Notes on Middle Income Trap and Cultural Factors

K. Ali Akkemik

1. Introduction

As Beaugrand (2004: 10) pointed out, "notwithstanding the role of special factors—such as frequent conflicts, persistently high population growth, declining aid flows, and the correction of overvalued exchange rates (notably in the late 1980s and early 1990s)—the fact that poor countries have grown poorer while rich countries grew richer is well established." The divergence between rich and poor countries during the five-decade period drew attention of economists to the sources of failure and success in economic development. The research on the sources of economic growth has taken a different route after the introduction of endogenous growth theory. This theory assumes that factors of production shaped by knowledge, i.e., research and development, technology, and human capital, are more deterministic in economic growth. Countries well-endowed with such production factors are more likely to overcome what is called the "middle-income trap" (MIT), i.e., getting stuck in the middle-income level of per capita GDP for a long time.

Since the 1970s few developing countries were able to pass the threshold level of income and become a developed country. Those countries which make it to the advanced country status after passing this middle-income level are generally argued to have superior education and technological capability compared to developing countries of their age. These countries typically have a high percentage of their population with tertiary education and the share of high-technology manufactures occupies a fairly large portion of their total exports. According to many economists, acquisition and generation of

knowledge, in this regard, are important priorities for developing countries.

Institutional and cultural factors are not well-studied on the middle-income trap literature despite their importance in economic development. Education and human capital accumulation, as sources of technological development, are shaped by institutional and cultural values. Therefore, an examination of the MIT should take into account institutional factors and cultural differences. It is well reported that East Asian countries, in particular, exhibit institutional and cultural values which promote social motivation during the catch-up and late development. In this study we examine empirically to what extent the MIT and the overcoming of this trap can be explained by institutional and cultural factors, in particular by differences in the general level of trust, worldviews, religions, and other cultural traits, using a large panel of countries. We control common economic factors and specifically examine the role of institutions and cultural differences.

The remainder of the paper is organized as follows. The middle-income trap is explained in the second section. The literature on the role of culture in economic development is reviewed briefly in section 3. The empirical analysis and an explanation of the variables with data sources are provided in the fourth section. Finally, the fifth section wraps up and concludes this paper.

2. Middle-Income Trap

Middle-income Trap (MIT) is a vague concept and it is difficult to define it using objective measures. Different organizations may place a specific country in the “middle-income country” category or “high-income country” category. It is often difficult to draw a line between these two categories. MIT was used first by Gill and Kharas (2007) in a report titled “An East Asian Renaissance.” Gill and Kharas (2007: 5) based their classification of countries on per capita income national levels and placed the middle-income countries on a status

between poverty and prosperity as follows: “Middle-income countries are squeezed between the low-wage poor-country competitors that dominate in mature industries and the rich-country innovators that dominate in industries undergoing rapid technological change.”

This observation is based on the ranks of countries according to per capita national income levels. It is also implied that MIT can be overcome by innovativeness and technological progress. Ohno (2009: 27-28) views MIT from the perspective of stages of economic development and industrialization and mentions five stages of catching-up industrialization: arrival of manufacturing FDI (stage 0), agglomeration (stage 1), technology absorption (stage 2), creativity (stage 3), and full capability in innovation (stage 4). For ASEAN countries, Ohno draws the threshold between second and third stages. He places Taiwan and Korea in this stage which is characterized by internalizing skills and technologies and enhancing the capacity to produce hi-tech products. On the other those trapped in the middle-income level (such as Thailand and Malaysia) are characterized by a failure to pass from stage 2, which is characterized by internalizing parts and components and specializing only in support industries mainly serving foreign companies, to stage 3.

Felipe et al. (2012: 21) argues that it is necessary to adopt a simple procedure to define MIT due to the lack of a definition and theoretical background. For this purpose, they determine the minimum number of years that a country is allowed to stay in the middle-income category and if the country stays longer than this allowed period, it is said to be in the MIT. However, this method seems to suffer from subjectivity in determining the allowable time period. They listed countries which moved from low-income category to high-income category during the period 1950-2010 as follows: China, Malaysia, Korea, Taiwan, Thailand, Bulgaria, Costa Rica, and Oman. However, the durations of transition exhibit large diversity ranging from 17-19 years in Taiwan to more

than 50 years in Turkey, Bulgaria, and Costa Rica.

Which countries are trapped in MIT? We prefer to look at the last four decades, namely the period 1980-2020. We trace per capita GDP in US dollars from the World Bank World Development Indicators and determine which countries have stayed in the middle-income level, which countries have escaped and which ones are trapped in the middle-income level. Therefore, we follow the tradition and define MIT countries using per capita income categories. For this purpose, we employ the World Bank's Atlas method. This classification is widely used in economic studies. We classify economies according to their GDP per capita as in the World Bank World Development Indicators. Note that the threshold levels vary across years. For instance, for the year 2016, they were as follows: 1005 dollars or less for low income, 1006-3955 dollars for lower middle-income, 3956-12475 dollars for upper-middle-income, and 12576 dollars and above for high income. When we look at countries in the middle-income category over the period 1980-2020, their per capita GDP oscillates between 4000-10000 dollars. Among them, some including Brazil, Chile, Cuba, Hungary, Malaysia, and Turkey, have succeeded to rise from lower to upper-middle-income category.

Since the 1980s endogenous growth models such as Romer (1986, 1990), Lucas (1988), Rebelo (1991), Aghion and Howitt (1992), Grossman and Helpman (1991), and Jones (1996) emphasized the importance of knowledge in economic growth process. It is discussed widely that expenditures on education and health as components of human capital improved labor productivity and created positive externalities for further economic growth. Hence, the general understanding that those countries that succeeded in overcoming the MIT exhibit the validity of this growth theory as well. On the other hand, it is also accepted that the number of countries that pass the threshold level to overcome the middle income level are far smaller in number compared to the

MIT countries.

To start off, we look at the per capita income levels (in constant 2000 dollars) of middle-income countries as of 2011 for the period 1980-2010. We observe that over the three-decade period, 31 countries out of 57 we have examined in this study stayed in middle-income category and 14 were in MIT. Only a few countries (Cyprus, New Zealand, and Spain) were able to move up from middle-income to high-income level. In addition, based on per capita GDP levels obtained from the World Bank's World Development Indicators, although not included in our sample, some other countries, such as, Greece, Ireland, Puerto Rico, and Singapore, can also be included in this group. Remarkably, Singapore was able to reach 15,000 dollars in 1990 and 20,000 dollars in 1995. Ireland followed Singapore's pattern as well.

World Bank (2013) pointed out the performances of late-developing Asian Tigers that have successfully overcome the MIT. This report demonstrates that most of the economies in the East Asian and Latin American region reached the status of middle-income during the 1960s and the 1970s and stayed there ever since (World Bank 2013: 12). Only 13 economies, out of the 101 middle-income countries examined in the report, reached the high-income status in 2008.

Of the countries that have been argued to have successfully overcome the MIT, the Asian Tigers, namely, Hong Kong, Korea, and Singapore attract much of the attention in the literature. Korea's growth performance is remarkable compared to others. Its per capita GDP was below 5000 dollars in the beginning of the 1980s, but reached 16000 dollars in 2010. The country successfully established itself as a major manufacturer and exporter of high-technology products. Most studies praise successful industrial development policies of the East Asian Tigers for their unprecedented growth performances (e.g., Amsden 1989; Wade 1990; Vogel 1991; Chang 2012). Despite the destructive

Asian financial crisis during 1997-1998, these countries were soon back on their high-growth track and Korea even emerged as a major technology creator especially in digital telecommunications and automotive sectors, both of which require research-and-development-intensive sectors.

3. Related Literature: Culture and Economic Development

There is a growing body of research which examines the impact of culture on economy but Few economists make a definition of culture. Often, culture is used as a catch-all word to explain non-economic causes of economic phenomena. Guiso et al. (2006) define culture as "customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation." Then, culture changes slowly. Bisin and Verdier (2001) show that parents teach their children what they learned from the previous generation and do not fully reassess the optimality of those beliefs for the current and next generation.

In an extensive review by Guiso et al. (2006), culture is shown to be important in analyzing cross-country variation in economic outcomes such as savings, investments, and bequests. They show that cultural values of societies have implications for economic growth and development. Alesina and Angeletos (2005) examined differences in social beliefs about the fairness of market outcomes in America, where people believe that effort determines success, and in Europe, where many people believe that luck determines success. They argue that since taxes are lower, people are more hard-working, investment in intangible capital is relatively higher, and the market outcomes in America are superior to Europe.

As Stulz and Williamson (2003) emphasize, it can be argued that, in general, culture affects economic development in three important ways: (i) culture determines the values which may have affect main economic decisions, e.g.,

charging an interest rate is regarded a sin in one religion but not in another, (ii) culture affects various forms of institutions, e.g., the legal system, and (iii) culture affects resource allocation, e.g., spending on churches may lead to an allocation of resources away from productive investments. In what follows, based on previous literature, we briefly review the relationship between cultural values and economic development through three important channels: institutions, religion, and social capital.

3.1. Culture and Institutions

Since Douglass North, economists have renewed their interest on institutions and their role on economic development. Institutions are generally viewed as limitations imposed on transactions and social interactions, both formal and informal. Organizational structures that carry the effect of such limitations on economic development have been the main focus of research for economists in general. For instance, Guiso et al. (2006) point out that certain organizations such as the state, church, and academia, promote certain types of cultures and they have a vested interest in the continuation of these cultures and the beliefs attached because of inherent economic rents. In this way, some cultural values may affect economic development adversely. A case in point is the strong control of people's lives and intolerance towards scientific achievements by the church during the Medieval Ages in Europe which is generally believed to account for the stagnation of output although certain groups were able to break out of the system and form a relatively progressive order.

If the analysis is confined to single country level, institutional change is an important channel for culture's impact on economic development. Based on institutional change, Roland (2004) categorized institutions into "slow-moving" and "fast-moving" types. He argued that the former type of institutions, such as cultural values and technology, changes slowly and continuously whereas

the latter type of institutions, such as political institutions, change rapidly and irregularly. He places legal arrangements in between. Roland (2004) asserts that culture as a slow-moving institution influences fast-moving institutions in the Webberian sense and contrary to the Marxian view. He argues that transplantation of institutions is likely to be unsuccessful as exemplified by the failure to transplant European institutions in colonized regions, which is due to complex interactions between slow-moving and fast-moving institutions. He also argues that knowledge accumulation was more remarkable in areas that promote the interaction of different cultures and these areas had a higher potential of change for fast-moving institutions.

At the cross-country level, differences in cultural values may be more important than institutional change. Greif (1994) refers to differences in cultural beliefs and institutional structures to explain the differences between developed and developing societies. He takes the collectivist Maghribi and individualist Genoese societies during the medieval period as a case study and shows that differences in the societal organizations of these two different societies are reflected in agency relations. Greif (1994) emphasizes that in the modern world developing countries are largely of a "collectivist" nature whereas the developed countries are "individualist." Contract enforcement is ensured by informal economic and social institutions in the former and by formal institutions and legal systems in the latter.

Finally, it is important to note that formal institutions receive much of the emphasis in the literature; however, informal institutions may be as important as formal ones for economic development. Licht et al. (2007) examined the informal institutions of governance, i.e., the rule of law, curbing corruption, and democratic accountability, and argue that prevalence of these norms depends on the prevailing cultural value orientations in a society. They conclude that while norms of governance are determined by cultural values, causality

may work in the other direction as well. Informal institutions are sometimes viewed as components of social capital on which we elaborate below. Tabellini (2010) examined the role of cultural traits to explain why institutions function differently across different environments. He argues that trust and respect for others promote social interactions such as anonymous market exchange and the provision of public goods, which reduces transaction costs and increase the well-being of individuals. Confidence in the link between individual effort and economic success encourages entrepreneurship.

3.2. Religion and Economic Development

Religious values and religiosity are recently among the most debated cultural values. The impact of religion on economic development and various economic phenomena such as economic growth, savings, and bequests have been examined in various studies (Ianaccone 1998; Barro and McCleary 2003; Guiso et al. 2003). Studies in this line have generally concluded that there is a correlation between certain religious beliefs of a society and economic development because these beliefs promote institutions that facilitate economic growth and development. Touching upon these two arguments, Guiso et al. (2003) argue that (i) either there is something inimical to certain religions so that they promote economic development, or (ii) certain religions lead a society to bad equilibrium. They argue that if the former argument holds, poor countries will remain poor because changing a country's religion is beyond power, and if the second argument holds, some reforms to escape the bad equilibrium will be the cure. Similarly, some other studies argue that certain religions lead to underdevelopment of some societies. In this regard, Kuran (1997, 2004, 2011) argued that the sources of underdevelopment in Muslim societies can be found in Islamic institutions. In addition, Guiso et al. (2003) found statistical evidence that Christian religions are conducive to economic

growth whereas Muslims are more anti-market. An interesting finding about religious people is that they tend to think that laziness is the cause of poverty, which may have policy implications for altruism and social security.

Barro and McCleary (2003) is perhaps the most extensive econometric study examining the relationship between religiosity, organization and regulation of religious institutions across countries, and economic development. The results of their analysis point to a decline in religiosity with economic development. They also found that an increase in church attendance reduces economic growth, but when church attendance is controlled for, increases in religious beliefs, notably in hell and after-life, increases economic growth. The authors argue that this positive association between religious beliefs and economic growth arises from productivity-increasing effects of such beliefs.

In another econometric study, Benjamin et al. (2010) examined whether religious identity and religiosity affect certain cultural traits such as contributions to public goods, trust, financial risk-taking, thrift and capital accumulation, generosity, and work ethics. They showed that (i) Protestants are more likely to donate compared to Catholics, (ii) Protestantism does not affect trust, (iii) Protestants are more risk-averse compared to Catholics, and (iv) there is an evidence work ethic effect for Judaism but not for Christians. In addition, Guiso et al. (2006) found that Catholics are more likely than Protestants to teach thrift to their children, and culture affects political preferences of individuals about what governments should do.

3.3. Culture and Social Capital

As Guiso et al. (2006) put forward, individuals cannot change culture to a large extent but they have higher control over what is called “social capital.” Social capital is another channel culture affects economic development. By “social capital” economists generally mean the advantages of social connections

and interactions of individuals and such connections become important when legal institutions fail to facilitate transactions (Glaeser et al. 2002). Smith (2007) defines social capital as "attitudes and expectations held by agents towards one another."

Trust is emphasized as the most important component of social capital because it reduces transaction costs. Putnam (1993) and La Porta et al. (1997) previously showed that Catholic religion hampers trust, and hence lowers GDP growth. Putnam (1993) found that trust is higher in Protestant societies. Guiso et al. (2006) found statistical evidence that trust affects economic decisions and trusting others increases the probability of being self-employed. In addition, Zak and Knack (2001) argued that backwardness yields more advantages for a high-trust poor economy than for a low-trust economy. They showed statistical evidence that formal institutions promote economic growth by enhancing trust.

Glaeser et al. (2000) offer a micro approach using a microeconomic model and experiments and elaborate on the relationship between social capital and economic and political phenomena. They found that joint group membership is important in generating social capital. One way such group membership is created is through religion. Smith (2007) examined how and to what extent religion influences the creation of social capital. He argued that social capital facilitates reciprocity without money or contracts. He concluded that one reason for church attendance is that individuals seek trust, loyalty, and altruism which in turn enhance reciprocity and cooperation, and Christian religions do indeed promote bonding social capital among members.

4. Empirical Analysis

We are interested in the correlations between the level of per capita GDP and cultural factors for different groups of countries. We focus on middle-income countries in particular.

Cultural variables are obtained from the World Values Survey (WVS) and the number of countries in our sample is limited to 89. As explained above, we classify these countries as middle-income, upper-middle-income, and trapped in MIT. WVS has been conducted in seven waves since 1980. We prefer to use data from the fifth (2005-2009), sixth (2010-2014), and seventh (2017-2022) waves due to convenience and coverage of countries (89 in total). For countries which appear in more than one waves, we took the most recent wave. The countries included in the surveys do not often overlap across different waves.

4.1. Variables

Below, we explain the variables.

Trust: We measure trust using the following specific question in the World Values Survey.

Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

1. Most people can be trusted

2. Need to be very careful.

We take the answer "1" as the relevant measure of trust and then take the percentage of answers "1" given to this question for individual countries in the sample.

Finally, culture-related variables are as follows.

Cultural Values: World Values Survey includes some questions that measure the cultural values. In this study we choose to take a representative set of such values measurable from the World Values Survey. For this purpose, we use the following five specific questions. In all questions, the answers are measured on a scale from 1 to 10 with the following explanation. We take the country averages for all culture-related variables and create variables a explained below.

How would you place your views on the following scale? 1 means you agree completely with the statement on the left; 10 means you agree with the statement on the right; and if your views fall somewhere in between, you can choose any number in between.

The first question below measures the importance of private entrepreneurship.

Private ownership of business and industry should be increased.							*Government ownership of business and industry should be increased.*		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*

We create a variable which we name PUBLIC OWNERSHIP using this question. Higher score implies less importance given to private entrepreneurship and government is called in for the provision of goods and services. Therefore, a high score for this variable may be taken as a rough indicator of the degree of the public's desire for statism.

The second question below measures the individuals' perception of the role of the government and private individuals in the society.

The government should take more responsibility to ensure that everyone is provided for.							*People should take more responsibility to provide for themselves.*		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*

We create a variable, GOVERNMENT, using this question. Higher score implies more responsibility by individuals. In some societies people attribute a larger role for the government to interfere in social life.

The third question below measures the individuals' perception of the importance of competition in the economy.

Competition is good. It stimulates people to work hard and develop new ideas.　　*Competition is harmful. It brings out the worst in people.*

1　2　3　4　5　6　7　8　9　10

We create a variable which we name NON-COMPETITION using this question. Higher score means competition is not valued or appreciated highly. It may be expected that some societies, such as in Western Europe where people can be safely described as individualistic, competition is appreciated more by the society. On the other hand, it can be asserted that in relatively more group-oriented or collectivist societies, cooperation rather than competition are desired. It is reasonable to expect that such values should also affect governments' economic policies regarding industrial organization.

The fourth question measures the respondents' evaluation of effort put into work and hence cultural attitude towards diligence.

In the long run, hard work usually brings a better life.　　*Hard work doesn't generally bring success – it's more a matter of luck and connections.*

1　2　3　4　5　6　7　8　9　10

We create a variable and name it LUCK-NOT-HARDWORK using this question. Higher score means that people are more inclined to believe that hard work is not necessary for success. There may be various reasons for this. The inefficiency of capital markets in rewarding entrepreneurship, corruption in various institutions, and luck of trust to such institutions, among others, may be plausible reasons.

The fifth question measures self-evaluations of the respondents' political inclinations.

In political matters, people talk of "the left" and "the right." How would you place your views on this scale, generally speaking?

Left									*Right*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*

We create a variable and name it RIGHTIST using this question. Lower score implies a higher probability of the person being leftist, and a higher score implies the probability of being rightist. It may be expected that in countries where a large portion of the population are leftist, and hence politics is shaped more by leftist ideology, welfare state is promoted more.

Table 1 presents the summary statistics for the variables.

4.2. The Relations Between Income and Cultural Factors

While it is desirable to run an econometric model, preferably a discrete choice model, the very small sample size is a problem. Hence, we prefer to focus our attention only on the correlations between income level and cultural variables above. On the other hand, it is possible to employ individual-level data on income from WVS and a set of cultural factors but combining them with macroeconomic variables to run economic regressions would be a difficult task.

Figure 1 plots cultural variables and per capita GDP on a scatter diagram for all countries in the sample. It is not surprising to see that per capita GDP increases with trust. Per capita GDP seems to decline with higher values of Public ownership and Rightist variables. In other words, with those cultural values giving more importance given to the government rather than private entrepreneurship and promoting rather rightist political views, we can expect lower GDP per capita, and vice versa. On the other hand, the association between income and the remaining cultural values seems to be very weak.

Similar scatter diagrams for per capita GDP and cultural variables are plotted for middle-income countries in Figure 2, for high-income countries in

Figure 3, and for MIT countries in Figure 4. The observations for Trust and Rightist variables above for the sample including all countries hold also for high-income countries. In addition, cultural values less emphasizing competition, giving more power to the government in the economy, and disregarding hard work are also negatively associated with income. Middle-income and MIT countries, on the other hand, demonstrate stark differences compared to high-income countries. The direction of the correlation between income and all except for trust are the opposite. Also, the association between trust and income is weaker in middle-income countries.

Middle-income trapped (MIT) countries are similar to the middle-income group and decouple from high-income countries and resemble the high-income countries although the correlations between cultural values and income are weaker. The association between the presence of the government in the economy (Public ownership) is similar for both high-income and MIT countries but different for middle-income group. Similar to high-income countries, income decreases in MIT countries with cultural values promoting government control of citizens' lives and rightist political ideologies.

4.3. Interpretation of the Results

Our findings about trust point to the positive relation between trust and income resemble Tabellini's (2010) findings for European regions, where he found that backwardness and low per capita GDP level are related to low level of trust and vice versa. In addition, Zak and Knack (2001) argued that high level of trust promotes social interactions, and helps improve the working of the formal institutions. Therefore, our findings conform to these findings as well. One important implication of our statistical evidence is that while economic factors, such as establishing a technological base to ensure innovation, are important in overcoming the MIT, cultural factors such as trust are important

as well. Put differently, we can argue that countries with a higher level of trust may overcome the MIT relatively faster.

Another important cultural factor is hard work. We found for high-income group of countries that hard work and per capita income are positively correlated. Alesina and Angeletos (2005) showed that Americans and Europeans are different in that Americans believe that hard work determines success whereas Europeans believe that it is luck not hard work. They use this difference to show that market outcomes are superior in the US much better than in Europe. This is a good example of an informal institution as named by Licht et al. (2007). It is safe to assert that the cultural tendency that emphasizes luck over hard work will typically lead to a lack of entrepreneurship which itself is an important production factor. If entrepreneurship is discouraged this way, one may even expect losing entrepreneurs to countries where individual effort is rewarded in the form of "brain drain." This finding also reinforces our finding that if government is expected to take more responsibility for individuals, the country may be trapped in MIT. That is, if individual effort is substituted by government effort, then opportunities for future growth may be lessened. This is not to say that individualism is necessary for success. It means that individual effort should be rewarded its market value.

We conclude that cultural traits of nations may be as important as economic factors in understanding the nature of and exploring how to overcome the MIT. Economic factors will be effective only with good institutions and institutions are affected by culture. Therefore, economic policies that will take countries from middle-income level to higher-income level should also consider cultural factors in addition to objectively defined economic policies.

5. Conclusion

MIT is recently a hot topic among development economists. For most

economists, the countries that are trapped in the middle-income level and cannot make it to advanced country status have common characteristics such as lack of a technological base to ensure technological progress and sustain industrial development, lack of efficient capital markets to facilitate further economic growth, and lack of proper and efficient institutions, to name a few. In this study, unlike most studies, we looked at the MIT from a cultural perspective and examine association between income and cultural values for different categories of countries.

The findings of this study imply that the likelihood of a country being trapped in the middle-income mey be related with cultural values regarding private entrepreneurship, hard work, competition, rightist political ideologies, the level of trust and the government's interference in individuals' social lives. In order to escape MIT, governments may put in place appropriate policies to foster entrepreneurship and competition, promote institutions that appreciate hard work and enhance trust among individuals, and promote civil rights and liberties. How these can be done is an important political and economic issue and a large volume of research in the development economics has contributed to debates in this regard. In addition to economic factors, it is also important to understand culture as an explanatory factor to understand MIT. Finally, it is worth noting that due to the small sample size, the results here should be interpreted with caution.

References

Aghion, P., P. Howitt. 1992. A Model of Growth through Creative Destruction. *Econometrica* 60(2): 323-351.

Alesina, A., G.M. Angeletos. 2005. Fairness and Redistribution. *American Economic Review* 95(4): 960-980.

Amsden, A. H. 1989. *Asia's Next Giant: South Korea and Late Industrialization*. Oxford University Press.

Barrett, D.B., G.T. Kurian, T.M. Johnson. 2001. *World Christian Encyclopedia*. Oxford University Press.

Barro, R. and J-W Lee. 2010. A New Data Set of Educational Attainment in the World, 1950-2010. NBER Working Paper No. 15902.

Barro, R.J., R.M. McCleary. 2003. Religion and Economic Growth. NBER Working Paper No. 9682.

Beaugrand, P. 2004. And Schumpeter Said, This Is How Thou Shalt Grow: The Further Quest for Economic Growth in Poor Countries. IMF Working Paper No. WP/04/40.

Benjamin, D.J., J.J. Choi, G.W. Fisher. 2010. Religious Identity and Economic Behavior. NBER Working Paper No. 15925.

Bisin, A., T. Verdier. 2001. The Economics of Cultural Transmission and the Dynamics of Preferences. *Journal of Economic Theory* 97: 298-319.

Chang, HJ. 2008. *Bad Samaritans: Rich Nations, Poor Policies and the Threat to the Developing World*. Random House.

Felipe, J., A. Abdon, U. Kumar. 2012. Tracking the Middle-income Trap: What Is It, Who Is in It, and Why? Levy Economics Institute of Bard College, Working Paper No. 715.

Gill, I., H. Kharas. 2007. *An East Asian Renaissance: Ideas for Economic Growth*. Washington, DC: World Bank.

Glaeser, E.L., D. Laibson, B. Sacerdote. 2002. An Economic Approach to Social Capital. *Economic Journal* 112(483): F437-F458.

Glaeser, E.L., D. Laibson, J.A. Scheinkman, C.L. Soutter. 2000. Measuring Trust. *Quarterly Journal of Economics* 65: 811-846.

Greif, A. 1994. Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies. *Journal of Political Economy* 102(5): 912-950.

Grossman, G.M., E. Helpman. 1991. *Innovation and Growth in the Global Economy*. Cambridge,

MA: MIT Press.

Guiso, L., P. Sapienza, L. Zingales. 2003. People's opium? Religion and Economic Attitudes. *Journal of Monetary Economics*, 50(1): 225-282.

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

Iannaccone, L.R. 1998. Introduction to the Economics of Religion. *Journal of Economic Literature* 36: 1465-1495.

Jones, C. 1996. Human Capital, Ideas, and Economic Growth. Mimeo.

Kuran, T. 1997. Islam and Underdevelopment: An Old Puzzle Revisited. *Journal of Institutional and Theoretical Economics* 153: 41-71.

Kuran, T. 2004. Why the Middle East is Economically Underdeveloped: Historical Mechanisms of Institutional Stagnation. *Journal of Economic Perspectives* 18: 71-90.

Kuran, T. 2011. *The Long Divergence: How Islamic Law Held Back the Middle East.* Princeton University Press.

Licht, A.N., C. Goldschmidt, 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.

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

Lucas, R. 1988. On the Mechanics of Economic Development. *Journal of Monetary Economics* 22(1): 3-42.

Ohno, K. 2009. Avoiding the Middle Income Trap: Renovating Industrial Policy Formulation in Vietnam. *ASEAN Economic Bulletin*, 26(1): 25-43.

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

Rebelo, S.T. 1991. Long-Run Policy Analysis and Long-Run Growth. *Journal of Political Economy* 99(3): 500-521.

Roland, G. 2004. Understanding Institutional Change: Fast-Moving and Slow-Moving Institutions. *Studies in Comparative International Development* 38(4): 109-131.

Romer, P. 1986. Increasing Returns and Long-Run Growth. *Journal of Political Economy* 94(5): 1003-1037.

Romer, P. 1990. Endogenous Technological Change. *Journal of Political Economy* 98(5): 71-102.

Smith, N. 2007. Religion, Altruism and Social Capital. Paper presented at SSSR Conference, November 2-4.

Stulz, R.M., R. Williamson. 2003. Culture, Openness, and Finance. *Journal of Financial Economics* 70: 313-349.

Tabellini, G. 2010. Culture and Institutions: Economic Development in the Regions of Europe. *Journal of the European Economic Association* 8(4): 677-716.

Vogel, E. 1991. *The Four Little Dragons: The Spread of Industrialization in East Asia*. Harvard University Press.

Wade, R. 1990. *Governing the Market – Economic Theory and the Role of Government in East Asian Industrialization*. Princeton University Press.

Zak, P.J., S. Knack. 2001. Trust and Growth. *Economic Journal* 111(470): 295-321.

Table 1. Summary statistics

	Min	Max	Mean	Standard deviation
Trust	0.021	0.742	0.218	0.149
Public ownership	1.960	7.510	5.238	1.275
Government	2.210	7.890	4.505	1.174
Non-Competition	1.760	7.140	3.799	0.984
Luck – not hard work	2.080	8.630	4.227	1.107
Rightist	1.840	7.550	5.126	1.367

Figure 1. Per capita real GDP and cultural variables (all countries)

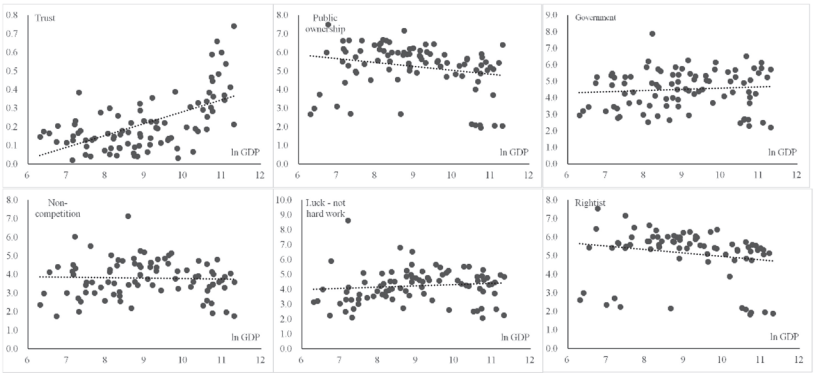

Figure 2. Per capita real GDP and cultural variables (middle-income countries)

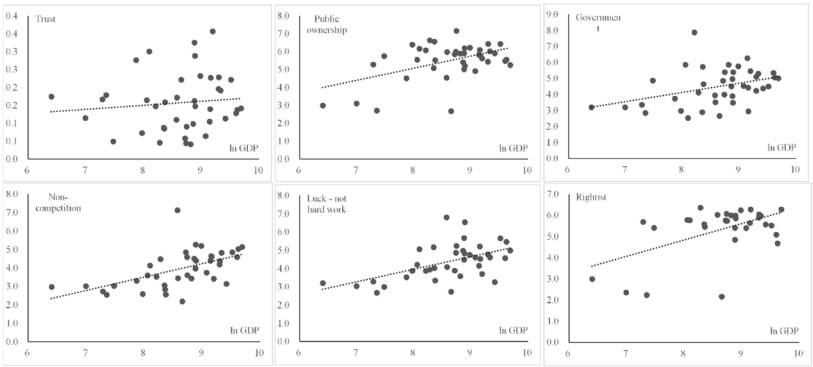

Figure 3. Per capita real GDP and cultural variables (high-income countries)

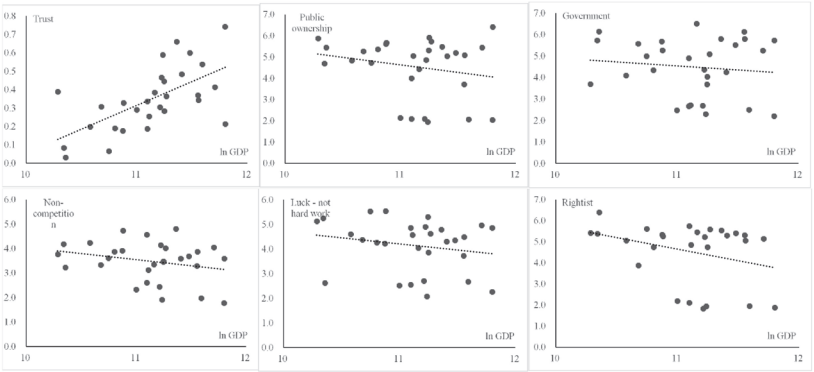

Figure 4. Per capita real GDP and cultural variables (middle-income-trapped countries)