Cultural Values and Economic Growth in Asia: An Empirical Analysis

Muhammad Mahroof Khan
PhD scholars at School of Economics,
Huazhong University of Science and Technology,
Wuhan, 430074, P.R.China
Email: khanhust@yahoo.com, Tel:008613618665351

Jianhua ZHANG
Professor of Economics at School of Economics,
Huazhong University of Science and Technology,
Wuhan, 430074, P.R. China
E-mail: jhzhang@mail.hust.edu.cn , Phone: 0086-138-7103-1919

Muhammad Saim Hashmi
PhD scholars at School of Economics,
Huazhong University of Science and Technology,
Wuhan, 430074, P.R.China
Email: msaimhashmi@gmail.com , Tel:008615271818724

Mohsin Bashir
PhD scholars at School of Management,
Huazhong University of Science and Technology,
Wuhan, 430074, P.R.China

Email: uaf_mohsinpk@yahoo.com , Tel: 008615271818734

Abstract

This paper represents an attempt at measuring the impact of certain cultural factors on economic growths of selected Asian countries .For this purpose, we tested the hypothesis on whether the existence strong cultural traits have had a large impact on people's life and thus leads to higher growth. Cultural factors are incorporated into baseline endogenous economic growth model analyzed by using the relevant data from the World Values Survey (1995-2007). This model has incorporated both cultural and economic variables and is thus superior to those models which are based on only the economic variables. Ordinary least squares regression is used to test the impact of the culture and economic factors on economic growth. We find evidence those cultural attitudes toward trust; respect and self-determination have positive impact on economic growth. However, cultural attitudes concerning obedience are found to be negatively associated with economic growth of the countries chosen for the analysis.

Key Words: Culture, Trust, Respect, Self-Determination, Obedience, Endogenous Growth Model, Economic growth, Cultural traits, Human welfare

1. Introduction

Economic growth, as a traditional development policy objective, is concerned with raising the level of productivity and employment, in the prospect that this will increase human welfare and reduce the level of poverty. Recently, a shift has taken place in favor of human development, where emphasis is placed on increasing individuals' capabilities, winding choice, and expanding freedom. In fact, human development focuses on individual and pays relatively less attention to social aspects of life. It also be well known that individual human being do not live and work in isolation. By and large, they live in groups of different sorts extending from nuclear families to global institutions. Human beings, individually and collectively, interact in many ways. They co-operate and compete with one another, engage in conflict, build harmonious relationships, and borrow and adapt attributes of others. This collective aspect of life called culture with all its diversity and complexity constitutes a people's way of life. Now once again, the crucial question is: What does culture has to do with economic growth and human development in different countries?

Although the current common economic models, such as the ones based on the neoclassical growth models of Ramsey (1928), Solow (1956) and Romer (1986), have emphasized the role of certain core variables like technological innovations, investment in physical and human capital, growth of population and the productivity of these inputs in economic growth, they have, as argued by Sala-i-Martin (1997), controlled a variety of other factors that may influence the growth process directly. The controlled factors related, for example, to government policies and social institutions, which defined the economic environment where growth takes place.

Additionally, there are some forces that influence economic growth through their impact on the core variables of growth. For instance, 'self-control' that affects saving behavior and the fertility choice that consequently impact the investment in physical capital (Lewis, 1955) and the population growth rate (Malthus, 1798) respectively; or the desire for self-improvement, which influences the decision to invest in education, which, in turn, enables people to acquire skills and build human capital (Azariadis and Drazen, 1990). However, there are some other factors that have a relatively less clear link with the core variables of growth, but they can be arguably and convincingly regarded as important factors affecting growth. Among these are found the moral commitment of one's own, that induces work ethics and is one of the main determinants of work effort and thus of labor productivity, trust and the willingness to cooperate, that impact the subjective cost of cooperating with strangers and can have a profound effect on trading networks which help shape the size and the expansion of markets. Similarly, mutual respect and honesty, which are the foundations of business ethics and property rights, influence the costs of contracts and minimize distortions such as corruption, theft, coercive acts and deceptive information.

It may be mentioned that some of the above mentioned factors and forces - self-determination, honesty, cooperation, trust, mutual respect, self-improvement, freedom of thought - depend on individual attitudes, which, in turn, are based on a set of beliefs, values and norms that change very slowly. It may, therefore, be argued that one can devise a series of factors that are defined or influenced by the customary beliefs, values and norms of the society, which have important real economic roles, and include them in the typical neoclassical growth models whose empirical estimation can show their probable effects on economic growth. In 1970s, the structural approach, by the school of dependencia, gained importance in the literature by overshadowing the cultural approach to economic growth, which was proposed first by Weber (1904–1905) and again rediscovered by early development economists such as Rostow (1960), Hoselitz (1960, 1963) and Kuznets (1965).

But later on in the 1990s, the cultural approach of estimating economic growth salvages the attention in the literature. The Asian tiger which are known as the economic miracle of the Asian Tigers had not only brought the dependencia theory into question, but had also suggested that economic growth was more a matter of human behavior than of endowment of others economic variables. Significant contributions of the period, for example, by Putnam's (1993) and Fukuyama's (1995) bestsellers, have evidently identified that cultural values play a very vital role in explaining economic growth all around the world.

A state of the art compendium can be found in *Culture* Matters edited by Harrison and Huntington (2000), where some of the most famous social, economic and political scientists have discussed the importance of the culture approach in their respective fields.

Additional evidence available further suggests that cultural differences are an important part of the story of economic growth and development. From past five decades, the Confucian- influenced economies of East Asia outperformed the rest of word by a wide margin. This holds true in spite of the fact that they are formed by a wide variety of economic and political institutions. By comparison, most African economies have experienced low level of growth rates during the same period of time. Both societal-level and individual-level evidence suggest that it is not only a society's economic and political institutions but also its cultural factors values, norms and factors are important in determining the economic development of any country.

However important these grand cultural theories may be, there are reason to exercise great caution in their application in explaining the economic growth of any country or region. It is held that while they may explain particular episodes of economic growth, they fail to clearly explain the international development experience following the Second World War. For example, Sen (2004) is suspicious of the pliability of the original argument molded to explain the economic modernization of European Catholic countries followed by Japan, later on, by Asian Tigers and, more recently, by countries like Malaysia, Indonesia and China or India. Similarly, Weiss and Hobson (1995) remind us that the same respected Confucian ethics, to which culturalist theories attribute the success of East Asian Countries and have also been associated for centuries with stagnant economies.

Numerous studies empirically provide the credence to the hypothesis that informal convention and culture play a vital role in economic growth (Chamlee- Wright 1997; Grier 1997; Knack and Keefer 1979; Duffy and Stubben 1998; Barro and McCleary 2003; Guiso, et al. 2006; Licht *et al.*2007, Leeson 2007a, b, c; Williamson 2009. Using the data of across European countries, Tabellini 2009 find a strong causal relationship between culture traits and economic development. Further, Williamson and Kerekes (2008) have empirically verified that culture can lead to more protected private property rights. Additional still, Bandfield (1958); Grief (1994) and Putnam (1993) conclude that cultural beliefs must be considered for devising strategies for economic development. In fact, there is a huge body of literature that deals with culture and economic performance [e.g., Hofstede, 1980; Franke et al., 1991; Casson, 1993; Sowell, 1994; Gray, 1996].

In particular, the effects of culture on economic growth are thought to be related to the elements of culture that affect production and investment decisions, efficient allocation of resources, technological innovation and openness to trade.Altman (2001), for example, models the impact of culture on economic growth by arguing that work effort is maximized when the cultural environment stimulates cooperative work, which is positively correlated with labor productivity. Similarly, Faria and Leon-Ledesma (2004) assume that cultural values that emphasize hard work affects labor supply. This idea is modeled by assuming that work is like habit forming. They show that in the case of habit forming, the labour supply is higher than neoclassical case and can further lead to higher levels of consumption, capital stock and output.

For Cozzi (1998), culture affects technological innovations. He assumes that culture bears no utility by itself and its survival is linked to its positive effects on productivity. In his model, technological innovations are generated as an externality by the aggregate investment in the bubble culture.Likewise, Johnson and Lenartowicz (1998) present a framework for investigating the relationship between cultural factors - such as uncertainty avoidance, conservatism and hierarchy - economic freedom, and economic growth. They found strong and rebuts positive relationship both between economic freedom and economic growth and weak uncertainty avoidance, and high level of individual autonomy.

It may thus be realized that, as seen from what is mentioned above, culture is a vast and complex concept that involves many elements and is too general to be captured by a single trait, idea or object. Whenever one intends to examine the role of culture in economic growth, one has to look for a proxy for culture. Previous attempts to analyze the role of culture in economic growth either infer culture from economic outcome or estimation of culture factors from impressionistic historical evidence. Both factors may be important, but unless cultural factors are entered into a quantitative analysis using data from countries with different cultures. However, this possibility was not tested using the data from Asian countries independently.

Thus, this study attempts to examine the impact of cultural values on economic growth of Asian countries[1]. The main idea in this paper is to apply a methodology similar to that of Acemoglu, Johnson and Robinson (2001), Granato, Inglehart and Leblang (1996) but to explain variations specifically amongst the Asian countries rather than across countries.

The required data set is obtained from World Value Survey to compute trust, self determination, respect, and obedience. These WVS surveys capture individual beliefs and values which reflect local norms and customs. To augment the size of sample, survey data of the chosen countries is pooled in three waves for the time periods of 1995– 1999, 1999–2004, and 2005-2007.We utilized the survey and aggregates the data to create the culture variables for each period. The data on the economic variables included in the model applied are obtained Penn World Table and various issues of World Development Indicators. Our investigation is distinctive in the sense that we include estimation of four variables in our growth equation. We focus on culture attributes that are relevant for economic exchange to capture the cultural effect on economic growth. The theory and evidence presented in this paper is organized as follows: Section two discusses theories that deal with the impact of cultural factors on economic development. This literature emphasizes the importance of cultural traits in the economic growth and conceptual link between culture and economic growth. Section three introduces the data, variables and hypothesis. Section four discusses the endogenous growth model. Section five represents the empirical analysis and results. The final section concludes the study.

2. Theoretical Link between Cultural Traits and Economic Growth

To understand how culture can affect the economy growth, we must first clarify what is meant by culture. We follow Guiso, et al. (2006: 23), who describe culture as "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation." From this general definition, we focus on more specific indicators of culture that are identified as being relevant for the interaction and economic exchange. Therefore, one may think of this subset as the economic culture. Similarly, Porter (2000) defines economic culture as "the beliefs, attitudes, and values that bear on economic activities of individuals, organizations, and other institutions". This study has followed the Porter's expressions in order to narrow the notion of culture so that we can focus our investigation on how economic cultural values may influence economic outcome.

As mentioned above, in this study we constructed the cultural variables by identifying four different categories of culture traits that are constraint to behaviour related to social and economic interaction which further leads to economic development. The four components we use for analysis are, trust, respect, individual, self-determination and obedience, which serve as convention leading interaction between individuals, together with market production and entrepreneurship.

[1] The nations included in this study are: China, India, Pakistan, Japan, S. Korea, Turkey, Malaysia, Taiwan, Thailand, Bangladesh, and Indonesia.

Generally, trust, respect and individual self-determination are consider to stimulate social and economic interaction, where as limit economic interaction is associated with obedience and development by decreasing risk-taking, a attribute fundamental to entrepreneurship.2

Following Boettke (2009: 437), who asserts that culture is obligatory and bending limit on human interaction, the first factor of culture, trust is assumed to effects economic outcome through its impact on transaction cost. It is also stated that more trusting individuals are leads to lower transaction and monitoring cost and also more secure property rights (Williamson and Kerekes 2008).

These studies also argued that high level of trust is positively associated with economic growth and development (Fukuyama 1996 Knack and Keefer 1997; La Porta, et al. 1997; Woolcock 1998; Zak and Knack 2001; Francois, Zabojnik 2005) and Williamson 2009). Trust is particularly important when transactions involve some unknown counterpart like a buyer or seller of goods in another country, when the transaction takes place over a period of time rather than being completed on the spot, and when the legal protection is imperfect.

The counterpart of trust is being trustworthy. This idea relates to distinction between "generalized" vs "limited" morality stressed by Platteau (2000). In traditional societies, obedient and honest behaviour are often limited to circle of related people (family members, or of the clan). Opportunistic and selfish behaviour is regarded as morally acceptable in these societies. This type of behaviour contrasts with modern democratic societies, where conceptual rules of good behavior apply to many social institutions, and not just limited to a small network of only personal friends or relatives.

To measure the second culture variable self-determination, is a quantitative assessment of the quantity of control individuals considering that they have in determining their action. The individuals who have control on their choice and also be required to claim the result of their action, individuals will be more probable invest in future, to innovate, and work more attentively (Tabellini 2009; Coyne and Williamson 2009). Another way, if individuals believe that economic achievement or failure is based on their own efforts, they assumed to be work hard in order to earn a better payoff for their output and enhance their wellbeing. According to these arguments and line of reasoning, if the individuals have greater control on their choice, the greater will be the overall level of economic development in their country (Banfield, 1958).

The third cultural measure, respect, is important and significant in a sense that a greater level of respect causes a greater tolerance for other people in society. With high level of tolerance comes a more accepting attitude towards, international trade, as a result expanding the extent of market as well as raising the level of economic growth and development. The countries with low level of respect with limited morality may be the cause of status quo and making opportunistic behaviour ethically condoned when interacting with individual's those are outside of a community (Platteau 2000). As Coyne and Williamson (2009: 13) argued that, "in societies with lower levels of social capital, and hence lower levels of respect, the extent of the market will be limited to close kin and friendship networks". In line with these arguments, higher levels of respect may be likely to lead to increase the level of economic growth and development.

Finally, obedience, taken as the fourth cultural measure, may affect economic growth negatively. If children are taught to obey and individualism is not desirable, the children also have control and autonomy at lower levels, they may, therefore, unlikely to engage in risky behavior to take the necessary entrepreneurial spirit (Harper, 2003).

[2] Baumol (1990) suggests that an appropriate institutional environment, people spend their time on developing their talents in productive entrepreneurship, but in poor settings, individuals have different incentives and engage in unproductive entrepreneurship. Sobel (2008) has shown empirically the relationship between institutional quality and entrepreneurship

It is also argued that the societies exist where individualism is concerned are viewed as "potentially damaging" (Tabellini 2009). Because of the inverse effect of high level of obedience on individual autonomy and risk-taking, the existing studies argued that high level of obedience leads to negative impact on economic growth and development. In general, trust, self-determination and respect all encourage and support economic growth, while obedience reduces the prospects of economic prosperity.

3. Data, Variables and Hypothesis

This section discusses the methods used for estimation of culture variables in more detail and formulates hypothesis as regards the probable impact of culture on economic growth of the selected countries. Because of the immaterial nature of the variables involved, the analysis of cultural variables has always been difficult to perform. The lack of required data on beliefs, attitudes and values, collected through standard methodologies have often frustrated the attempts to construct quantities models linking cultural values to economic growth. As mentioned before, the data used for this study have been taken from the Word Value surveys to quantify trust, self determination, respect, and obedience. The data represents individual's beliefs and values which reflect local norms and customs. In order to augment the size of sample, data for the 11 countries surveyed are pooled all the three waves for the time periods of 1995– 1999, 1999–2004, and 2005–2007 and aggregated to create the culture index.

We identified one question from the survey that is most closely related with each trait, in order to capture there categories. Such as, trust is measured by the question: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" To measure self-determination, following question is used: "Some people feel they have completely free choice and control over what happens to them. Please use this scale (from 1 to 10) where 1 means none at all' and 10 means a great deal' to indicate how much freedom of choice and control in life you have over the way your life turns out." Respect is measured using the question: "Here is a list of qualities that children can be encouraged to learn at home. Which, if any, is considered to be especially important by you? Please choose up to five." The percentage of those who chose tolerance and respect for other people in the societies is used to estimate respect. Obedience is also measured by the same question, but in this case, the percentage of those surveyed who chose obedience "as important for children to learn at home" is used as the relevant variable in this study. For each country, individual responses from each of the four questions are aggregated.

This procedure extracts the general variations between all four traits; so, the culture sum is required as a net measure of culture that is conducive to economic interaction and exchange. The created culture index is normalized between zero and ten. A country, with a higher culture index score implying stronger informal norms that support economic outcome comparative to country having lower score. As our study is concerned with to identify the impact of overall culture values and economic growth, these aggregated variables serve as the main focus of our empirical analysis. With the probable effect of these four measures on economic growth captured in our culture variables, we formulate the following hypothesis to accomplish the desired task.

Hypothesis 1: Culture is positively associated with economic growth with high levels of trust, respect, self-determination and low levels of obedience.

Hypothesis 2: Culture is negatively associated with economic growth with low levels of trust, respect, and self-determination and high levels of obedience.

4. Endogenous Growth Model

Neoclassical Endogenous Growth Models owe much to the work of Solow (1956) and Swan (1956). The fundamental attributes of these models is their focus on savings, population growth, and shifts in technology. Production functions depend on shifts in these "exogenous" variables.

For example, one could draw the economic growth consequences resulting from a shift in the rate of saving, population growth rate, or technology. In these models, aggregate savings produce a level of capital accumulation such that gross investment exceeds depreciation, and thereby increases capital per worker. Consequently, at the limit, the marginal product of capital declines to the point where the savings (revenue) generated by the capital falls to a level just large enough to replace old equipment and provide machines for new workers. The steady state result is an unchanging standard of living.3

This latter result is clearly not supported by evidence from the real world. With time, economists searched for ways to expand the neoclassical model that would allow sustainable growth and increases in the standard of living. These models have been known as endogenous growth models. At the spirit of endogenous growth literature is the emphasis on the productivity of the population (Lucas 1988; Romer 1990). Contrasting the "old" neoclassical models, endogenous growth models explain that the reproducible capital need not have decreasing return to scale. In endogenous growth model, growth can be sustainable and in particularly, they make assumption of constant return to scale a wide range of reproducible inputs, including human capital. Both these leading schools of thought, however, differ in their emphasis as Romer (1990) argues that spending on research and development is the key to new technological developments, which, in turn, increases social return of social knowledge.

On the other hand, Lucas (1988) argues that development of human capital in term of both education and "learning by doing," also play an important role in economic growth. It may, therefore, be argued that a series of factors can be developed that influenced by the cultural beliefs, values and social norms, which have important role in economic growth, and include them in the typical neoclassical growth models whose empirical estimation can show their probable effects on economic growth[4].

We included these cultural factors with economic factors in our growth model and thus the empirical endogenous growth models applied in this study have appeared in the following form:

$$Y_{it} = \alpha + \beta_1 Ecov_{it} + \beta_2 Culv_{it} + \xi_{it} \qquad [1]$$

where, *Y*i is output growth (per capita) for country I, $Ecov_{it}$ are economic variables and estimated at the beginning of the time period for country *i.* The variables include in the model are: (i) investment in human capita and initial level of wealth, (ii) initial level of per capita income, (iii) the initial level of human capital investment, and the period share of investment to GDP. These economic variables are included in model under consideration because of the strong evidence of their positive correlation with economic growth available in the relevant literature (Barro, 1991; Helliwell, 1994; Levine and Renelt 1992; Mankiw, Romer, and Weil, 1992; Granato, Inglehart and Leblang, 1996). $Culv_{it}$, is a set of cultural variable of trust, respect, self-determination and obedience.

5. Empirical Analysis and Results

The empirical results of the analysis performed are discussed below. The correlations among the variables of trust, self- determination, respect and obedience regarded as the main traits of culture as based on the whole data set with all individual responses are presented in Table 1.

[3] This result was based on an assumption of constant returns to scale and fixed technology.

[4]As discussed by Tabellini (2009) and Coyne and Williamson (2009).

Since the correlation matrix depicted below has negative correlation coefficients for obedience and positive ones for *trust, self- determination* and *respect as* theoretically expected, we take them to be a net calculation of the aspects of culture that supports economic growth. We also computed *culture index,* defined as the sum of the three positive believes (*trust, self- determination, and respect)* minus the negative belief the negative belief (*obedience*) as explained before. A reflection of Table 1 displays reveals that, while there is a lot of sound in the individual responses, these summary measures do capture a common cultural pattern.Similarly, the correlation coefficients the national rate of economic growth for the period 1980–2007 have also been calculated and results are reported in Table 2. A short look at the table bears out the claims that obedience is negatively correlated to economic growth. On the other hand, almost all the values of the correlation coefficients associated with the other three cultural values are positively correlated to economic growth. As such, the results of the analysis performed for measuring the impact of different cultural variables on economic growth achieved by the selected countries over the above mentioned period are consistent with prior theoretical expectations.

The analysis is further extended by estimating relevant multiple regression functions. Following Levine and Renelt (1992) and Granato, *et al* (1996), we begin by estimating (OLS) a baseline endogenous growth model that includes variables identified as having robust partial correlations with economic growth. Using data for 11Asian countries, we first test the endogenous growth specification (Model 1 in Table 3). In accordance with Equation [1], the rate of per capita economic growth is regressed on its initial level of per capita income and investment on human capital (spending on education) as well as to on its rate of physical capital accumulation. The estimated results, as expected are quite compatible with prior expectations of endogenous growth theory. The results of Model 1 are summarized as follows: The initial level of per capita income is associated with a statistically significant negative coefficient, which show the existence of the evidence of "conditional convergence". Similarly, the coefficient of, investment in human capital is statistically significant and has a positive effect on subsequent economic growth, which is again in line with the conventional wisdom regarding the potential impact of education on growth as well as development.

Finally, it implies from the results that increasing the rate of physical capital accumulation increase a nation's rate of economic growth.

The results depicted in Table 3 of Model 2, which regressed the rate of per capita economic growth on a constant and the four cultural variables, are in conformity with the prior expectations. As expected, trust, respect and self determination are significant predictors of economic growth and are associated with the expected algebraic signs. As shown in earlier estimations, the variable of obedience is accompanied with a negative sign, which is indicative of its inverse impact on growth and these finding also support to hypothesis 2.

Results of Model 3 reported in Table 3, derived with the multiple combinations of variables; show that culture has directly affected positively and highly significant economic growth of the sample countries over the period in question. Thus, these results are supporting hypothesis **1** and also prior studies on culture and economic growth (Guiso, et al. 2006; Tabellini2009; Zak and Knack 2001; Francois, Zabojnik 2005 and Williamson 2009)

The results obtained from estimation of both model 2 and 3 are satisfactory even on the basis of additional statistical characteristics of the regression functions estimated for the present analysis. For instance, the explanatory power of the model has improved in Model 3 as reflected by the value the adjusted-R^2 which increased from 0.71(Model 2) to 0.73 (model 3). Even though the increase in the value of the adjusted R^2 from the quantitative point of view may appear to be small, it becomes statistically significant if the coefficient of partial R^2 is taken into consideration (last row of the Table 3). By *partial* R^2 we mean the reduction of total unexplained residual variance of the model, induced by the addition of new explanatory variables.

Shifting from the standard economic model (Model) to cultural model (Model 2) yields value of partial R^2 0.37. This imply that 37% of variance unexplained by the standard economic model has been captured by the introduction of the cultural index, namely by the trust, respect and self determination syndrome minus obedience syndrome.

On the other hand, if the cultural variables are modified in line with the theoretical framework proposed in this study, the value of partial R^2 increases significantly from 0.37 to 0.43. In other words, it may be seen that, if we concentrate our concentration on the increase of R2 as a result of the cultural variables alone, the role of trust, respect and self determination have positive impact on economic growth and become more statistically significant.

6. Conclusion

The importance of culture to economic growth and development de-emphasized by modern neoclassical economists and they tend to make the assumption that human being is rational utility-maximizing individuals, and across different human societies, such maximizing behavior is largely invariant. The widely accepted economic growth model pioneered by Robert Solow focuses only at inputs of labor and capital; more recent so-called 'endogenous' growth models emphasize the role of technology. From this perspective, culture factors comprise at most a kind of residual factors that one appeals to when explanation of other economic variables fail.

There are some forces that influence economic growth through its impact on the core variables of growth. For instance, 'self-control' that affects saving behavior and the fertility choice that consequently impact the investment in physical capital (Lewis, 1955) and the population growth rate (Malthus, 1798) respectively; or the desire for self-improvement which influences the decision to invest in education allowing people to acquire skills and build human capital (Azariadis and Drazen, 1990). However, there are other factors that have a less clear link with the core variables of growth, but can arguably and convincingly be regarded as important.

We find that economic theory already is augmented with "social norms" and "cultural" factors (Cole, Malaith, and Postlewaite 1992; Elster 1989; Fershtman and Weiss 1993) where cultural values would fit theoretically in growth models. 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.We tested these hypotheses within a growth regression framework by using cultural traits for a set of data of 11Asian countries. Our results find, first, a strong and robustly positive impact of cultural traits on growth.

We use ordinary least squares to test the economic and culture models of growth on respective countries. We find that economic and cultural factors impact on economic growth. First three cultural variables, trust, respect and self-determination appears to be favorable to economic growth. The variable trust resembles what former studies have called "social capital", (having trust on other people) and *respect* (appreciating the virtue of being respectful of others in one's own children). The third variable is the individual's confidence, and is captured by the variable *self-determination* (control on feeling of one's life) and, *obedience* (appreciating obedience in one's in own children) has negative impact on economic growth.

Insofar as its estimated value, obedience has most negative impact on economic growth. Emphasize on obedience is negatively associated with economic growth, for a converse reasons. Obedience means conformity to traditional norms, which downplay and even stigmatize economic growth in preindustrial societies. The cultural traits: obedience, respect for others, and religious faith all accentuate obligations to share with support one's kin's and neighbors. The persisting belief that resources are limited and not expandable even in times of technological progress is fatal to economic growth because there is no choice to social factors other than practicing intense behaviors. If these arguments concerning tradition societies are true, it is essential to explain, by rational procedure as we had made one attempt in the present paper. The heartening findings of this study not casual, but rather the fruits of a conceptual framework that brings to the forefront role of individual autonomy as engine of economic and culture evolution. Our findings also demonstrate that the cultural factors are strongly correlated not only with the economic growth of European regions, but also with economic growth in a broad sample of Asian countries.

References

Acemoglu, D., S. Johnson and J. A. Robinson (2000), "The Rise of Europe: Atlantic Trade, Institutional Change and Economic Growth", NBER Working Paper no. 9378.

Altman, Morris (2001), Culture, human agency, and economic theory: Culture as a determinant of material welfare, Journal of Socio-Economics 30, 379-391.

Azariadis, Costas and Allan Drazen (1990), Threshold externalities in economic development, Quarterly Journal of Economics 105, 501-526.

Banfield, E.C. (1958). The Moral Basis of a Backward Society. New York: The Free Press.

Barro, Robert J. and R. McCleary. (2003), Religion and Economic Growth across Countries, American Sociological Review, 68(5): 760–781.

Barro, Robert. (1991), "Economic Growth in a Cross Section of Countries." Quarterly Journal of Economics 106:407-44.

Boettke, P.J. (2009), Review of Eric L. Jones Cultures Merging: A Historical and Economic Critique of Culture, Economic Development and Cultural Change, 57(2): 434–437.

Baumol, W. J., 1990,Entrepreneurship: Productive, Unproductive, and Destructive,*Journal of Political Economy*, Vol. 98, No. 5, Part 1, pp. 893-921.

Casson, Mark C. (1993), Cultural determinants of economic performance, Journal of Comparative Economics 17, 418-442.

Chamlee-Wright, E. (1997), The Cultural Foundations of Economic Development: Urban Female Entrepreneurship in Ghana. New York: Routledge.

Cole, Harold, George Malaith, and Andrew Postlewaite. (1992), "Social Norms, Savings Behavior, and Growth." Journal of Political Economy 100:1092-125.

Coyne, C.J. and C. Williamson. (2009), "Trade Openness and Culture," Mimeo.

Cozzi, Guido (1998) Culture as a bubble, Journal of Political Economy 106, 376-394.

Duffy, D. and J. Stubben. (1998), An Assessment of Native American Economic Development: Putting Culture and Sovereignty Back in the Models, Studies in Comparative International Development 32(4):52-78.

Elster, Jon. (1989),Social Norms and Economic Theory.Journal of Economic Perspectives:99-117.

Joao Ricardo Faria & Miguel A. Leon-Ledesma, 2004. Habit formation, work ethics and technological progress, Manchester School, University of Manchester, vol. 72(3), pages 403-413, 06

Fershtman, Chaim, and Yoram Weiss. (1993), Social Status, Culture, and Economic Performance. The Economic Journal, 103:946-59.

Francois, P. and J. Zabojnik. (2005), Trust, Social Capital and Economic Development, Journal of European Economic Association, 3(1) 51-94

Franke, R. H., Hofstede, G. & Bond, M. H. (1991), Cultural Roots of Economic Performance: a Research Note, Strategic Management Journal, Vol. 12, 165.

Fukuyama, F. (1996), Trust: The Social Virtues and the Creation of Prosperity. New York: Simon and Schuster.

Fukuyama, F., (1995), Trust. The Social Virtues and the Creation of Prosperity. Free Press, New York, NY.

Granato, J., Inglehart, R. and Leblang, D., (1996), The effect of cultural values on economic development: theory, hypotheses, and some empirical tests. American Journal of Political Science 40 (3), 607–631.

Gray, H. Peter (1996), Culture and economic performance: Policy as an intervening variable, Journal of Comparative Economics 23, 278-291.

Greif, Avner. (1994), "Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies." Journal of Political Economy.102:5, pp. 912-50.

Grier, R. (1997). The Effect of Religion on Economic Development: A Cross-National Study of Sixty-Three Former Colonies, Kyklos, 50(1): 47–62.

Guiso, L., P. Sapienza and L. Zingales. (2006), Does Culture Affect Economic Outcomes? Journal of Economic Perspectives, 20(2): 23–48.

Harper, D.A. (2003). Foundations of Entrepreneurship and Economic Development. New York: Routledge.

Harrison, L.E., Huntington, S.P. (Eds.), (2000), Culture Matters. How Values Shape Human Progress. Basic Books, New York, NY.

Helliwell, J. F. (1994), "Empirical Linkages Between Democracy and Growth." British Journal of Political Science 24:225-48.

Hofstede, G. (1980), Culture's consequences: international differences in work related values, Sage Publications, Beverly Hills, California.

Hoselitz, B.F., (1960), Theories of stages of economic growth. In: Hoselitz, B.F., et al. (Eds.), Theories of Economic Growth. Free Press, Glencoe, IL.

Hoselitz, B.F., (1963), Main concepts in the analysis of the social implications of technical change. In: Hoselitz, B.F., Moore, W.E. (Eds.), Industrialization and Society. UNESCO, Mouton.

Johnson, James P. and Tomasz Lenartowicz (1998) "Culture, freedom and economic growth: Do cultural values explain economic growth?" Journal of World Business 33 (4), 332-356.

Knack, S. and P. Keefer. (1997). Does Social Capital Have an Economic Payoff? The Quarterly Journal of Economics, 112(4): 1251–1288.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. (1997), Trust in Large Organizations, American Economic Review, 87(2): 333–338.

Leeson, P.T. (2007a), Better Off Stateless: Somalia Before and After Government Collapse, Journal of Comparative Economics, 35(4): 689–710.

Leeson, P.T. (2007b), Trading with Bandits, Journal of Law and Economics, 50(2):303–321.

Leeson, P.T. (2007c), Efficient Anarchy, Public Choice, 130(1-2): 41–53.

Levine, Ross, and David Renelt. (1992), "A Sensitivity Analysis of Cross-Country Growth Regressions." American Economic Review 82:942-63.

Lewis, Arthur (1955), The Theory of Economic Growth, London: Allen & Unwin.

Licht, A.N., G. Chanan, and S.H. Schwartz. (2007). Culture Rules: The Foundations of the Rule of Law and Other Norms of Governance, *Journal of Comparative Economics*, 35: 659–688.

Lucas, Robert. (1988), "On the Mechanics of Economic Development." Journal of Monetary conomics, 22:3-42.

Malthus, Thomas R. (1798), First Essay on Population, Reprints of Economic Classics, New York: Augustus Kelley, 1965.

Mankiw, N. Gregory, David Romer, and David Weil. (1992), "A Contribution to the Empirics of Economic Growth." Quarterly Journal of Economics 152:407-37.

Platteau, J. (2000), Institutions, Social Norms, and Economic Development. Harwood: Academic Publishers & Routledge.

Porter, Michael E. (2000), Attitudes, Values, and Beliefs, and the Microeconomics of Prosperity, in ed. Lawrence Harrison and Samuel Huntington Culture Matters :How Values Shape Human Progress. New York: Basic Books, 202–218.

Putnam, R.D. (1993), Making Democracy Work: Civic Traditions in Modern Italy. Princeton, NJ: Princeton University Press.

Ramsey, Frank P. (1928), A mathematical theory of saving, Economic Journal 38, 543-559.

Romer, Paul M. (1986), Increasing returns and long-run growth, Journal of Political Economy 94,1002-1037.

Romer, Paul. (1990), "Endogenous Technological Change." Journal of Political Economy 98:71-102.

Rostow, W.W., (1960), The Process of Economic Growth, 2nd ed. W.W. Norton & Co., NewYork, NY.

Sala-i-Martin, X. (1997), I Just Ran Two Million Regressions, American Economic Review, 7(2): 178–183.

Sen (2004), People in economics, Finance & Development,www.imf.org/external/pubs/ft/fandd

Solow, Robert M. (1956), A contribution to the theory of economic growth, Quarterly Journal of Economics 70, 65-94.

Sowell, T. 1994. Race and culture: a world view. New York: Basic Books.

Swan, Trevor. 1956. "Economic Growth and Capital Accumulation." Economic Record 22: 334-61.

Tabellini, G. (2008), Presidential Address: Institutions and Culture, Journal of the European Economic Association, 6 (2-3): 255–294.

Tabellini, G. (2009), Culture and Institutions: Economic Development in the Regions of Europe, Journal of the European Economic Association, forthcoming.

Weber, M., (1904), The Protestant Ethic and the Spirit of Capitalism, 1976 ed. Allen & Unwin, London, UK.

Weiss, L. and John M. H. (1995). States and Economic Development: A Comparative Historical Analysis. Cambridge:Polity.

Williamson, C. R. (2009), Informal Institutions Rule: Institutional Arrangements and Economic Performance, Public Choice, 139(3): 371–387.

Williamson, O.E. (2000). The New Institutional Economics: Taking Stock, Looking Ahead, Journal of Economic Literature, 38: 595–613.

Williamson, C.R. and Kerekes C.B. (2008). Securing Private Property: Formal versus Informal Institutions, Mimeo.

Framework, Theory and Society, 27(2): 151–208.

Zak, P.J., and S. Knack. (2001). Trust and Growth, The Economic Journal, 111: 295–321.

Table 1: Correlation among cultural variables

	Trust	Respect	Self - determination	obedience
Trust	1			
Respect	0.58	1		
Self-determination	0.35	0.23	1	
Obedience	-0.54	-0.27	-0.17	1

Source: Author's calculations

Table 2: Correlation coefficients between cultural values and economic growth (1980–2007) in 11 countries

Values to economic culture	Correlation coefficients between cultural value and economic growth
Trust	0.65
Respect	0.37
Self determination	0.43
Obedience	-0.57

Source: Author's calculation

Table 3: Cultural Model of Economic Growth (Dependent variable: Rate of per capita income)

Explanatory Variables	**Model-1**	**Model-2**	**Model-3**
Constant	-0.71	2.39	0.83
Economic Variables			
Per capita GDP in 1980	-0.67*	-0.45*	-0.53*
Primary education in 1980	2.29*	2.12*	2.33*
Secondary education in 1980	3.25*	-	-
Investment/GDP (1980–2007)	8.71*	_	_
Cultural variables			
Trust		0.65*	
Respect		0.37*	
Self determination		0.43*	
Obedience		-0.57	
Cultural Index	-	-	2.08*
$R2$	0.56	0.71	0.73
Partial R^2		0.37	0.43

*Parameters are statistically significant at 5%.