



# Effects of the Occurred Economic Corruption Occurred and the Economic Corruption Control Index on the Economic Growth in Iran

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## ABSTRACT

This study aimed to estimate the effect of corruption on the economic growth within the framework of endogenous growth model using the occurred economic corruption perceptions index based on the Iranian laws along with the corruption control index and the economy Islamization index. The collected data were related to Iran in 1980-2013 and the growth model was estimated through the logarithmic and linear ordinary least squares econometric method. Dependent variables were the gross domestic product (and its growth) and the basic explanatory variables of model, capital, and labor. The occurred economic corruption perceptions index, the corruption control index, and the Islamic economy index have also been considered in the model. The main results indicated that the economic corruption has a negative effect on the growth and the economy Islamization has a positive effect on the growth. The economic growth is reduced to a lesser extent by adding the Islamic economic index to the model for every unit increase in the economic corruption. The corruption control index also showed a significant effect on economic growth.

**Keywords:** Occurred Economic Corruption, Corruption Control, Economic Growth, Iran

**JEL Classifications:** C43, O53, O47

## 1. INTRODUCTION

The major challenges for developing countries to achieve the economic growth and development are a number of obstacles in the way. One of these obstacles is the economic corruption. Many economic theorists and scholars believe that the economic corruption impedes the development and some others argue that corruption is an easing tool of getting permissions and business improvement in countries where the administrative bureaucracy is extensively implemented. Therefore, corruption has a positive effect on the growth in these societies. Extensive studies have been done in the world regarding this context. Most of the experimental studies have measured the corruption based on surveying, or they have used such tools to analyze the effect of corruption. However, there are two particular notes in this context. One of them is answering the question of whether the survey-based measured corruption is valid and whether it is a good index for corruption. Moreover, the second note is whether corruption effect reduces in an Islamic space with bringing the Islamic economic index.

However, according to the International Transparency Organization indices, which measure the corruption based on surveys, Iran does not have a good rank, but the index can be biased and invalid due to being survey-based. Accordingly, we have tried in this paper to provide the two variables of occurred corruption in Iran and the corruption control index of the International Transparency Organization for Iran in the simultaneous and separate endogenous growth model and then, analyze the results to determine which index can better show the effect on the growth. Regarding this context, it is especially important for Iran to find out that whether the effect of corruption on the growth (reduction) reduces coincided with the Islamization of the economy. To investigate this claim, we estimate the model along with the corruption perceptions index without the Islamic economy index of Iran. Then, we compare the results to see how the economic growth affects the index.

This paper initially expresses the introduction and then discusses the literature and experimental investigations in this regard. After that, the model and the variable are defined and the model was

estimated and analyzed. Finally, the research conclusion was presented.

## 2. RESEARCH LITERATURE

Since this research evaluates the effect of economic corruption on economic growth within the framework of the Islamic economic system, here is a brief look at the literature. Initially, we will review the history of economic growth theories. Then, we discuss the economic growth scientific literature –including the economic corruption definition, corruption types, economic corruption aspects, economic corruption categories and consequences, and economic corruption indices in Iran), and then the Islamic economy index literature. Finally, we reviewed the experimental studies in this regard.

### 2.1. Economic Growth Literature

Some theories have been proposed in the field of the economic growth, which can be classified into three groups of classical, neoclassical growth, and endogenous growth theories.

David Hume and Adam Smith are the pioneers in the development of growth theory in the classical school. In Adam Smith's idea, specialization and division of labor are the engine of growth. In addition, the classical economists believe that natural resources are the main constraints to growth opportunities.

The second category is the neoclassical growth theory. Neoclassical theories consider the technological progress as an exogenous factor and capital accumulation as an endogenous factor of production growth. The neoclassical view of the growth theory was presented in the 1950s by Solow (1956) and Sowan (1956). The basic feature of Solow-Sowan model is the production function form. The hypotheses of this function are the fixed return to scale, diminishing return for each input, and the positive substitution elasticity among the production inputs. Neo-classical production function is associated with a fixed rate of saving to create a general equilibrium model. Other economists who have worked in this field are Abramovitz (1959) Chenery et al (1986).

The third category of growth theory is known as the endogenous growth. The endogenous growth theory, which has been proposed based on the experimental and theoretical studies in the 1980s, rejects the classical and neoclassical theories about ideal markets and diminishing returns on factors, especially capital factors. The main thinkers of this category are Arrow (1962), Romer (1986), Lucas (1988), Grossman (1987), and Helpman (1998). They considered factors such as the increasing efficiency of research and development and transfer of knowledge and information, learning from the experience, dispersion of technology, social capital, region branch, and other factors affect the economic growth.

Accordingly, the economic growth models have been developed over time from Yang, Harrod, Domar, Solow-Sowan, Kaldor, Arrow, Romer, and Lucas up to century 21 from the perspective of factors affecting the growth, endogenous and exogenous growth of variables such as human capital, production function type, increasing or decreasing impact of inputs, definition of capital

and the separation of physical and human capital and the political variables. In other words, there have been three waves of growth theory in the past six decades, which are discussed in the following (Ezzati, 2016b).

### 2.2. Economic Corruption

#### 2.2.1. Definition of economic corruption

Corruption means cottuptness and forbidding from reaching a goal, which is derived from (Romper) in Latin. It means breaking or violation of moral or social rules or laws and administrative regulations (Tanzi and Davoodi, 1997). According to Webster's definition, corruption is an illegal reward to force someone to breach of the duty.

Corruption in Amid dictionary is expressed as the ruin, decay, sedition, cruelty, revelries (Amid: Corruption). Dehkhoda has defined it as degradation, taking someone's property with oppression, oppression, evil, wickedness, depravity, debauchery, and sedition. He also has used it as sedition, rebelliousness, sodomy, adultery, disobedience, and sinning. In some Arabic sources, this word is raised as cottuptness, disruption, and prohibiting to achieve a purpose. Corruption in Latin means breaking or violating, cottuptness, decadence, distortion, bribery, and bribery, or kickbacks. It mainly means that something is broken or violated that can be rules and regulations.

Global Program against Corruption states that corruption is the abuse of power to gain private advantages, which includes both public and private sectors (Gardiner, 1993).

According to Myrdal (1968), corruption is all forms of diversion or personal power and illicit use of occupational authority and position. According to the public opinion, any act within the framework of administrative-public activities is immoral and harmful from people's view (Gerlagh and Pelgerini, 2007).

#### 2.2.2. Categories of corruption factors

Recently, factors affecting economic corruption have been considered among economists and policymakers because corruption is one of the main obstacles to economic growth, reduce government legitimacy, increase illegal activities, and political instability of countries.

Factors affecting corruption are separated into two groups based on the main motivation for human behavior in order to achieve the maximum utility as well as the necessities to perform a behavior:

1. Factors affecting corruption (causes). It can be said, trying to gain wealth through dishonest and illegal ways is called economic corruption. Here are the factors that directly affect people to obtain income and wealth through improper and illegal ways, or we refer the corruption reasons: (1) Poverty, (2) unemployment, (3) income limits, (4) prohibition of some job, and (5) relative corruption cost (price).
2. Factors underlying corruption. Any behavior from humans only occurs only when the environment allows you to do it. Some aspects of these fields and their effect on society include: (1) The complexity of the paperwork and regulations, (2) expansion of the government size in the economy and

the expansion of brokers' power, the direct intervention of government in the economy, (3) instability in policies and programs, (4) huge exogenous income for the government (Ezzati and Karimi, 2014).

3. Corruption can affect the whole society on the formation of all members of society and processes and variable changes in the society. Due to the extent of the effect of corruption on society, fighting is one of the fundamental duties of all members of society. Some of the more important effects of corruption are, (1) security reduction, (2) instability, (3) investment reduction, (4) productivity reduction, (5) income reduction and increasing the government costs, (6) Country's departure from the development path, (7) conducting abilities (talents) to incorrect routes, (8) devaluation of moral, cultural, and social capital, (9) loss of faith and religion in society, and (10) other consequences of the decline in production such as increasing poverty, income gap, and public services (Ezzati and Karimi, 2014).

### 2.2.3. Economic corruption indices in Iran

The experience of other countries shows that measuring corruption has a very important role in designing anti-corruption programs. Currently, there are a few article about measuring corruption in Persian contrary to arguments about the definition, causes, and consequences of corruption and descriptive studies of descriptive cases in Iran, which cover the substantial literature about them in Persian. Now, we review only the conducted studies in Iran to provide the corruption measurement index.

Corruption perceptions index was published for the first time in 1995 by Transparency International (TI) Organization. The organization was established with the aim of fighting corruption, which holds a conference named International Anti-Corruption Conference every two years (Mehnatfar, 2008). TI Organization introduced and measured the corruption perceptions index like other variables of the economy. CPI or corruption perceptions index reflects corruption supply side in the range of 0-1. According to this index, zero shows the highest corruption and 1 shows the least corruption. TI Organization has introduced another index called Bribe Payers Index, which represents the demand side of corruption in 1999 by reviewing 19 countries. In addition, corruption control index as the good governance sub-index is another index presented by the World Bank.

According to economic corruption literature, economic corruption is one of the appropriate indices to measure the economic corruption. The occurred economic corruption has been measured based on the number of issued court orders on the total economic corruption convictions in Iran, which has been given as the economic corruption index of Iran in this model. These corruptions are governmental or non-governmental, which include embezzlement, bribery, fraud, smuggling, extortion, and corruption homes (Ezzati and Karim, 2014).

### 2.3. Composite Index of Islamized Economy

Islamization components can be identified with different approaches. One of them that is obtained from the theoretical framework of Islamization and therefore functional results.

More studies adopt this approach. A kind of index entitled as the Islamization sign of the economy has been applied in our study, which has this approach. In the combined index whose data have been taken from Iran's Islamic economy report in 2015, the six following components have been included:

1. The first Islamic component of the economy that can be achieved from this theoretical framework is justice. Economic discrimination in the distribution of the government budget (between geographical regions, ethnic, religious, and linguistic minorities), discrimination between men and women (gender discrimination), poverty, and human development variables can be the signs for justice.
2. The second component of the economy is social security. Universal insurance (with the ratio of insured to total population, the percentage of coverage of medical expenses and the payout percentage of health cost pocket) and strength of the family (percentage of single-person households and divorce rates by marriage) can be the variables to show the size of social security expansion.
3. The third component is the economic health and the absence of corruption. Corruption control index, the number of occurred economic crimes, inflation rate, unemployment rate, or the size of managers' corruption in public administration, as well as corruption in the society, shows the economic corruption whose opposite shows the economic health of the society.
4. The fourth component of the Islamic economy can be the rule of law and compliance with laws and regulations of the Islamic government in the society. Variables such as the compatibility of the economic rules and regulations with the Islamic economic framework with the regulation quality index, property rights index (economic freedom index), and the law role index in economic functions can show the legalism and obeying the Islamic rules and regulations.
5. The basic economic factors listed in Islam are growth, development, and prosperity of human society based on the Islamic man-asked subrogation principle. The variable of national income per capita can be the most important variable to show the economic productivity power and growth in a society.
6. The sixth component is the observance of Islamic teachings in the field of economy. The share of Gharzolhasaneh in gross domestic product (GDP) and financial institutions loans can be a sign to observe the economic teachings of Islam. These data were applied because other teachings' data were not available.

In order to measure the context in each component and in the combination of six components, the base year index 1359=100 was created for each of the sub-sectors for standardization and uniformity and making them homogeneous. Then, the combination of sub-index simple average and then, component index have been applied. Accordingly, a combined index with the base year 1359=100 was built, which has been studied as the indicating variable of Islamic economy, was imported into the model (Ezzati, 2016a).

## 3. EXPERIMENTAL STUDIES

The conducted studies on the subject of this paper can be categorized to two issues of economic corruption and growth and

Islamic economy and economic growth. We have a brief look at the reviews in any field.

### 3.1. Studies on the Economic Corruption and Growth

Extensive studies have been performed about the economic corruption and growth. Some of them are mentioned below.

Mauro (1995) has applied the institutional indices of political stability, efficient bureaucracy (average of the judicial system, bureaucracy, and corruption) in the model in a paper entitled corruption and economic growth by examining the cross-country and panel data econometrics. The results showed the positive and significant effect of the institutional indices on the growth. Kotera et al. (2010) examined the relationship between corruption and government size in 1995-2008 using the panel data method. The results indicated that the size of government and corruption are positively correlated in the countries with the lower level of democracy. The relationship between corruption and government size is negative in countries with high level of democracy. Pellegrini and Gerlagh (2004) have examined the effect of corruption on growth from the channel of transparency. Glenn (2007) reviewed the effect of corruption on development in China.

Boroumand (2008) analyzed the effect of corruption on Iran's economic growth through its effects on the level and composition of government expenditure and private sector investment. Sabahi and Malek Al-Sadati (2009) evaluated the effect of financial corruption control on the economic growth in a large sample of countries during 1996-2006. Sadeghi et al. (2012) experimentally analyzed the effects of money laundering on economic growth, government expenditure, and income inequality in 1984-2009 in Iran. They concluded that money laundering as one of the financial corruptions has a deleterious role in the country's economic development. Sameti et al. (2012) have simulated the effect of corruption on the economic growth of Iran based on the growth model. They concluded that the economic growth rate in a dynamic transition between a rentier government to a benevolent government increases from 1.2 to 2.6. Delangizan et al. (2014) have discussed that the economic corruption affects the economic health from different channels. The study was conducted on 138 country samples in 2000-2011. They found that the most important channel is the distortion in the allocation of resources. Heidari et al. (2014) assessed the potential threshold effects in the relationship between the corruption control index and the GDP growth in terms of the variables such as school fees, government consumption expenditures, agricultural raw material exports, inflation rate, and the openness of D8 countries in 1996-2011. Shakeri et al. (2015) have measured the institutional quality and its relationship with economic growth per capita through panel data in 2002-2010 in the Middle East and North Africa. Hekmati et al. (2015) evaluated the effect of corruption control and globalization on economic growth in countries with low per capita income, medium per capita income, and high per capita income using panel data from 113 different countries in 2002-2010. Anvari et al. (2016) in a paper entitled whether the interaction between the corruption and financial liberalization affects economic growth, experimentally and theoretically deals with the issue looking at evidence of the Organization of Petroleum Exporting Countries about the member

countries in 1990-2013. Knack et al. (1995) in a paper entitled institutions and economic performance: A nationwide study using alternative institutional measures, have applied the institutional indices of capital confiscation risk by the government, the possibility of contract rejection by the government, and corruption in the model. The results show a significant negative effect of the institutional indices on the growth. Ezzati et al. (2016) investigated the short and long term relationship between the effects of oil revenues on economic corruption in Iran in 1979-2011 using Auto-regressive distributed lag method. Results show that increasing (decreasing) the oil revenues increases (decreases) the per capita economic corruption.

### 3.2. Studies on the Relationship between Islamic Economics and Economic Development

Despite the extensive theoretical views on the effect of Islam on economic growth and development, a few studies have been conducted for the Islamic countries to the effect of the Islamic economic indices on growth and development. Here is a look at the examples of experimental studies in the field of the effect of Islamic economic indices and variables on the economic growth.

Ezzati and Agheli (2008) examined the effect of Islamic capital on the development in a theoretical and experimental study using cross-sectional data in 1997 for Iran's provinces based on an endogenous growth theory model. Mohajeri (2011) investigated the effect of the religious capital on the economic growth of Iran's provinces using econometrics panel data in 2002-2009 in an endogenous growth model. He concluded that the religious capital has a positive effect on the economic growth. Nazarpour et al. (2013) tried to analyze the effect of Islamic banking and the economic growth on the poverty index in a study on Muslim countries using econometric panel data in 2002-2009. Their main result was that increasing the usury-free banking indices has reduced the poverty. Mousavian and Varmazyari (2012) assessed the effect of usury-free banking on the economic growth in Iran using econometric auto interval distribution method with quarterly data in 2001-2011. They concluded that increasing the capital supply and accumulation of Iranian banks - all of them work in the usury-free banking framework- had a positive effect on the economic growth. Ezzati and Kazemi (2014) examined the effect of Islamic banking on the economic growth of Islamic countries using panel data in 2006-2012. The results show the positive effects of Islamic banking size and share (from the whole banking system) on the economic growth in Islamic countries. Farahanifard et al. (2015) investigated the effect of Islamic banking and non-banking institutions on the economic growth in Iran using the generalized torque econometric with quarterly data in 1999-2013. They found that Iran's banking and financial institutions (which are assumed Islamic) have a positive effect on the economic growth.

## 4. LITERATURE CONCLUSION

Looking at the experimental studies, we find that though there are some studies regarding the effect of corruption on economic growth and the effect of some Islamic variables on the economic growth separately, there is no combined study in this regard. In addition, these studies have been applied to show the effect of

occurred corruption in the corruption control variable, which is obtained based on surveys. In addition, the effect of variables in the Islamic variable position is given alone in surveys. No holistic index was proposed. Accordingly, the innovation of this study is importing the occurred corruption variable and comparing its effect with the corruption control index, considering the effect of Islamic economy index as a multi-dimensional combined index along with the corruption index, and showing the effect of importing this index on the economic growth and simultaneous analyzing caused by corruption.

As clear in the conducted studies, there are many theoretical studies regarding the effect of religion on the development. Muslim scholars have theoretically attempted in these studies to explain the positive effect of the Islamic economic institutions on the economic growth and development. However, there are a few studies on this topic. Most of the studies have examined the effect of the Islamic banking on the growth. There are only two similar studies that have evaluated the effect of religion capital on the economic growth using a surrogate index. No study has analyzed the relationship of an index in the framework of Islamic economy with the economic growth and development. Therefore, such experimental studies are required very much. Hence, evaluating this paper can complete the experimental studies in this regard.

Based on what was presented in the literature, the study's theoretical framework and model can include the following variables. To investigate the effect of economic corruption on the economic growth in Iran, variables of labor, capital, the composite index of the Islamic economy and the two economic corruption indices have been applied. Based on the literature and conducted studies, the variables of labor, capital, the composite index of Islamic economy should have a positive effect and the corruption index should have a negative effect on the dependent variable (GDP or economic growth). Although in some studies, it has been said that religion can have a negative effect on the production growth. Some articles have argued that corruption in some societies can have a positive effect on the growth. However, this effect can be reviewed here to observe how the growth of these variables affect the economic growth in Iran, and how is the effect of corruption especially with the Islamic economic variables. In addition, the other point in this study that can be considered is finding one of the corruption indices (index based on the surveying or based on the occurred corruption) can explain the economic growth better.

## 5. MODEL AND METHODOLOGY

This paper was conducted according to Iranian data in 1980-2013, which have been used to estimate a model. The main limitation of the data was the lack of corruption index for the years after 2013). The applied method in this research was the documentary method for the initial identification, which is mainly based on the written documents. This method was also used in order to collect the statistical data. The Center of Statistics, the Central Bank, and the World Bank statistic resources have also been used to collect the required data.

The econometric analysis methods are used to analyze the data, in which the ordinary least squares, logarithmic, and linear models are estimated. Eviews software is used to estimate the model. The model is based on the endogenous economic growth whose framework is according to the general growth model correlated with the two main variables of capital and labor, which are emphasized in all growth theories. In this study, the two variables of the Islamic economy and economic corruption have also been added.

Our applied equation to show the growth model like many studies on the economic growth and the effective factors are as follows:

$$Y_t = C_0 + C_1 L_t + C_2 K_t + C_3 IE_t + C_4 IG + C_5 IF + U_{10}$$

### 5.1. Introduction of Variables in the Model to Estimate and Analyze

This study is conducted in the Islamic country of Iran whose data (1980-2013) was used to estimate the model. The variables and their measurement are shown:

- Time (t): To estimate the model, the variable data have been used in 1980-2013.
- GDP (Y): The GDP variable in this study has been given from the central bank time series database. To show GDP growth in the model, its logarithm (LY) is imported into the model.
- Labor (L): The data from the Statistical Center of Iran have been used for the number of every year workers in the country to estimate this variable in the model.
- Capital (K): Capital is one of the most important variables in economic studies. In this study, the capital stock per year is given based on the central bank data in the model.
- Islamic economy index (IE): According to what was said in the theoretical literature of the Islamic economy composite index, the variable data are collected from Iran's Islamic Economy Report (Ezzati, 2016a) and they are given in the model.
- In order to obtain the index size for each component, we have summed the average of the options for each component to measure each component.
- Occurred crime index (IG): The data of this index were taken from Ezzati et al. (2016). They have collected the data from the judiciary, which show the number of crimes and their culpability issuance.
- Corruption control index (IF): This index is created and released every year based on surveying by TI Organization. The variable data are taken from the organization website. The corruption control index measures the public sector action for private interests, which include micro and macro corruption, capturing and influence the government by beneficiary groups.

### 5.2. Data Statistical Tests

We perform the KPSS<sup>3</sup> test before applying time series for stationary. The result of this test showed that all the variables are stable at 1% probability level.

### 5.3. Model Estimation

Based on literature and surveys conducted to investigate the effect of economic corruption on the economic growth in Iran, we have brought the variables of labor, capital, Islamic composite

index, and the two variables of economic corruption (occurred corruption and corruption control) in the model. Therefore, we have economic growth variable model and we estimate the model with two linear and logarithmic forms to assess the variables and their relationship better.

### 5.3.1. Linear model

To check the model and analyze the effect of the obtained variables in the theoretical framework, we estimated the model with all the above variables in a linear form. Model 1 in the second column of Table 1 shows the result of this estimation. In this estimation, capital and labor variables are well significant. In addition, the Islamic economic index variables were positively significant in this model and the occurred corruption index was negatively significant. Based on what was said in the theories, the variables were effective. Meanwhile, the corruption control variable whose index is created based on surveying is not significant. To ensure the integrity of the other variables' effects, this variable is excluded from the model and the estimation is performed again. The result is shown in the fourth column as Model 3. As can be observed, the effect of other variables is significant such as the Model 1. To test the independent effect of corruption on growth and its comparison with the imported Islamic Economy index, the model is estimated just with labor and capital variables and showed in the third column as Model 2.

Model 2 estimation results show that the occurred economic crime index has a significant negative effect on the economic growth and the model is totally significant. In this estimation, it has been shown that the effect of each unit (percent) change in the occurred economic crime index (occurred corruption) reduces the national production as much as 218 billion rials. We add the Islamic economic index variable to model 2 to test the effect of the economy Islamization input variable on the effect of economic corruption on the growth. This estimation is shown as Model 3. The results showed that the effect of economic corruption on the growth reduces by considering the variable of economy Islamization in the model. Of course, the effect of capital and labor is slightly increased and decreased, respectively, but reducing the effect

of corruption is much more. Accordingly, it can be said that the effect of corruption is reduced aside from other effects of Islamic economy index when the effect of this variable is imported into the model. Perhaps, the negative effects of corruption are neutralized with some positive effects of Islamization.

### 5.4. Logarithmic Model

We estimate the logarithmic model to evaluate the effect of economic growth better, in which all variables changes in the form of the percentage. This model has been estimated with all variables and its result is given as Model 4 in Table 2. This model showed that the effect of corruption control index is not significant. The occurred economic corruption (crimes) index variable is negatively significant and the Islamic economic variable is positively significant. Therefore, the corruption control index, which is made based on surveying, cannot explain the issue, but the economic corruption index is more expressive.

The comparison of models 5 and 6 showed that Islamic economy index variable reduced the negative effect of the corruption in the model. However, the effect of labor on the growth is significant in both models. Accordingly, all three models have a problem. Thus, it can be said that the capital productivity is reduced with increasing the labor because of the capital shortcoming compared to labor in Iran. Thus, it can show itself at the rate of percent. Based on this model, the variable coefficients show the elasticity. Thus, the dependent variable changes as much as the estimated coefficient (in percent) by every 1% increase in the explanatory variable considering that other variables are constant. Non-significant coefficient showed that this variable has not a positive effect in terms of other variables and the stability of a variable such as capital. This may be due to the high ratio of labor to capital whose increasing reduces the capital. This reduction neutralizes the increasing effect of the labor. Therefore, the capital-labor ratio variable can be imported into the model in such positions. If the model was significant, the above justification is acceptable.

Model 6 is an estimated model with the variables of capital-labor ratio, Islamic economic index, corruption control, and the occurred corruption. All the coefficients except for the corruption control are significant according to the theory. The coefficient of this model is more significant than other models and their t-value is higher. However, the variables of models 2 and 3 were all significant, but here it is greater and the result can be trusted more. The non-significant variable of corruption control is excluded from the model to finalize the model. Once again, the model is estimated. Model 7 shows the estimation. The results show that the capital-labor ratio growth variable has a positive effect on the economic growth. The Islamic economy index has a positive effect on the economic growth. The economic corruption index has a negative effect on economic growth.

## 6. RESULTS

According to economic theories, some views believe that religion has a negative effect on the economic growth. In contrary, some views express that if the true religion prevails in society and we consider the religious economic variables, the religion can have

**Table 1: Estimation of linear models**

Explanatory variables	Model and dependent variable		
	Model 3	Mode 2	Mode 1
	Y	Y	Y
Intercept (C)	-142355 (-3.60)	-79843 (-3.16)	-163667 (3.64)
Labor (L)	0.019 (7.4)	0.022 (9.89)	0.020 (7.42)
Capital (K)	0.058 (5.39)	0.054 (4.87)	0.051 (4.08)
Islamic Index (IE)	969.2 (2.00)		980.692 (2.02)
Occurred crime index (IG)	-169.9 (-2.03)	-218.0 (-2.6)	-189.0 (-2.20)
Corruption control index (IF)			134.178 (0.99)
R <sup>2</sup>	0.973	0.970	0.973
F statistic	313.5	381.0	250.9
Durbin Watson D-W	1.51	1.52	1.57

**Table 2: Logarithmic model estimation**

Explanatory variables	Model and dependent variable				
	Model 4	Model 5	Model 6	Model 7	Model 8
	L(Y)	L(Y)	L(Y)	L(Y)	L(Y)
Intercept (C)	9.006 (1.85)	9.01 (1.75)	9.66 (2.08)	14.5 (11.90)	14.67 (13.34)
Logarithm of the labor force (L [L])	0.066 (0.21)	0.22 (0.67)	0.04 (0.12)		
Logarithm of the capital (L [K])	0.245 (5.12)	0.26 (5.10)	0.25 (5.55)		
Logarithm of the capital-labor ratio (L [K/L])				0.294 (12.10)	0.3 (12.90)
Logarithm of the Islamic index (L [IE])	0.465 (2.92)		0.45 (2.91)	0.506 (3.24)	0.5 (3.27)
Logarithm of the occurred crimes index (L [IG])	-0.49 (-4.92)	-0.56 (-5.36)	-0.5 (-5.14)	-0.522 (-5.42)	-0.53 (-5.59)
Logarithm of corruption control index	0.028 (0.52)			0.018 (0.34)	
R <sup>2</sup>	0.964	0.959	0.965	0.963	0.964
F-statistic	187.9	302.3	240.4	231.8	317.8
Durbin Watson D-W	1.94		1.92	1.97	1.95

a positive effect on the growth. In addition, the effect of religion can reduce the negative effect of some variables such as corruption on the growth. This study sought to assess both ideas. The results showed that the effect of economy Islamization index is positive on the economic growth and the effect of economic corruption is negative on the economic growth. Meanwhile, Islamization of economy reduces the negative effect of the corruption on the growth. Despite the negative views of religion, if the true religion was applied in a community, the religious community has a positive effect on the growth. On the other hand, it can neutralize some negative effects of other variables.

Another result of this study is that the corruption control index, which is made of surveys, cannot be expressive very well and it cannot show the negative effect of corruption in the growth models. Perhaps the positive effect of corruption on the growth and the facilitating effect of the corruption in some studies are due to that fact that this index is not expressive and true. In contrary, the occurred economic corruption index clearly shows the negative effect of corruption on the growth. It is much better to use these indices to measure true corruption. The corruption control index should not be relied in analyses and policy-makings. Planning and policy-makings should be done based on the occurred corruption.

The other result of this study was that the capital-labor ratio growth variable has a positive effect on the economic growth. This means that the country is faced with the capital-labor ratio shortcoming. More employments do not increase the growth very much. On the other hand, higher investment has an increasing effect on the growth. If we want to increase the economic growth and its intensity, we have to think about investment more rather than labor.

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