital accumulation. As expected, the results (shown as Table 3) are quite compatible with the expectations of endogenous growth theory. The results of Model 1 are summarized as follows:

(1) the significant negative coefficient on the initial level of per capita income indicates that there is evidence of "conditional convergence." That is, controlling for human and physical capital investment, poorer nations grow faster than richer nations;

(2) investment in human capital (education spending) has a positive and statistically significant effect on subsequent economic growth; and

(3) increasing the rate of physical capital accumulation increases a nation's rate of economic growth.

Overall this baseline economic model performs well: it accounts for 55% of the variation in cross-national growth rates and is consistent with prior cross-national tests of the conditional convergence hypothesis (e.g., Barro 1991; Mankiw, Romer, and Weil 1992). Model 1 also passes all diagnostic tests, indicating that the residuals are not serially correlated5 (LM test), are normally distributed (Jarque-Bera test), and homoskedastic (White test).

GIL continued by regressing a 2-variable culture dimensions of Achievement motivation and postmaterialism which further increased explanatory power of the model to 59% (referred to as Model 2 in Table 3). Then they combined both the economic and cultural variables and came up with Model 3. After which, they performed a sensitivity analysis eliminating the three insignificant variables before finally coming up with a more robust model, Model 4.

**Table 3:  GIL's OLS Estimation of Economic Growth Models**
*Using Dependent Variable: Mean Rate of Per Capital Economic Growth (1960-89)*

| Model Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| Constant | −0.70 | 7.29* | 3.16 | 2.40* |
|  | (1.08) | (1.49) | (1.94) | (0.77) |
| Per Capita GDP in 1960 | −0.63* |  | −0.42* | −0.43* |
|  | (0.14) |  | (0.14) | (0.10) |
| Primary Education in 1960 | 2.69* |  | 2.19* | 2.09* |
|  | (1.22) |  | (1.06) | (0.96) |
| Secondary Education in 1960 | 3.27* |  | 1.21 |  |
|  | (1.01) |  | (1.08) |  |
| Investment | 8.69* |  | 3.09 |  |
|  | (4.90) |  | (4.40) |  |
| Achievement Motivation |  | 2.07* | 1.44* | 1.88* |
|  |  | (0.37) | (0.48) | (0.35) |
| Postmaterialism |  | −2.24* | −1.07 |  |
|  |  | (0.77) | (1.03) |  |
| $R^2$ Adjusted | .55 | .59 | .69 | .70 |
| SEE | .86 | .83 | .72 | .71 |
| LM $(\chi^2(1))$ | .42 | .65 | .68 | .87 |
| Jarque-Bera $(\chi^2(2))$ | .05 | .30 | .18 | .57 |
| White $(\chi^2(1))$ | .28 | .24 | .37 | .18 |
| SC | .119 | −.117 | −.095 | −.352 |

*Notes:* Mean of dependent variable: 3.04; *N* is 25 for all models; Standard errors in parentheses.
*$t$ test: $p < .05$.

Granato, J., R. Inglehart and D. Leblang. (1996). The Effect of Cultural Values on Economic Development:Theory, Hypotheses, and Some Empirical Tests. *American Journal of Political Science*, 40( 3). 607-631.

In conclusion, GIL accepts that the idea that economic growth is partly shaped by cultural factors has encountered considerable resistance. One reason for this resistance, they claim is because cultural values have been widely perceived as diffuse and permanent features of given societies: if cultural values determine economic growth, then the outlook for economic development seems hopeless, because culture cannot be changed. Another reason for opposition is that standard economic arguments supposedly suffice for international differences in savings and

growth rates. For example, the standard life cycle model and not cultural arguments explains the difference in savings rates and growth rates between, say, Germany, Japan, and the United States.

However, they assert that when culture is approached as something to be measured on a quantitative empirical basis, the illusion of diffuseness and permanence disappears. We no longer deal with gross stereotypes, such as the idea that "Germans have always been militaristic," or "Hispanic culture is unfavorable to development." Thus, analysis now shifts to specific components of a given culture at a given time and place. Though these changes have been gradual, they demonstrate that central elements of culture can and do change.

Furthermore, GIL's study provides encouragement that empirical research can help identify specific components of culture that are relevant to economic development. One need not seek to change a society's entire way of life. The present findings suggest that one specific dimension-achievement motivation-is highly relevant to economic growth rates. In the short run, to change even a relatively narrow and well-defined cultural component such as this is not easy, but it should be far easier than attempting to change an entire culture. Furthermore, empirical research demonstrates that culture can and does change. Simply making parents, schools and other organizations aware of the potentially relevant factors, may be a step in the right direction.

Their study further finds that economic theory already is augmented with "social norms" and "cultural" factors (Cole, Malaith, and Postlewaite 1992; Elster 1989; Fershtman and Weiss 1993). Where would cultural values fit theoretically in growth models? The economics literature is replete with models of savings behavior that focus on the "life cycle" and, more specifically, the bequest motive. Cultural variables matter here. Since savings and investment behavior holds an important place in growth models, a determination of how cultural and motivational factors can be used to augment these existing economic models, it seems, is the next step to uncovering a better understanding of economic. In the end, however, these arguments can only be resolved on the empirical battlefield.

The results of GIL's study demonstrate that *both* cultural and economic arguments matter. Neither supplants the other. Future theoretical and empirical work is therefore better served by treating these "separate" explanations as complementary rather than mutually exclusive.

## ISSUES AND RESOLUTIONS

The foregoing review highlights some important issues relating to factoring culture into growth economics. It seems that there are three main issues, one relating to the concept of culture, another to measures of cultural factors and third, appropriate operational models.

### Concept of Culture

Hofstede defined culture as "the collective programming of the mind which distinguishes the members of one human group from another . . . culture, in this sense includes systems of values and values are among the building blocks of culture". As such, culture relies on structures of values of its members.

Kluckhohn (1951) defined value as "a conception, explicit or implicit . . . of the desirable which influences the selection from available modes, means and ends of action". Rokeach (1968) further refined this concept by stating that it refers to "abstract ideals, not tied to any specific object or situation, representing a person's belief about modes of conduct and ideal terminal modes". England (1967) views it as composing "a relatively permanent perceptual framework which shapes and influences the general nature of an individual's behavior". Williams (1968) further adds that the core phenomenon is that values serves as "criteria or standards of preference". Posner and Schmidt (1996) described it as lying "at the core of personality, influencing the choices individual makes . . . and the way individuals and organizations alike invest their time and energy". This implies the centrality of values in understanding and even predicting (or at least antecedents of) actual human behavior (Homer and Kahle, 1988; Connor and Becker, 1994).

Culling from the works of Aizen and Fishbein (1980) and Fazio (1986), Connor and Becker (2003) stressed that behavior is the most readily observable variable, with attitudes and values successively inferential. Furthermore, this relationship provided a major reason for the growth in scholars' interest in values: the pervasive and important influence of values on an individual's interpersonal, decision-making, ethical and performance behavior (England, 1967; England and Lee, 1974). Indeed, most researchers conclude that values are predictors or at least antecedents of actual behavior. Research has shown that the most important indicator of attitudes and behavior is value structure since values are the underlying structures that affect attitude and subsequently behavior (Ajzen, 1988; Kahle, 1985; Murphy and Anderson, 2003; Rokeach, 1979).

Rokeach further adds that values transcends attitudes toward objects and toward situations; it is a standard that guides and determines action, attitudes toward objects and situations, ideology, presentations of self to others, evaluations, judgments, justifications, comparisons of self with others, and attempts to influence others. Thus, extending it to how cultures are formed, cultures are both stable and universal concept.

Williams (1968) further attests to this enduring quality of value when he wrote, "It is the rare and limiting case if and when a person's behavior is guided over a considerable period of time by one and only one value . . . more often particular acts or sequences of acts are steered by multiple and changing clusters of values." After a value is learned it becomes integrated into an organized system of values wherein each value is ordered in priority with respect to other values. Such relative conception of values enables us to define change as a reordering of priorities and, at the same time, to see the total value system as relatively stable over time. It is stable enough to reflect the fact of sameness and continuity of a unique personality socialized within a given culture and society, and yet unstable enough to permit rearrangements of value priorities as a result of changes in culture, society and personal experiences.

While the universality of values, the essential building blocks of culture, allows researchers to compare similar value constructs across different countries, the enduring and stable aspects of values (and hence culture) makes it difficult to measure values or changes in values over a short time period to explain growth.

This leads to another issue regarding the appropriate period dimensions (i.e. annual, 5-year cycles, etc.) within which changes or variations in cultural measures could be correlated or regressed. This maybe addressed by using appropriate panel data analysis or other specialized econometric or statistic models.

## Measurement

Culture, by definition, is a very qualitative concept. While we could use different operational constructs to measure each dimension of culture, the issue remains how do we measure culture as a whole.

Most studies in measuring culture use either a single or a set of dimensional variables (i.e. Confucian-work dynamism) separately and in a single time period. Few studies, like Hofstede's and Bond's, measures the same variables or dimension in two or more time periods. Comparable data across countries and time is not available or does not even exist.

Furthermore, there seems to be no consensus among scholars which cultural construct is superior or is at least widely accepted. I believe, this is perhaps due to the very dynamic and multi-faceted nature of culture per se.

**Models and Methodologies**

Most common models or methodologies in factoring in culture to explain growth includes regressions and multivariate analysis. While results of studies such as Granato, Ingelhart and Leblang has shown empirically that culture is an important explanatory variable to growth, using only a dimension (those quantifiable) of culture does not really do justice to the holistic concept to of culture which we intuitively, at least, accept as a key determinant of growth.

The need for a more robust regression model which can integrate both qualitative and quantitative dimensions of culture as a pattern or holistic measure of culture, and bootstrap sampling methods would thus be primordial in coming up with a more widely acceptable empirical basis if not an irrefutable proof of what we accept intuitively as true.

**CONCLUSION**

The question "Can culture explain economic growth?" should not be addressed with either an affirmative nor negative response. Instead, the above literature points to the intuitive and empirical basis that indeed culture at the very least, in part explains economic growth. I believe, the more pertinent question for researchers now is "how to measure the effect of culture in explaining economic growth using more robust modeling techniques" and of course, continuous sampling and data collection across different countries.

Significance-wise, studies on culture and its effect on economic growth is gaining momentum. 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 joke but 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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