



Jejak Vol 11 (2) (2018): 416-431, DOI: <https://doi.org/10.15294/jejak.v11i2.16061>

JEJAK

Journal of Economics and Policy
<http://journal.unnes.ac.id/nju/index.php/jejak>



Corruption, Poverty, and Economic Growth (Causality Studies among Asean Countries)

Zuhairan Y. Yunan^{1✉}, Ayu Andini²

^{1,2}Economics Department, UIN Syarif Hidayatullah Jakarta

Permalink/DOI: <https://doi.org/10.15294/jejak.v11i2.16061>

Received: April 2018; Accepted: June 2018; Published: September 2018

Abstract:

Corruption has causal impacts on economic and social development indicators. The discussion on this issue is widely interesting among economists, especially in Southeast Asia Countries which have been considered that has as a corrupt governance system. The objective of this study is to analyze the causality of corruption, poverty, and economic growth among ASEAN countries between 2002 and 2015. Four countries have been chosen since they have the same characteristics in term of the indicators presented. Granger causality test and Random Effect Model have been used to answer problem question of this paper. The results show that statistically, both of economic development indicators have a significant effect to corruption, while each indicator has a different direction. Meanwhile, causality test presents a tendency in Philippines. Hence, it is only economic growth is affecting corruption significantly and it occurs between poverty and corruption as well. In Thailand, different result shows that the causality happens poverty and economic growth indicators. However, Indonesia and Malaysia have no causality at all.

Keywords: corruption, poverty, economic growth, causality test, random effect model.

JEL Classification: D73; P46; O47

How to Cite: Yunan, Z., & Andini, A. (2018). Corruption, Poverty, and Economic Growth (Causality Studies among Asean Countries). *JEJAK: Jurnal Ekonomi dan Kebijakan*, 11(2), 416-431.
doi:<https://doi.org/10.15294/jejak.v11i2.16061>

✉ Corresponding author :
Address: Jl. Ir. H. Djuanda No. 95, Ciputat, South Tangerang,
Banten, Indonesia
E-mail: zuhairan@uinjkt.ac.id

INTRODUCTION

Transparency and accountability are often discussed in many countries to see the quality of governance. Corruption became the most dominant issue in the quality of the bureaucracy, and in 2005 the UN Convention was held to fight corruption. Corruption is also considered an extraordinary crime since it destroys the social order by taking the rights of others for benefiting certain people as well as their cronies.

The World Bank (2009) identifies corruption as one of the biggest obstacles to economic growth, social development and poverty reduction. This is due to the extent of the scope of corruption activities and their confidential nature. Legislation related to public policy issue regarding corruption eradication is a challenge in the future (Sahakyan & Stiegert, 2014).

Lambsdorff (2007) said that corruption has become an issue in political science as well as social sciences in recent centuries, but it is still difficult to find a systematic approach. Corruption is an economic issue even since the Adam Smith era. Smith observed how the British government from 18th to 19th centuries that had monopoly power over international trade was closely related to corruption. In some cases, the economy in a country, corruption is one indicator that causes the country experiencing shortages in terms of income. In a perspective of World Bank, corruption reduces the effectiveness of public administration and distorts public spending decisions. Corruption reflects the failure of the "market" in either economically and politically (Jain, 2001). Although corruption makes itself seen as an economic transaction, political institutions should be able to control and to fight this type of crime.

Southeast Asia is one of Asia region, which consists of 11 countries has a Geopolitics relationship. It has been started since 1967 as an association passed in Bangkok and called the Association of Southeast Asian Nations or commonly known as the ASEAN (Association of South East Asian Nations). This association is aimed at promoting economic growth as well as social and cultural progress. However, most of the ASEAN countries has been affected by corruption issues. It becomes a major obstacle in economic growth and community welfare.

Table 1. GDP per Capita of ASEAN Countries

Countries	2015	2016	2017*
Singapore	54,939.8	55,970.4	57,713.3
Brunei	31,047.0	26,935.1	29,711.9
Malaysia	9,505.3	9,374.1	9,812.8
Thailand	5,830.8	5,970.4	6,590.6
Indonesia	3,369.3	3,604.3	3,875.8
Philippines	2,882.7	2,953.4	2,976.3
Vietnam	2,087.8	2,171.8	2,353.7
Lao PDR	2,212.4	2,416.9	2,540.5
Myanmar	1,147.3	1,210.5	1,263.9
Cambodia	1,167.7	1,277.7	1,389.6

Source: <https://www.statista.com>
(Timor Leste Excluded)

According to World Bank, one of developed country requirements is having a USD 12,000 GDP per capita minimum. From table 1, only Singapore and Brunei are confirmed as developed countries, while others are still below than that. However, Malaysia has started to catch up with its country. In addition, the quality of bureaucracy (Country Risk Assessment) in ASEAN countries is in the low level. So, it potentially affects spaces for doing corruption. This assumption is reinforced by the findings made by (Cuervo-cazurra, 2008) stated that countries are undergoing economic transition actually have a positive

relationship with other development indicators.

One of indicators to measure corruption is Corruption Perception Index (CPI) published by Transparency International. It describes perceived level of corruption per country based on score from 0 (highly corrupt) to 100 (very clean). Table 2 gives indication that the average CPI score of ASEAN countries is low, representing the poorest value is the more corrupt. However, only Singapore, Brunei, and Malaysia have high scores. Developing countries like Indonesia has a low CPI since level of corruption in this country is high. One of possible reason that corruption higher is bureaucracy and regulations in giving permits to investors.

Table 2. CPI of ASEAN Countries

Countries	2015	2016	2017
Singapore	85	84	84
Brunei	n/a	58	62
Malaysia	50	49	47
Thailand	38	35	37
Indonesia	36	37	37
Philippines	35	35	34
Vietnam	31	33	35
Lao PDR	25	30	29
Myanmar	22	28	30
Cambodia	21	21	21

Source: <https://www.transparency.org> (Timor Leste excluded)

In 2003, the United Nations Convention against Corruption (UNCAC) has formulated policies and anti-corruption program. It has also been ratified by various countries. In addition, all international institutions including ASEAN declare war on corruption. On the following year, ASEAN countries leaders signed the "Bali Concord II", which agreed on a corruption-free regional area. The UN Convention states that the current criminal issues in the world are

transnational, including corruption. Moreover, in 2004, the Memorandum of Understanding (MoU) has been signed by Southeast Asia country leaders to provide an assistance in the deterrence of corruption offenders through SEA-PAC (South East Asian Parties to the Anti Corruption).

In 2017, Singapore had 84 points of corruption index, representing the 6th highest clean country in the world and this is the best position among ASEAN members. Other countries such as Brunei and Malaysia are on average point (62 and 47), which are much better than other countries. However, Indonesia and Thailand have almost the same rank. Therefore, ASEAN countries are still struggling to realize clean governance.

The success of development is how government can alleviate poverty and increase economic growth. The government's development is supposed to provide prosperity to its people. Kanbur & Squire (1999) said that poverty occurs because of the impact of government policy. Pro-poor government policies will improve health and education of societies. Research conducted by Chetwynd (2003) described that one of causes increasing poverty is corruption. The high corruption in a country affects investors are reluctant to invest. It will have an impact on low economic growth.

Referring to the Head Count Ratio (HCR) in table 3 shows that the composition of community who are included on poverty category is still fully attention for four ASEAN countries.

Table 3. HCR of ASEAN Countries

Countries	2012	2013	2014	2015
Malaysia	1.7	1.5	0.6	0.5
Thailand	12.6	10.9	10.5	10.2
Indonesia	12	11.4	11.3	11
Philippines	25.23	24.7	23.55	22.45

Source: UNDP, 2015

Economic development aims to promote economic growth which can be affected in reducing poverty as well as inequality. Adelman (1999) stated that the success of economic development has been measured by several elements such as sustainable growth, structural changes in production patterns, technological advances, socialization, politics, and the welfare of society.

ASEAN countries economic growth has always shown a positive trend especially for the four ASEAN countries shown in the table 3. They are able survive amidst global economic that is still considered on weak conditions. The relationship between corruption and economic growth is still much debate by academicians. Majority of economists state that corruption is a obstacle to the development of a country, and corruption is believed to play an important role to pose a trap of poverty (Blackburn, Bose and Haque, 2006).

Some studies have very contradictory results. Corruption can be beneficial to the economy, as it will become "oil" for the acceleration of a country's development process (Huntington, 1968; Lui, 1985; Acemoglu and Verdier, 1998). In contrast, the increasing of corruption will reduce economic growth, and can even incur huge bureaucratic costs (Tanzi and Davoodi, 1997; Mo, 2001; Guriev, 2004). Another review ever conducted by Treisman (2000) and Paldam (2001; 2002) found that corruption is a disease driven by poverty in developing countries. Research conducted by (Yun *et al.*, 2015) stated that in the long term there is a negative relationship between corruption and economic growth. These result is consistent with research conducted by (Shera, Dosti and Grabova, 2014) revealed that there is a statistically significant

negative relationship between corruption and economic growth.

Causality study regarding corruption and poverty has been conducted by (N'zune and N'guessan, 2006). The finding shows that poverty and growth together lead to corruption and inequality together with the growing causes of corruption. Waluyo (2010) has several different finds that poverty has no impact on economic growth and corruption, and vice versa. While economic growth leads corruption, both combination poverty and corruption affect economic growth. However, poverty and economic growth leads corruption. In general Klitgaard (1988) and Colombatto (2003) also 419 variable corruption theoretically with different institutional environments and find that in some cases, corruption can be efficient in developed countries as in totalitarian states.

Adequate institutional facilities must exist in developing countries to reduce losses due to corruption especially in and after the period of economic growth (Wright and Craigwell, 2013). Corruption undermines economic growth, reduces investors, public expenditure productivity, resource allocations (Gyimah-brempong, 2002; Mathew *et al.*, 2013; Shera, Dosti and Grabova, 2014). In addition, other results stated that interactions between corruption and governance shape the efficiency of public spending, and political instability (Dridi, 2013; Dzhumashev, 2014). Moreover, corruption has a direct negative impact on GDP per capita (Pulok, 2011; Swaleheen, 2011). While the United States of America also has a bad impact of corruption, corruption plays an important and causal role in reducing growth and investment across the state (Johnson, Lafountain and

Yamarik, 2010). Likewise, a study conducted by (Huang, 2015) on corruption and economic growth in the Asia-Pacific Country stated that the increasing of

growth is the result of increased corruption, whilst this is certainly not effective for their country's economy. Another aspect of corruption research on economic growth is that by (Glaeser and Saks, 2004) obtained country with higher GDP per capita and more education is generally less corrupt.

According to Chetwynd et al. (2003), poverty is linked to access and quality of public services that are vital for the poor such as health, education, water, infrastructure and sanitation. It is also about lack of opportunity, information, voice, representation. The relationship between corruption and poverty is complex. At the macro level, corruption affects poverty through declining economic growth, reduces foreign and domestic investment, distorts market, stifling competition, and an inequality. Corruption is more likely to increase poverty as it reduces poor's potential income. Therefore, the eradication of corruption is a crucial issue in the process of poverty alleviation. Alternatively, poverty is usually indicated by low income which is the low level of education and health, vulnerability and helplessness. Social inequalities and incomes in poor countries create a greater imbalance in the distribution of power and encourage corruption (Ndikumana, 2006).

RESEARCH METHODS

This study focuses on four ASEAN countries i.e. Indonesia, Malaysia, Thailand, and the Philippines by studying three interrelated variables (corruption, economic growth, and poverty). Panel regression has

been employed to analyse this study using 14 time points (2002 to 2015).

In general, corruption has been defined as unlawful actions to enrich someone and others or a corporation that results in state or economic losses. In this study, corruption is measured by an index commonly known as the Corruption Perception Index developed by Transparency International. This index is the result of a quantitative survey of business people in a country. The score of this index has a range of 0-10. In addition, economic growth is measured in the form of percentage changes every year. If economic growth shows a positive number, then the country's economy tends to be in good condition. In this study, economic growth is obtained from the ratio of Gross Domestic Product from each country. Moreover, one of the social problems in every country is poverty. The size of a poverty can also varies from one to another. This study utilizes a measure of poverty published by UNDP and the World Bank, namely Head Count Ratio.

There are several ways that can be used to determine which technique is most appropriate on estimating panel data parameters. There are two tests to select panel data estimation techniques. First, the statistical test F (test chow test) is used to select between common and fixed effect method.

Second, the Hausman test is used to select between fixed effect and random effect method. From the results of accuracy testing, the best model used in this study is the Random Effect Model.

$$CPI_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 POV_{it} + e_{it} \quad (1)$$

where:

CPI : corruption perception index

GDP : economic growth

POV : poverty
 β_0 : intercept
 β_1, β_2 : coefficient of regression
 I : country
 t : time-period
 e : error term

Causal relationship between these variables has been tested using Engle-Granger Approach. Causality analysis has been associated with cointegration concept. It is approved that if two series are cointegrated and at least one way on Granger causality.

Table 4. Descriptive Statistics

	CPI	GDP	POV
Mean	3.47	5.01	15.96
Median	3.40	5.40	16.20
Maximum	5.20	7.60	33.40
Minimum	1.90	-1.50	0.50
Std. Dev	0.98	1.97	9.59
Skewness	0.35	-1.44	0.03
Kurtosis	2.03	5.02	1.88
Jarque-Bera	3.31	29.10	2.92
Probability	0.19	0.00	0.23
Sum	194.60	280.90	893.90
Sum Sq. Dev.	53.66	214.15	5061.01
Observations	56	56	56

Source: Research Data, (processed)

RESULTS AND DISCUSSIONS

According to descriptive statistics (table 4), the lowest corruption perception index among four ASEAN countries in this study is

1.90. This figure shows that all countries still need to work harder for improving the performance of bureaucracy. Although the highest score is 5.2, on average, it shows a very poor index, 3.47. This indicates that businesses owners are still very uncomfortable with corrupt behavior in the bureaucracy.

In the last 14 years, the average ratio of economic growth from four countries is 5.01 percent. This ratio shows that all countries still describing economic performance which tends to improve, although the lowest economic growth is -1.5 percent. In contrast to the conditions of poverty, the average poverty ratio in four countries was shown by the figure of 15.96 percent. It indicates that the poverty is still high.

The general description of the three variables studied in four countries analysed is disputed in the following discussion. First is about corruption.

Figure 1 gives information about the Corruption Perception Index in Malaysia, Indonesia, Thailand, and Philippines. Overall, it can be seen that while Malaysia is the country that has the highest score, three others have the index relatively same. However, it should be emphasized that there is no 100 percent accurate method for measuring corruption since the nature of corruption is hidden activities.

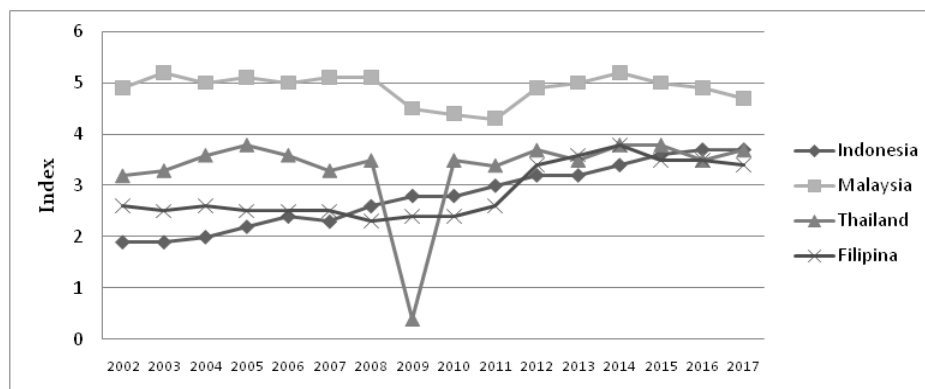


Figure 1. Corruption Perception Index of Malaysia, Indonesia, Thailand, and Filipina

Malaysia was recorded as a less corrupt country among the four ASEAN countries studied. According to Transparency International, Malaysia is ranked 50 out of 175 countries around the world. The corruption survey in Malaysia in 2013 stated that 90% of business organizations felt bribery and corruption needed to do business in Malaysia today. Transparency International (Malaysia) 2014's first Corruption Barometer (MCB) 2014 released in January this year recorded 45% of Malaysians felt the most corrupt political party, followed by police officers then the community and civilians.

Meanwhile, Transparency International, released the Indonesian Corruption Perception Index score, which ranges from 2-3 to a relatively corrupt country. This has an impact on growth and development in this country since the misallocation that occurs due to budget for development such as education, health, and social is not optimally channeled.

Based on data published by Corruption Eradication Commission (*KPK*), the number of corruption cases in political institutions has no tendency to decline every year. Corruption is always considered merely as a criminal matter is mostly done by those in the ministry. From 2004 to 2011, there were 91 corruption cases that occurred in the ministry, followed by 49 cases in municipalities/ districts government, 27 in the provincial government and the parliament, as well as 22 in National and Local Enterprise.

In addition, Global Corruption Barometer data shows that the parliament body is the most corrupt institution in Indonesia with a score of 3.6, followed by political parties and the police (3.5). Moreover, the judicial institution, public

official, and education system are between 3.0 and 3.49. However, military, media, non-governmental organizations, and religious institutions are the lower score.

In Thailand, corruption is also very serious problem. The World Bank Governance Indicators noted that corruption had deteriorated between 2005 and 2008, with indicators falling from 54.4 to 43.5 from a score of 100 and increasing in 2009 to 51. Whilst, Corruption perception Index recorded corruption scores for Thailand decreased for three years by 3.30 in 2007. This shows that corruption in the country is poor. Corruption that occurred in Thailand was caused more by the regime at that time enriching his family and cronies.

The lowest level of corruption is the Philippines, whereas, this country was a country that had economic power in the early 1960s. However, corruption is the most severe threat in the Philippines and society today. Corruption in the Philippines has become a "humanitarian crisis" Corruption deteriorates the rights of every citizen to good governance, freedom, a decent life, and more importantly dignity. Corruption is a serious obstacle to the social and economic development of a country. According to the 2008-2009 Global Competitiveness Report World Economic Forum, companies have identified corruption as the number one concern for doing business in the Philippines, and bribery is a crucial problem for companies.

In 2007, Global Corruption Barometer revealed that the Philippine business sector has problems with corruption, although the level of corruption in this sector is reported to have declined from the previous year. However, companies that plan to invest are encouraged to conduct due diligence when

entering into business partnerships or contracting agents to facilitate business transactions in this country. The Philippines private sector recognizes that corruption is a big problem that companies need to work towards solving.

Second is economic growth which determines the performance of the economy in every country. In Indonesia, the impact of the global financial crisis began to be felt especially towards the end of 2008. This was reflected in a significant economic slowdown mainly due to the drop of export performance. On the external side, Indonesia's balance of payments experienced a deficit and the rupiah exchange rate experienced a significant weakening. The increasingly integrated global economy and the deepening of the crisis have caused the economy in all countries to experience a slowdown in 2009.

In 2015 the Indonesian economy recorded positive developments. This is marked by better performance of macroeconomic stability. Although economic growth can be achieved positively, this is not easy given that this year various external challenges hit the Indonesian economy. This condition if not managed properly can result in increased macroeconomic instability and continued weakening of economic growth.

Meanwhile, Malaysia's economic growth also moved fluctuatively. Even minus recorded after the global economic crisis. Malaysia's economy recorded -1.5% in 2009 where the global economy experienced the deepest decline in the history of this century. The collapse of global demand and world trade caused a double-digit decline in Malaysian exports and industrial production.

In 2010, the Malaysian economy experienced a resurgence of strong growth

marked by a growth rate of 7.2%. This growth was mainly driven by strong domestic demand; and especially by the return of private sector trust to invest. Over the past decade, intra-regional relations in East Asia have strengthened significantly, and more recently during the global financial crisis, have provided support for recovery after the global financial crisis. Although the challenges of the international economy were quite strong in 2011, the Malaysian economy was quite stable marked by a 5.1% growth in the economy, seen to decline compared to 2010 at 7.2%.

One of the ASEAN countries, which is affected by the political impact is Thailand. It has implications for the country's economic instability. In 2009, the Thai economy recorded 2.3 percent year-on-year, the lowest for the first time in a decade, due to the global financial crisis that significantly affected Thailand, especially trading partner countries. As a result, Thailand's exports fell sharply which was caused by domestic consumption and investment. During the first quarter of 2009, Thailand's economy was most severely affected by the global economic crisis.

In 2010, Thailand began to restore its economy. This is marked by increasing economic growth reaching 7.5 percent year - on year. Facing several negative factors throughout the year, including uncertainty after the global economic crisis, domestic political unrest, exchange rate volatility and natural disasters. However, with strong economic fundamentals, together with accommodative fiscal and monetary policies Thailand succeeded in strengthening exports, tourism and domestic demand. During the period of 2011 to 2015, the condition of the Thai economy moved

fluctuatively. This was caused by Thailand's unstable political condition, marked by the occurrence of a coup during this period and had implications for the country's economic instability.

From the four of countries studied, the Philippines became the only country in ASEAN that quickly recovered in economic growth after the global economic crisis. As in other countries around the world, the global economic crisis in 2009 has affected the Philippine economy which is included in the lowest GDP in the past 11 years.

The recent challenges experienced by the Philippines have not weakened the country's macroeconomic fundamentals. This is the fastest growing economy in the ASEAN and has the second highest GDP growth rate in Asia, besides China. Hence, the Philippines was included in the country rankings in various 108 international surveys from 138 Global Competitiveness Reports.

In 2015, during deteriorating performance in economic growth among ASEAN countries, the Philippines became the only country that was stable in achieving economic growth. This has a strong fundamental. Poverty alleviation is expected to continue if the country can maintain relatively high economic growth and better employment trends in recent years.

The third variable is poverty. In ASEAN countries, poverty is quite high. Among the four countries examined, only Malaysia is the lowest number of poverty level (see figure 2). Meanwhile, in Indonesia, the poverty rate is slowed, from 2006 to 2010 poverty was reduced by 1.2% per year. However, from 2011 to 2014 poverty only decreased by 0.5% per year.

The government has made a poverty reduction program through the strategy that focuses on inclusive growth, although this is not enough to reduce poverty. The World Bank noted that 28 million Indonesians are still below the poverty line and 40% of the population are vulnerable to falling into poverty.

Although Indonesia's economic growth is quite good in ASEAN, it cannot be denied that this growth is not quality of economy because of the large number of poor people in Indonesia. Another problem faced by Indonesia is that corruption in the government causes misallocation. The quality of education, infrastructure, microfinance institution, society health assurance can be improved through lowering corruption. It has implication for reducing poverty.

In Malaysia, reducing poverty has done through National Economic Plan (NEP) program, which succeeded in reducing poverty in Malaysia to reach 0.5% in 2015.

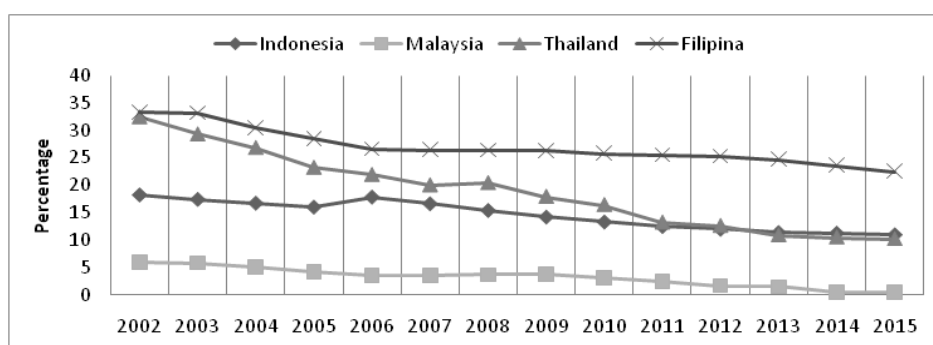


Figure 2. Poverty Headcount Ratio

Although Malaysia's growth experienced a slowdown since the global economic crisis in 2008, this country was able to reduce poverty significant. The Malaysian government is committed to providing welfare to the poor through special programs carried out to overcome poverty in a sustainable manner, especially in terms of providing income generating opportunities, as well as microcredit schemes. In addition, awareness to reduce poverty in Malaysia includes sharing of policy-making stakeholders targeting programs and project formulation and implementation of stakeholders.

Increasing productivity in education and training program has been done in Thailand to alleviate poverty. The state needs to reform at least three dimensions of governance quality i.e. Voice and Accountability, Political Stability and Absence of Violence, and the Rule of Law. There is plenty of evidence from countries around the world supporting that good governance reduces poverty, and that bad governance causes poverty. In economic theory, there are at least three ways of connecting government and poverty reduction: 1) economic growth; 2) effectiveness of assistance; and 3) human development. Poverty in Thailand is quite

high, but it needs to be appreciated by the decline in poverty in the last fourteen years. Poverty rate decreased from 32.4% in 2002 to 10.2% in 2015.

Meanwhile, poverty is one of the main challenges in the Philippines. The poverty ratio in the Philippines recorded a decline from 26.27% in 2009 to 25.23% in 2012. This figure still not able to reach the Millenium Development Goals target. Income distribution is quite high in the Philippines as well as a high level of poverty compared to countries in the ASEAN Region. Although economic growth is quite high in the Philippines, it is still not enough to alleviate poverty in the Philippines. A detailed discussion regarding the relationship between three variables is analysed from the estimation results through the following panel regression. Panel data model can be chosen by doing a Chow, Hausman, and LM test. Based on table 5, it can be seen the Random Effect Model is much better than others to explain panel regression. The results of the panel regression using Random Effect Model can be seen in Table 6. It can be explained by the following equation:

$$\text{CPI} = 3.960670 + 0.061384\text{GDP} - 0.049715\text{POV} \quad (2)$$

Table 5. Tests of Choosing Model

Chow Test			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	42.96	(3,50)	0.00
Cross-section Chi-square	71.38	3	0.000
Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.74	(2)	0.68
LM Test			
	Test Hypothesis		
	Cross	Time	Both
Breusch-Pagan	156.39 (0.00)	4.97 (0.00)	161.37 (0.00)

Source: Research Data, (processed)

Statistically, economic growth has a significant effect on corruption with a positive direction. This means that the increasing on economic growth will affect the improvement of corruption index. Hence, corruption will reduce properly. On the other hand, poverty has different results on affecting corruption. It has a negative effect which means that alleviating poverty will influence clean governance since corruption index increase. Coefficient determination (R^2) is 26.04 percent, representing that corruption variation can be explained by economic growth and poverty variations, while 73.96 are explained by others not included on this model.

The result shows that the four ASEAN countries are still considered corrupt. It can be seen from the constant value in the corruption equation. Moreover, the two variables (economic growth and poverty) have a significant effect to corruption. Economic growth coefficient revealed that by the promoting of growth 1 percent, corruption perception index will increase 0.06 percent. Hence, corruption reduces significantly. In line with the regression

coefficient of poverty variables, if there is a decrease 1 percent in the poverty rate, the level of corruption will experience an improvement of 0.04 percent. This figure shows that the level of poverty affects the level of corruption.

According to individual effect result, Indonesia and Philippines have negative coefficients. This sign indicates that corruption will reduce 0.89 percent in Indonesia and 0.14 percent in Philippines when Economic Growth and Poverty change in those countries.

Economic growth is the process of increasing production described by the rising of national income. It can be shown through the expansion of potential GDP reflected by the growth of output per capita which is an important target of the government. In addition, it is related to an increase in the real average income and standard of living. In the long run, the success of a country can be seen from the improvement of economic growth by using the “four wheels”, human resources, natural resources, capital formation, and technological progress.

Table 6. Panel Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.960670	0.518109	7.644473	0.0000*
GDP	0.061384	0.026991	2.274225	0.0270*
POV	-0.049715	0.012122	-4.101343	0.0001*
R-squared				0.268082
Adjusted R-squared				0.240463
F-statistic				9.706252
Prob(F-statistic)				0.000256
_Indonesia	-0.896279			
_Malaysia	0.787920			
_Thailand	0.254262			
_Philippines	-0.145903			

Source: Data Processed

* significant level 5%

In the relation between economic growth and corruption, many academics provide a confidence in development policies to reduce corruption. Svensson (2005) reveals that the institutional quality designed by economic factors can be shown by the strong relationship between economic growth and corruption. Hence, an increase in economic growth will reduce corruption and the quality of institutions can also be improved. Similar results are also indicated by (Brown and Shackman, 2007; Rehman and Naveed, 2007; Elbahnasawy and Revier, 2012) stated that corruption might be occurred in the short-run when economic growth increases significantly; however, it will reduce corruption in the long-term since the practice of corruption might be able to be detected and prevented by the countries which have sufficient resources. In line with economic growth, trade openness provides similar association to corruption.

Based on the theories of Shleifer & Vishny (1993), for instance, when a project needs to get permission from many people, where each of them has the power, the cost of corruption increases and economic growth declines. Corrupt official can use his power to delay and block the project. Hence, he can get more bribes. In addition, Krueger (1974) which is represented a classic study of rent-seeking inefficiencies through corruption with trade restrictions. "De facto", institutional environmental factors will further restrict economic activity rather than "de jure". However, there is also a reason that corruption is good for economic growth. Lui (1985) points out that corruption can shorten waiting time lists. In general, (Colombatto, 2003) also analyses corruption theoretically with different institutional environments. He found that in some cases, corruption can be

efficient in developed countries as in totalitarian countries.

Blackburn & Powell (2011) and Evrensel (2010) concluded that the relationship of corruption and economic growth in a country can be influenced also by a bureaucratic system that is not working properly causing new problems in a country. Then, according to Huang (2015), this corruption greatly affects one aspect of economic growth i.e. investment in that country where it will not run efficiently in public projects and hamper its investment path and will further obstruct its economic performance.

In this paper, there is a positive relationship between economic growth and corruption. It explains that the higher of economic growth can boost the level of corruption perception. In other words, the improvement of national incomes will affect the increasing of societies perception on corruption. From this, corruption will be reduced by improving economic performance of each country. However, a study revealed by (Yun *et al.*, 2015) stated that in the long term corruption affects economic growth in negative way. Hence, corruption will reduce economic growth. Although it has different direction, it can be concluded that good economic performance enables reducing the level of corruption.

Corruption is not only detrimental to the state's finances but also undermining development in every sector of a country that should be used for development that can benefit societies (Nwankwo, 2013). For example, the funds that should be allocated to the poor are misused by greedy and irresponsible people. Here, if there is no firm action against corruption, then in the long run will cause an increase in poverty levels in the country. Nwankwo (2014) also argued that

corruption has a negative impact on economic growth thus contributing to the increase of poverty rate in Nigeria. This statement also supports previous research as according to Negin et al. (2010) which advises against a massive and sustained anti-corruption effort.

A literature study conducted by Chetwynd et al. (2003) points that corruption cannot directly produce poverty. However, corruption has direct consequences for governance and economic governance factors, which in turn leads to poverty.

It is true that corruption does exacerbate and encourage poverty, but the pattern is not simple, but complex since it covers many factors in the economy and governance.

With these findings, it can be said that a variety of well-prepared budget transparency and anti-corruption programs to address issues of economic growth, income distribution, government capacity, government services in health and education, and public trust in government, will be not only impact on eradicating corruption, but also poverty (Wijayanto, 2010). It can be said that there is a positive relationship between corruption and poverty. The point is that when there is an increase in the number of corruptions it will cause an increase in the level of poverty in a country. This can happen of course because of the "robbery" of state money by certain individuals who should be allocated for the welfare of societies.

Table 7. Causality Test

Countries	Variable	Obs	Prob.
Indonesia	GDP does not Granger Cause CPI	12	0.5668
	CPI does not Granger Cause GDP		0.9036
	POV does not Granger Cause CPI	12	0.2001
	CPI does not Granger Cause POV		0.1561
	POV does not Granger Cause GDP	12	0.7175
	GDP does not Granger Cause POV		0.6850
Malaysia	GDP does not Granger Cause CPI	12	0.1717
	CPI does not Granger Cause GDP		0.9073
	POV does not Granger Cause CPI	12	0.6717
	CPI does not Granger Cause POV		0.4420
	POV does not Granger Cause GDP	12	0.4191
	GDP does not Granger Cause POV		0.6700
Thailand	GDP does not Granger Cause CPI	12	0.4407
	CPI does not Granger Cause GDP		0.9890
	POV does not Granger Cause CPI	12	0.4946
	CPI does not Granger Cause POV		0.1904
	POV does not Granger Cause GDP	12	0.0499*
	GDP does not Granger Cause POV		0.8138
Philippines	GDP does not Granger Cause CPI	12	0.6424
	CPI does not Granger Cause GDP		0.0743**
	POV does not Granger Cause CPI	12	0.6848
	CPI does not Granger Cause POV		0.0079*
	POV does not Granger Cause GDP	12	0.9150
	GDP does not Granger Cause POV		0.5534

Source: Data Processed

* significant level 5%; **significant level 10%

From the above reviews on corruption and poverty, we can draw the conclusion that overall corruption is very influential on poverty, because indirectly corruption has deprived the rights of others, to the detriment of the State and societies. If corruption continues to grow and become a habit it will be bad for both the State and for the communities. Therefore, moral education, ethics, attitude is very early in the wake, to be a good basis for everyone when they do something. The relationship between corruption and poverty is a negative. Poverty will be reduced by the increasing of corruption perception index.

In the Philippines, there are two causality effect in the direction of Corruption and Economic Growth. This means that only Economic Growth is statistically significant affecting Corruption and does not apply otherwise. Similar causality also occurs between the variables of Corruption and Poverty. The results show that statistically, Poverty affects Corruption and does not apply otherwise.

The different results are shown in Thailand. Unidirectional causality occurs only between the variables of Poverty and Economic Growth. These results mean that statistically, Economic Growth affects Poverty and does not apply otherwise.

CONCLUSION

Overall economic growth and poverty rates affect corruption behavior in all countries analyzed. Both variables individually also show their influence for bureaucratic improvement in the four ASEAN countries. Although individual effect for each country is different, the characteristics for each variable are also different. However, Corruption Perception Indexes for Malaysia

and Thailand tend to be better compared to Indonesia and the Philippines. A good level of economic growth will increase business confidence to invest in investing, as the increase in economic growth will encourage corrupt behavior to decline. It is also with the decline in poverty levels. A low poverty rate is likely to have a positive impact on corrupt behavior, which means the rate of corruption declines.

The causality relationship that occurs occurs only in Thailand and the Philippines for the three variables. But all three have only one-way causality. As for the State of Indonesia and Malaysia did not happen a causal relationship between these variables.

It is imperative that both macroeconomic indicators, economic growth and poverty, should be a serious concern for four ASEAN countries. Increasing economic growth based on domestic strength will encourage national production to increase so that it will open many jobs in various fields. The governments of four countries can also work in various sectors to advance their economies. With the levelling of growth, it will create a clean government. In addition, the poverty rate should also be a government's priority. Reducing this number through the number of job opportunities will improve people's purchasing power and minimize inequality among them. Hence, the potential for corrupt deeds is likely to be minimized.

REFERENCES

- Acemoglu, D. and Verdier, T. (1998) 'Property rights, corruption and the allocation of talent: a general equilibrium approach', *The Economic Journal*, 108(450), pp. 1381-1403. Available at: <http://www.jstor.org/stable/2566185>.
- Adelman, I. (1999) *Fallacies in development theory and their implications for policy*. 887. California.
- Blackburn, K., Bose, N. and Haque, M. E. (2006) 'The

- incidence and persistence of corruption in economic development', *Journal of Economic Dynamics & Control*, 30, pp. 2447-2467. doi: 10.1016/j.jedc.2005.07.007.
- Blackburn, K. and Powell, J. (2011) 'Corruption, inflation and growth', *Economics Letters*. Elsevier B.V., 113(3), pp. 225-227. doi: 10.1016/j.econlet.2011.06.015.
- Brown, S. F. and Shackman, J. (2007) 'Corruption and Related Socioeconomic Factors: A Time Series Study', *KYKLOS*, 60(3), pp. 319-347.
- Chetwynd, E., Chetwynd, F. and Spector, B. (2003) *Corruption and poverty: a review of recent literature*. Washington.
- Colombatto, E. (2003) 'Why is corruption tolerated?', *The Review of Austrian Economics*, 16(4), pp. 363-379.
- Cuervo-cazurra, A. (2008) 'Better the devil you don't know: Types of corruption and FDI in transition economies ☆', *Journal of International Management*, 14, pp. 12-27. doi: 10.1016/j.intman.2007.02.003.
- Dridi, M. (2013) 'Corruption and Economic Growth: The Transmission Channels', *Journal of Business Studies Quarterly*, 4(4), pp. 121-152. Available at: http://jbsq.org/wp-content/uploads/2013/06/June_2013_9.pdf.
- Dzhumashev, R. (2014) 'Corruption and growth: The role of governance, public spending, and economic development', *Economic Modelling*, 37, pp. 202-215. doi: 10.1016/j.econmod.2013.11.007.
- Elbahnasawy, N. G. and Revier, C. F. (2012) 'The Determinants of Corruption: Cross-Country-Panel-Data Analysis', *The Developing Economies*, 50(4), pp. 311-333. doi: 10.1111/j.1746-1049.2012.00177.x.
- Evrensel, A. Y. (2010) 'Corruption, growth, and growth volatility', *International Review of Economics and Finance*, 19, pp. 501-514. doi: 10.1016/j.iref.2009.08.002.
- Glaeser, E. L. and Saks, R. E. (2004) *Corruption in America*. 10821. Massachusetts Avenue, Cambridge. Available at: <http://www.nber.org/papers/w10821>.
- Guriev, S. (2004) 'Red tape and corruption', *Journal of Development Economics*, 73, pp. 489-504. doi: 10.1016/j.jdeveco.2003.06.001.
- Gyimah-brempong, K. (2002) 'Corruption, economic growth, and income inequality in Africa', *Economics of Governance*, 3, pp. 183-209.
- Huang, C.-J. (2015) 'Is corruption bad for economic growth? evidence from Asia-Pacific countries', *North American Journal of Economics and Finance*. doi: <http://dx.doi.org/10.1016/j.najef.2015.10.013>.
- Huntington, S. P. (1968) *Political Order in Changing Societies*. 7th edn. London: Yale University Press.
- Johnson, N. D., Lafountain, C. L. and Yamarik, S. (2010) 'Corruption is bad for growth (even in the United States)', *Public Choice*, p. 17. doi: 10.1007/s1127-010-9634-5.
- Kanbur, R. and Squire, L. (1999) *The evolution of thinking about poverty: exploring the interactions*. 99-24. New York. Available at: http://ageconsearch.umn.edu/record/127697/files/Cornell_Dyson_wp9924.pdf.
- Krueger, A. O. (1974) 'The political economy of the rent-seeking society', *American Economic Association*, 64(3), pp. 291-303.
- Lambsdorff, J. G. (2007) *The institutional economics of corruption and reform: theory, evidence, and policy*. 1st edn. New York: Cambridge University Press. Available at: www.cambridge.org/9780521872751.
- Lui, F. (1985) 'An Equilibrium Queuing Model of Bribery', *Political Economy*. JSTOR, 93, pp. 760-781. doi: 10.1086/261329.
- Mathew, R. E. et al. (2013) 'Analysis of corruption and economic growth in Nigeria', *Afro Asian Journal of Social Sciences*, 4(4.2), pp. 1-19.
- Mo, P. H. (2001) 'Corruption and Economic Growth', *Journal of Comparative Economics*, 29, pp. 66-79. doi: 10.1006/jcec.2000.1703.
- N'zune, F. F. and N'guessan, C. J. F. (2006) *The causality between corruption, poverty, and growth: a panel data analysis*. 1. Ottawa.
- Ndikumana, L. (2006) *Corruption and pro-poor growth outcomes: evidence and lesson for African countries*. 120. University of Massachusetts Amherst.
- Negin, V., Rashid, Z. A. and Nikopour, H. (2010) *The causal relationship between corruption and poverty: a panel data analysis*. 24871. Munich. Available at: <https://mpra.ub.uni-muenchen.de/24871/>.
- Nwanko, O. (2014) 'Impact of Corruption on Economic Growth in Nigeria', *Mediterranean Journal of Social Sciences*, 5(6), pp. 41-46. doi: 10.5901/mjss.2014.v5n6p41.
- Nwankwo, R. N. (2013) 'Official corruption and poverty reduction in Nigeria: a critical assesment (2003-2010)', *International Journal of Arts & Sciences*, 6(2), pp. 305-329.
- Paldam, M. (2001) 'Corruption and religion adding to the economic model', *International Review for Social Sciences (KYKLOS)*, 54(April), pp. 383-413. doi: 10.1111/1467-6435.00160.
- Paldam, M. (2002) 'The cross-country pattern of corruption: economics, culture and the seesaw dynamics', *European Journal of Political Economy*, 18, pp. 215-240. doi: 10.1016/S0176-2680(02)00078-2.
- Pulok, M. H. (2011) *The impact of corruption on economic development of Bangladesh: evidence on the basis of an extended solow model*. 28755. Munich. Available at: <https://mpra.ub.uni-muenchen.de/28755/>.
- Rehman, H. U. and Naveed, A. (2007) 'Determinants of

- Corruption and its Relation to GDP: (A Panel study)', *Journal of Political Studies*.
- Shera, A., Dosti, B. and Grabova, P. (2014) 'Corruption impact on economic growth: an empirical analysis', *Journal of Economic Development, Management, IT, Finance and Marketing*, 6(2), pp. 57-77.
- Shleifer, A. and Vishny, R. W. (1993) 'Corruption', *The Quarterly Journal of Economics*, 108(3), pp. 599-617.
- Svensson, J. (2005) 'Eight Questions about Corruption', *Journal of Economic Perspectives*, 19(3), pp. 19-42.
- Swaleheen, M. (2011) 'Economic growth with endogenous corruption: an empirical study', *Public Choice*, 146, pp. 23-41. doi: 10.1007/s1127-009-9581-1.
- Tanzi, V. and Davoodi, H. (1997) *Corruption, Public Investment, and Growth*. WP/97/139.
- Treisman, D. (2000) 'The causes of corruption : a cross-national study', *Journal of Public Economics*, 76, pp. 399-457. doi: doi.org/10.1016/S0047-2727(99)00092-4.
- Waluyo, J. (2010) 'Analysis of causality between corruption, economic growth, and poverty: a cross-country study', *Economic Bulletin*, 8(2), pp. 159-169.
- Wright, A. S. and Craigwell, R. (2013) 'Economic growth and corruption in developing countries: evidence from linear and non-linear panel causality tests', *Business, Finance & Economics in Emerging Economies*, 8(2), pp. 21-43.
- Yun, C. H. et al. (2015) *The relationship between corruption and economic growth in Malaysia*. Malaysia.