

THE RELATIONSHIP OF CORRUPTION AND ECONOMIC GROWTH

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ABSTRACT

The purpose of this study was to reveal the relationship between corruption and economic growth. The method used in this study was the pooling data. Number of cross-section data were 14 countries and times-series data were nine years. The best model obtained from redundant fixed effect test, correlated random effects-Hausman test and technical consideration. The model was fixed effect model. Based on regression output, corruption have positive significant to 12 Asia Pasific countries economic growth. So, corruption are not become a **grease of wheel** for economic that countries. If corruption (corruption perception index/CPI) increase, economic growth increase too. While, other variables like FDI, and government budget for healthy have positive significant to the economic growth. Actually, only **five countries** in which the CPI variable significantly to economic growth. Two countries have positive significant (Japan and Korea) and another have negative significant (Brunei Darussalam, Timor Leste, and Kamboja).

Keywords: CPI, economics growth, pooling data, none, fixed, and grease of wheel

INTRODUCTION

Corruption is the abuse of power for personal gain (World Bank and IMF). Corruption became a global phenomenon that affects almost all aspects of social life and economics. World Bank (2008) estimates that more than US \$ 10 billion, or about 5% of world GDP per year are lost due to corruption. The African Union estimates that corruption in its territory about 25% of its GDP.

USAID voiced the same thing that corruption undermines economic development. In the private sector, corruption increases the cost of business through the price of the bribe itself, the cost of management of negotiations with officials and risk of violations deal. Nevertheless there are some people claim that corruption has lowered their costs by cutting bureaucracy.

Economists, historians and political scientists have been engaged in a long debate about whether corruption endangering economic growth. The general view expressed that corruption disrupt economic activity by distorting the efficient allocation of resources in the economy. Most economists view that corruption is a major inhibitor of development. Corruption is one of the causes of low income and plays an important role in creating poverty traps (Blackburn et al .; 2006). Perhaps surprisingly, that some people assume that by "oiling the wheels" (oiling the wheel) bureaucracy, sometimes corruption can also be useful for the economy (Huntington, 1968; Lui, 1985). Contrasting results indicated by Tanzi (1998) and Guriev (2004) who claim that corruption can cause bloated bureaucracy.

An important contribution to this debate is from Mauro (1995) who built the corruption index for 67 countries and showed that corruption is negatively related to investment and growth. Mauro also assume that the direction of causality is corruption affects growth, and not vice versa. While Toke AIDT, Jayasri Dutta and Vania Sena (2008) states that the role of political accountability as determining the relationship between corruption and economic growth. If political institutions have good quality, corruption negatively affects economic growth and vice versa if the low quality of political institutions, the corruption does not have an impact on growth.

Table 1
Corruption Perception Index (CPI) In 14 Countries In Asia Pasific

No.	Countries	CPI in 2010	CPI in 2011	CPI in 2012
1	New Zealand	9.3	9.5	9.0
2	Singapura	9.3	9.2	8.7
3	Australia	8.7	8.8	8.5
4	Jepang	7.8	8	7.4
5	Brunei	5.5	5.2	5.5
6	Korea Selatan	5.4	5.4	5.6
7	Malaysia	4.4	4.3	4.9
8	China	3.5	3.6	3.9
9	Thailand	3.5	3.4	3.7
10	Kamboja	2.1	2.1	2.2
11	Indonesia	2.8	3	3.2
12	Philipina	2.4	2.6	3.4
13	Timor Leste	2.5	2.4	3.3
14	Papua New Guinea	2.1	2.2	2.5

Source: Transparency International

Table 1 shows the development of corruption as measured using the corruption perception index in 14 countries in Asia Pacific. The higher the index means the more clean the country from corruption. The average increase in the CPI of the country in just a few points. For example, as Indonesia than in 2010-2012 increased by only 0.2 per year. Similarly, South Korea, Malaysia and China, only the Philippines which jumped quite large from 2011 to 2012, from 2.6 into 3.4. The other only increased slightly. The data also showed that the group of countries that are very clean as New Zealand, Singapore, Japan and Australia, each year is always in the group of countries free from corruption and otherwise corrupt country also clumped unchanged from its original position, like Indonesia or Papua New Guinea. And as mentioned above, the graft may undermine economic growth of a country. Although there are also stating instead that corruption is increasing the growth of a country.

Asia Pacific showed that economic conditions vary and also the level of corruption that is different between countries. Be interesting to know if among 14 Asia-Pacific countries have the same behavior in terms of economic growth and its corruption perception index. In other words, whether corruption has positive influence on economic growth in 14 countries in Asia Pacific.

THEORITICAL

Corruption Theory

The simplest definition of corruption is the abuse of power for personal gain or groups (World Bank and IMF). On the view of law, said corruption if it meets the following elements: tort, abuse of authority or opportunity, to enrich themselves, another person or corporation, and the last element is detrimental to the finances and economy of the state. An act called corruption when giving or accepting gifts or promises or bribery, embezzlement or extortion in office, participated in the procurement and receiving gratification for state officials. In general, corruption is the misuse of official position for personal gain. The end point of corruption is a kleptocracy (government by thieves).

Corruption occurs in all countries, irrespective of the level of social and economic development. Generally, corruption is most likely to occur when the public sector and the private sector met and in particular where public authorities have a direct responsibility for the provisions of the public service or the application of a special regulation. Corruption undermines democracy and good governance where corruption can destroy a formal process has been established. Corruption in elections and legislative bodies reduces accountability and representation in policymaking; corruption in the court system to stop the rule of law and corruption in public administration led to inequities in service to the community. Corruption as well as lowering the government's legitimacy and democratic values.

In economic terms, it undermines economic development in which the private sector, corruption increases the cost for their illegal payments and risk of cancellation of the agreement or for their investigation. Even so, there are also stating that corruption reduces costs because it simplifies the bureaucracy that is the cause bribe officials create new rules and new obstacles. Thus, corruption could also disrupt world trade. Companies that close officials are protected from competition,

the results are firms become inefficient. Other negative impacts, corruption has caused distortions in the public sector by diverting public investment into community projects where bribes and wages are more readily available.

Neoclassical Growth Theory

In the theory of economic growth, there are two schools of thought that the neoclassical theory and the theory of modern (Tambunan, 2003). In neoclassical theory, factors affecting economic growth is labor (Labor / L) and capital (capital / K). The addition of K and L assuming the productivity of each factor of production is fixed, it will increase the output produced. The percentage of output growth could be larger (increasing returns to scale) or can be smaller (decreasing returns to scale) or fixed (constant returns to scale) compared to the percentage increase input K and L. In this theory, the role of technology is considered constant, so the theory this does not recognize the existence of an increase in productivity.

Neoclassical growth theory are less able to explain the economic growth of the countries that are members of the NICs (New Industrial Countries) such as South Korea, Taiwan, Hong Kong and Singapore. Their economic growth in these countries shows the importance of technology in improving productivity. So not only inputs K and L are essential in the production but also input technology.

Endogenous Growth Theory

In endogenous growth theory, the important factors affecting the growth in addition to K and L as well as technology, entrepreneurship, raw materials and materials. In addition, the availability and condition of infrastructure, laws and regulations, political stability, government policies, bureaucracy and international exchange basis (terms of trade). The importance of these factors can be seen in the various cases are in Africa, especially in sub-Saharan Africa. Economic development in the country stalled because of the quality of labor is very low, political instability, war, government financial deficits and lack of infrastructure.

So, there is a difference between the neoclassical and endogenous growth theory. On the theory of endogenous, the role of labor quality is more important than the quantity of labor. The quality of labor is not only seen on the level of education, but also health. In empirical analyzes, the role of education and health is an important variable in influencing the economic growth of a country. Similarly, the capital, the role of the quality of capital (technological progress) is more important than quantity of capital. So it is with the role of entrepreneurship, including the ability to innovate, become an important factor for economic growth.

Corruption and Growth

Many academic paper which gives credence to the development policy in tackling corruption. Based on the theory Sheifer and Vishny (1993), stating, for example, when a project needs to get permission from a lot of people, each of which has the power of veto, then the cost of increased corruption and declining economic growth. Myrdal (1968) said that corrupt officials could use its power to delay and obstruct a project so that he could get more bribes. Krueger (1974), which represents a classic study of inefficiency rent-seeking through corruption by trade restrictions. Such corruption, de facto institutional environment will further restrict the economic activity of the de jure.

There are also reasonable that corruption be good for economic growth. Lui (1985) showed that corruption can shorten the waiting time list. Delays by bureaucrats slow business. As a result, the profitability of businesses and consumers become blocked. Corrupt officials may use it to facilitate everything with bribes of course, so that ultimately drive growth. The positive aspect of corruption make maximum growth in countries whose rules are relatively efficient because of the decrease of corruption would increase the cost to eliminate all of them, such as crime in general (Klitgaard; 1988). Colombatto (2003) also analyzed theoretically corruption with a variety of different institutional environments and found that in some cases, corruption can be efficient in the developed world as in a totalitarian state.

Previous Research

MushfiqSwaleheen and Dean Stansel (2007) conducted a study on the Economic Freedom, corruption and growth with panel data of 60 countries. They show that corruption affects growth indirectly by the intermediation of economic freedom. Countries with low economic freedom, then, corruption reduces economic growth, and vice versa if the economic high Freedom then, corruption increases economic growth.

Boris Podobnik, Shao Jia; DjuroNjavro, Plamen Ch. Ivanov and H.E. Stanley (2008) studied the influence of corruption on economic growth and foreign investment rate, a case study in 121 countries during the 1999-2004 period. The results show that the rise in the CPI of the unit causing an increase in GDP per capita growth rate of 1.7%. Especially for European countries, the increase in CPI by one unit increase per capita GDP growth of 2.4%.

Gbewopo Attila (2008) investigated corruption, taxation and economic growth: theory and evidence. In endogenous growth, corruption, there are two ways that corruption in public spending and corruption in public acceptance.

Corruption not only affects the tax rate but can also distort, leading to excessive tax rates that could undermine economic growth. More corrupt a country, the stronger the negative effects of taxation on growth.

Toke Aidt, Jayasri Dutta; Vania Sena (2008) examines the governance regimes, corruption and growth: theory and evidence, case studies in countries around the world. In the regime with high-quality political institutions, corruption has a negative effect, but if the quality of political institutions is low, corruption does not affect growth.

Jack C Heckelman and Benjamin Powell (2010): Corruption and the institutional environment for growth. They show that corruption drive economic growth when economic freedom is restricted, but a lot of benefits from the presence of corruption decreased with increasing economic freedom. Another discovery was the beneficial effects of corruption are immediately lost when the size of government and extensive regulation lowered.

METHODS

Population and Sample

The population in this study are all over the world because of this research can be applied in all countries. This study used a sample of countries of Asia Pacific 2002-2011 using annual data.

Types and Sources of Data

The data used in this research is secondary data drawn from the World Bank and Transparency International data.

Operational Definition of Variables

1. Corruption: using the corruption perception index is CPI (corruption Perception Index) released by Transparency International with a score from 0 to 10. Scores 10 means an area free of corruption and vice versa if zero, the more corrupt (index).
2. Economic growth: real GDP occurs every year (jutaUS \$).
3. Investment: the amount of foreign direct investment or foreign direct investmen (FDI) (million US \$).
4. Education expenditures: Total budget spent by the government for education (million US \$).
5. Health Spending: the amount of budget spent on health (million US \$)
6. Population growth: using the rate of population growth that occurs each year (%)

Model Research

The research model using pooled data that combines cross section data and time series. The basic model of this research is

$$Y_{it} = \alpha_0 + \alpha_1 CPI_{it} + \alpha_2 FDI_{it} + \alpha_3 PP_{it} + \alpha_4 PK_{it} + \alpha_5 Pop_{it} + \epsilon_{it}$$

For $i = 1, 2, 3, \dots, 33$ and $t = 1, 2, 3, \dots, 10$

Where:

i = cross section data

t = the time series data

Y = real GDP (million US \$)

CPI = corruption index (index)

FDI = total foreign direct investment (million US \$)

PP = total government budget for the education sector (million US \$)

PK = total budget for the health sector (million US \$)

Pop = population growth rate (%)

ϵ = disturbance error

Hypothesis

1. Corruption positive effect on economic growth
2. Variables investment, spending on education, spending on health, and population positive effect on economic growth

Analysis method

Data panel is a set of data that contains sample data of individuals that combines cross section data and time series. Panel data can be very useful because it allows researchers to explore the economic effects can not be obtained by using cross section data or time series data only. With information accommodate both associated with a variable cross section and time series, panel data can substantially decrease the problem omitted-variables; model that ignores the relevant variables. Data panel can also be useful for technical reasons and pragmatically, that is related to the availability of data. By combining the data time series and cross section, we will be able to increase significantly the number of observations without any treatment of the data. Therefore, the data panel may give a satisfactory settlement.

There are three approaches estimate the pooling of data that is least squares approximation (pooled least squares), fixed effects approach (fixed effect), and the approach of random effects (random effect). The first approach, combining the entire cross section data and time series, and then estimate the model using OLS (ordinary least squares) so-called least

squares approximation (pooled least square). The second approach, taking into account the probability of encountering problems omitted variables that may bring changes to the intercept of the data time-series or cross section. This model adds dummy variables to allow for changes to intercept. The third approach, improve process efficiency by calculating the least squares error of the cross section and time-series. This model is a variation of generalized least squares estimation.

RESULTS AND DISCUSSION

This study uses data pooling, consisting of a cross-section of 14 countries in Asia Pacific and the data time series started in 2003-2011. However, the results of data processing using Eviews suggests that two countries, namely China and Papua New Guini are automatically dropped by Eviews because of incomplete data.

Test Specifications Model

Prior to estimate the relationship between corruption and economic growth then, is necessary to determine on which model will be used for the estimate.

Table 2
Possible Test of Estimation Method

	Cross-Section		Random Effect
	None		
P e r i o d	None	Standard	Redundant Fixed Effect Test: signifikan
	Fixed Effect	Redundant Fixed Effect Tests: TidakSignifikan	Correlated Random Effect – Hausman Test: Tidaksignifikan
	Random Effect	Correlated Random Effect – Hausman Test: TidakSignifikan	Redundant Fixed Effect Tests: signifikan
			Mixed Fixed & Random Effect not allowed with imbalace data
			Two-way random effect not allowed with imbalanced data

In this study, samples taken are not random but selected based on countries that are already widely known, so that in this study used Fixed Effect Model (FEM).

Regression Analysis Results

Regression results using FEM shows that if the period is fixed, then at each period of time there is a different intercept over time. The highest economic growth in 12 countries in Asia Pacific occurred in 2004 followed in 2003 and then 2008. It could happen because of the impact of the deteriorating economic situation of European countries. Economic openness led to the events experienced by a country with a big economy will have an impact on other countries, especially those that have trade relations with that country.

If the cross-section is fixed, then the highest economic growth experienced by Japan followed by South Korea, and Indonesia. The development of the world economy recently showed that South Korea experienced a remarkable economic development. Many items that previously dominated the Japanese, now controlled by South Korea, for example, the electronics industry and the entertainment industry, while the auto industry began to show the same symptoms.

The regression results also indicate that the corruption perception index (CPI) positive effect on economic growth in the 12 countries of the Asia Pacific with a coefficient of CPI amounted to 96.50055. That is, if the CPI increases by one point, the index of economic growth (real GDP) in 12 countries in Asia Pacific will increase by 96.5 million US \$ and vice versa, if the more corrupt or CPI decreases, the economy of these countries will also be decreases. Therefore, the government of these countries (Australia, Indonesia, Brunei Darussalam, Cambodia, Japan, South Korea, Malaysia, Philippines, Singapore, Thailand, Timor Leste, and Vietnam) should maintain and clean the country of corrupt practices in order sustainable economic growth can be achieved.

The regression results also show that foreign direct investment or FDI has positive influence on economic growth in 12 countries in Asia Pacific with a coefficient of FDI amounted to 0.001203. That is, if the FDI increased by one million US \$, economic growth (real GDP) in the 12 countries will increase by 0.001203 million US \$ and vice versa. Thus, if these countries want economic growth to be sustainable they must strive so that foreign investors are willing to invest directly in their countries. Since many countries vying for foreign capital for economic growth, the government needs to have a good

strategy and innovative in order to easily attract foreign investors. The influx of foreign capital will increase employment so that the government is able to bring down unemployment. If it really happens then the public welfare will be achieved.

One variable that indicates the quality of human resources is the government spending on health. The regression results indicate that the variable positive effect on the economic growth of these countries with the coefficient value of 17.78435. That is, if the government's health budget is increased by one million US \$, economic growth (real GDP) the country will increase by 17.78435 million US \$ and vice versa. If the budget is handed down, the quality of human resources will be decreased so that the production capacity will decline, as a result of economic growth will also decline. Even if a country has few natural resources, such as Japan, for example, because the country has qualified human resources, it is natural that Japan is an amazing country. In the current Asian countries still sinking, Japan became the country are taken into account by the developed nations because Japan has the quality of human resources is amazing. Therefore, the government must have the courage to provide substantial funds for the health of their communities to be healthy to be more productive. Higher productivity will push economic growth higher as well.

Relationship Analysis of Corruption and Economic Growth

Further analysis of the relationship between corruption and economic growth in 12 countries in Asia Pacific, it is necessary to regression coefficient specific cross section in the form of CPI, because the focus of this study is about corruption linked to economic growth. The results showed that the CPI is significant only in five countries.

Of the five countries that corruption significantly, only Japan and Korea are showing a positive relationship between corruption and economic growth. So, who actually dominated the results of the 12 Asia-Pacific countries are Japan and South Korea with a higher coefficient obtained Japan. The Japanese influence is undoubtedly in the economies of Asia Pacific. As is known, the Japanese CPI is the third highest after Singapore and Australia which is about 7-8. It means that Japan's economy is the third cleanest compared to other countries in Asia Pacific. South Korea is also included quite clean of corruption with indices of about 5-6. South Korea become an advanced country today, it may even replace Japan sometime in the future, because the development of the electronics industry and the entertainment industry began to shift the position of Japan. Both also encourages other 10 Asia-Pacific countries to make the corruption is no longer a grease of the wheel. If these countries want a sustainable economic growth, the country must fight corruption to its roots.

Three other significant countries are Brunei Darussalam, East Timor and Cambodia. The three countries have to really be careful in making decisions related to corruption. Not to happen, the eradication of corruption is aggravating their economic growth. If corruption occurs due to bureaucracy that is too long and with bribery, policy makers can speed up the bureaucratic process (shortening the waiting time for investors), the government should strive to simplifying the bureaucracy so that no more bribes in the permitting process. Even if the three countries were significant, but the effect is not dominant because the results are generally positive and significant. Thus, if a country is getting clean of corruption, the higher the real GDP of the country.

CONCLUSIONS AND RECOMMENDATIONS

The estimation results indicate that the CPI is a positive effect on economic growth in 12 countries in Asia Pacific. Thus corruption is not the Grease of Wheel or corruption is not a lubricant for the economy. Further analysis showed that only five countries that actually have significant corruption variable. But the dominant state influence the outcome in 12 Asia Pacific countries are Japan and South Korea.

The weakness of this study is data imbalance and the number of the object is less widely so that the results are not as expected. Therefore, further research related to corruption and economic growth can compensate for the shortcomings of the results of this study.

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