

THE EFFECT OF CORRUPT BEHAVIOR ON THE FLOW OF FOREIGN DIRECT INVESTMENT TO INDONESIA

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Submission date: 23-Mar-2020 09:58AM (UTC+0700)

Submission ID: 1280077412

File name: 2018_ACFE_FDI.pdf (1.15M)

Word count: 4507

Character count: 24241

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**THE EFFECT OF CORRUPT BEHAVIOR ON THE FLOW OF FOREIGN
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ARTICLE INFORMATION

Article history:

Received Sept 03, 2017

Revised Dec 18, 2017

Accepted March 07, 2018

JEL Classifications

D73; F21

Key Words:

International Economics;

Investment;

Corruption;

Foreign Direct Investment;

Corruption Perceptions Index

DOI:

10.21532/apfj.001.18.03.01.18

ABSTRACT

The objective of this paper is to find out whether corrupt behavior can affect the foreign investment flow to Indonesia. Corrupt behavior in Indonesia is proxied using Corruption Perceptions Index (CPI) issued by Transparency International institution. This study was conducted empirically through a single model built using a gravity model with panel data regression. The variables included in the model are capital flows, bilateral factor, economic size of home country, economic size of host country, barrier of investment, and global factors. The bilateral factor is reviewed using the competition of foreign investment flow to China. The investment constraint, in the form of corruption, is reviewed using the Corruption Perceptions Index (CPI). The result of the research shows that foreign investors are very concerned about corruption in Indonesia which is considered as a barrier and obstacle in investment. The high level of corruption has resulted in a decrease in the flow of foreign direct investment into Indonesia. This should be cautioned because corruption in Indonesia has had a negative effect on the investment climate in Indonesia.

1. INTRODUCTION

The Indonesian economy is deeply affected by the principle of the global economy because it embraces an open economic system. The Indonesian economy will deal with other countries' economies in trading (export-import) and investment, both directly and indirectly. In the midst of the current economic slowdown, Indonesia is expecting a significant influx of Foreign Direct Investment (FDI) to help recover the economic condition, which requires considerable funding and labor absorption. In investing its capital, the first thing to do by a Multinational Corporation

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(MNC), as a home country, is to study the condition factors of the host country.

There are several determinants that affect FDI (Chantasawat, 2005), such as market size variables, labor market conditions, institutional variables, policy variables and global supply of FDI. Foreign investors will be more interested in countries with better local markets, as indicated by the growth rate of GDP as a potential level of demand, and real GDP per capita as an indicator of the potential market size for the products of foreign investors. The expected result is that the higher the GDP, the higher the demand for domestic assets.

One of the decisive factors that need to be identified in determining the amount of FDI flow is the obstacle to enter and start an investment in a country. This can be measured from several variables, such as wage of labor, infrastructure, and transparency of the government. From the explanations, there are attraction and rejection in starting foreign investment to Indonesia. The attraction factor is the size of the economy owned by Indonesia, while the rejection factor is the obstacle in doing business.

From the illustration presented above, the researcher would like to see the obstacle (corrupt behavior) faced by foreign investors in investing their capital to Indonesia. In addition, the researcher also would like to find out whether the corrupt behavior has greater negative effect than the appeal of the size of Indonesian economy in determining the policy to invest in Indonesia.

2. THEORETICAL FRAMEWORK

Each country has the goal to increase its economic growth. There are many ways that can be used to achieve that goal. Along with the globalization of liberalization in the economic field, policy makers and economists across the world see investment as one way to boost economic growth. Investment, either directly or indirectly, is aimed at obtaining certain

benefits. Investment decisions are always faced with risks and benefits that lead investors to choose investments that promise the highest profit levels and lowest risk levels. In investing its capital, a Multinational Company (MNC) in a home country will surely learn the condition factors of the host country when it will channel its capital as FDI (Foreign Direct Investment). Foreign investors, in investing in Indonesia, always evaluate Indonesia's macroeconomic and microeconomic performance.

In accordance with the theories of economic development, the important role of investment has been put forward by many economists. One of the main sources of investment is domestic savings. But in many developing countries, including Indonesia, the source of savings remains so limited that it has to rely on foreign capital in the form of loans, aid, direct investment and portfolio investment. Therefore, every country in this world must require capital flow that enters the country (capital inflow) as one of development funds. The international capital flows consist of private capital and government capital.

For the developing countries, private capital flows are an opportunity to obtain financing funds for economic development. FDI provides relatively large and stable contribution. Portfolio investment and commercial loans also provide large contribution, but these kinds of capital inflow provide high volatility, especially on the types of bank loans and short-term securities. FDI is an investment that provides one of the most important sources of funding for developing countries. The entry of FDI in a country shows the confidence of foreign investors to conduct economic activities to the country, so it will stimulate the number of other capital inflow. This will add many international official reserves from the country.

Corruption and Foreign Direct Investment

Corruption comes from the Latin verb "corrumpere" which means rotten,

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destabilizing, twisting, bribing. According to Black's Law Dictionary, corruption is illegality; a vicious and fraudulent intention to evade the prohibitions of the law. The act of an official or fiduciary person who unlawfully and wrongfully uses his station or character to procure some benefit for himself or for another person, contrary to duty and the rights of others. The American Encyclopedia defines corruption as an act of doing self-perpetuating crime that directly or indirectly harms the state's finances / economy. According to Transparency International, corruption is the behavior of public officials, both politicians and civil servants, who unfairly and illegally enrich themselves or enrich those close to them, by abusing the public power entrusted to them. In criminal law, corruption is defined as a bad deed like embezzlement, receipt of bribes and so on.

According to the World Bank, corruption is a misuse of power for personal gain. In the political, democratic, and good governance aspects, corruption can destroy the established formal processes. In the economic aspect, corruption complicates economic development, where in private sector, corruption increases costs due to illegal payments and the risk of cancellation of agreements. Corruption can also disrupt the world of commerce through the creation of new rules and new barriers. Companies that are close to the state officials are protected from competition, thus making companies inefficient (Nawatami, 2013).

Terrence Gomes (2000) explains how corruption can occur using several theories. Robert Robert's Means-Ends Scheme Theory states that corruption is a human behavior caused by social pressure, causing violations of norms. Social Solidarity Theory considers that human nature is actually passive and controlled by society. Vroom theory states that corruption is a negative value of one's expectation to achieve something. This theory considers that a person's motivation to do something

is influenced by the expectations and values contained in each person. Robert Kitgaard's theory states that monopoly of power coupled with high discretion of officials but minus accountability may cause an impetus to commit corruption. Theory of Ramirez Torres explains that corruption is a crime of calculation, not just a passion. Someone will corrupt if the reward obtained is higher than the penalty earned with the small possibility of being captured. Gone Theory is associated with factors that lead to fraud or corruption that include greed, opportunities, needs and exposure.

Many hypotheses state that corruption can reduce the level of investment. Corruption will directly add to the transaction costs and inflate the costs of a project, and even it has been started before the project begins to build. Investors already have to pay money in order to get an investment license. Once the project starts operating, the producers still have to pay various fees, including bribes. In addition, corruption can adversely affect foreign direct investors and international creditor. The debtor countries, with large corruption, will provide the possibility of stopping paying debts, or nationalizing FDI assets.

From his literature study, Basyaib (2002) shows that bribery costs strongly influence the decisions made by investors when choosing a location for investment. Corruption also creates uncertainty of the flow of income and expenses, which makes it difficult for potential investors to calculate exactly the net present value of a project. With increasing uncertainty, an investor will refuse to invest his capital even though he knows that his project will be profitable. Finally, corruption also degrades the quality of physical infrastructure. This will certainly affect the business environment in the country. Basyaib also explains that the increase in a single unit of corruption index will increase the investment ratio. Increased corruption perceptions will result in the decrease of the ratio between foreign capital

investment and GDP (gross domestic income). Indonesia would be able to increase the ratio of foreign capital investment, if it could improve the corruption perception index.

Wei (2000) also states that in terms of field tenure, direct investors usually have a more favorable position than investors through the capital market. They place their people in management positions and gather information about the host country's economy. However, the profits are thinned in corrupt countries. The more often foreign investors connect with the local bureaucracy, the more increasing their coercion and extortion to pay "bribe" money. Direct investors clearly interact more with the local bureaucracy than the portfolio investors through the capital market. Direct investment includes sunk costs which is greater than bank loans. Once cash capital is embedded, corrupt officials begin to storm the project with demand for bribes and forced donations. There are also findings that corruption will also change the composition of capital inflows. Direct investment consists of cash capital and capital obtained in the form of credits from creditors. A country with a high level of corruption shows that the inflow of foreign capital in cash is less than the debt capital. Embedded cash capital is more easily undermined by corrupt officials than the debts of foreign creditors.

3. RESEARCH METHOD

The empirical approach in this study is done by using gravity analysis. The model of gravity was originally found in Newton's physics theory where two objects attract one another according to the proportion of their mass divided by the square of the distance of both objects (Sohn and Yoon, 2001). The application for the international economy is in explaining bilateral flows, either in terms of trade, FDI, or foreign portfolio investment (which is positively related to the attractiveness of the economy size of the two parties (eg population and GDP or gross domestic product)

and negatively related to the distance / obstacle (Mody, Razin and Sadka, 2003).

The gravity model used to describe the observational variations of the FDI flow was first built in 1960 which was originally to explain the flow of bilateral trade from country i to country j . Early version of the gravity model is as follows (Sohn and Yoon, 2001):

$$T_{ij} = A_{ij} \cdot (Y_i Y_j / \text{Dist}_{ij}) \quad (1)$$

where T_{ij} is a bilateral trade flows (exports + imports); Y_i is the GDP of state i ; Y_j is the GDP of country j ; Dist_{ij} is the distance between country i and country j ; and A_{ij} is constant of proportionality.

The basic model is developed and applied to the FDI flow model. Bos and van de Laar (2004) rewrite it down:

$$\text{FDI}_{ij} = A_{ij} \times ((\text{GDP}_i \times \text{GDP}_j) / \text{Dist}_{ij}) \quad (2)$$

where FDI_{ij} is the actual FDI flow volume from home country i to host country j ; GDP_i is the actual GDP of home country; GDP_j is the actual GDP of host country; Dist_{ij} is the distance between home country i and host country j ; and A_{ij} is constant of proportionality.

This equation is an equilibrium condition in a long run, where FDI_{ij} is expected to be the same as the actual FDI_{ij} . However, in reality there are countries that accept smaller FDI or even greater than expected. In this model, there is a constant A_{ij} where if one GDP of a country leads to a value of zero then the flow of FDI between the two countries is also zero, here the value of A_{ij} becomes a proportional constant.

We can create a function that explains the relationship between variables according to the gravity model. The flow of FDI is directly proportional to the per capita GDP and population of the host country (positive sign), and is inversely proportional to the distance between the MNC country and the host country

(negative sign). So in this basic model gravity, there is a relationship:

$$FDI = f(A_{ij}, GDP_i, GDP_j, Dist_{ij}) \quad (3)$$

By performing modified gravity model between domestic model and regional model, a regression model can be formed as follows (Kennedy, 2014):

$$FDI_{hos,t}^{hom} = \beta_o + \beta_c \times FDI_{cina,t}^{hom} + \sum_{p=1}^2 \beta_p \times bilateral\ factors_{ind,t,p}^{hom} + \sum_{q=1}^2 \beta_q \times hom\ size_{hom,t,q} \\ + \sum_{r=1}^4 \beta_r \times hos\ tsize_{ind,t,r} + \sum_{s=1}^4 \beta_s \times investment\ barrier_{ind,t,s} + \beta_w \times FDI_{world,t} + \epsilon_{ind,t}^{hom} \quad (4)$$

The dependent variable used in this study is capital flows (FDI flow from home country to Indonesia). While the independent variables include FDI flow from home country China, bilateral variables (bilateral variables between home country and Indonesia), host country factors (variables of conditions affecting the economy in Indonesia), home country variables (GDP variables from home country), and global factors (ie total world FDI flow and world oil prices). All of these dependent variables will be tested in relation to the FDI flow in Indonesia entered by home country.

The data used for the test are taken from reports issued by several world organizations through their official website. Most of them are taken from World Development Indicator (WDI) from World Bank, Bank Indonesia (BI), China Statistic, and Transparency International (TI). The home countries of FDI flows selected are United States, Canada, England, Germany, France, Japan, South Korea, Singapore, and Malaysia. These countries have the highest rating in flowing their capital (FDI) into China and Indonesia.

There are various ways and methods used to measure corruption. Corruption is a complex issue so that one number will not be able to explain the conditions completely. However, there needs to be an index to help see the problem comprehensively. Measurements by input indicator and output indicator methods

tend to produce different sizes (there is time lag). Another example of using an approach based on output indicators obtained through perception is generally difficult to change. All approaches have their own weaknesses and advantages.

In Indonesia there are measurements related to corruption (direct / indirect), including the Integrity Survey (by Corruption Eradication Commission /KPK), the Anti-Corruption Behavior Survey (by Central Bureau of Statistics /BPS), the Indonesia Governance Index (by partnership), and the Indonesia Corruption Perceptions Index (by TI Indonesia). For the international level, there are several alternatives of survey and measurements on corruption levels in different countries of the world, with diverse focus and survey methods or calculations. For example, Worldwide Governance Index-Control of Corruption (WGI-COC), Global Corruption Barometer (GCB), Bribe Payer Index, Political and Economic Risk Consultancy (PERC) etc and Corruption Perception Index (CPI). The CPI is one of the most popular measuring tools for assessing and ranking countries based on perceptions of corruption. This index uses a combination of several surveys and assessments of corruption collected from trusted sources. (Wijayanto, 2015)

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For this research, Indonesia's corruption rate data are taken from Corruption Perception Index. The variables involved in this study are conceptualized as follows:

Table 1
Variable Operationalization

Type of Variable	Variable	Unit	Simbol	Source
Dependent variable	1 FDI from home country to Indonesia ($FDI_{ind,t}^{hom}$)	US\$	FDII	BI
Capital Flows	FDI from home country to China ($FDI_{cina,t}^{hom}$)	US\$	FDIC	Cina Statistic
Bilateral Factors	Bilateral exchange rate	IDR/unit	EXCR	WDI
	Host-home interest rate differential	%	INTR	WDI
Economic Size of Home Country	Total FDI from home country	US\$	FDIH	WDI
	GDP per capita growth	annual %	GDPH	WDI
Economic Size of Host Country	GDP per capita growth	annual %	GDPI	WDI
	Total reserves	annual %	RESV	WDI
	Inflation (in month of import)	in months	INFL	WDI
	Total debt service	US\$	DEBT	WDI
Barrier of Investment	Taxes on income, profits and capital gains	% of revenue	TTAX	WDI
	Minimum wage	US\$/year	WAGE	WDI
	Telephone	Per 1,000	TELL	WDI
	Index of corruption (bad to good)	0-10	CORR	TI
FDI of the world	Total FDI of the World ($FDI_{world,t}$)	US\$	FDIW	WDI

Source: Kennedy (2014)

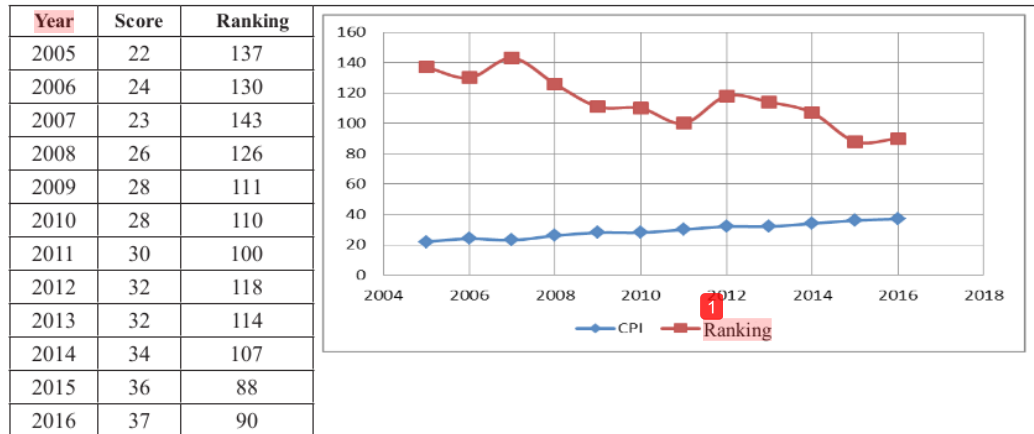
The testing is done using panel data processing analyzer with fixed effect method and GLS (General Least Square) method. Panel data are a combination of time series data and cross section data whose process is called pooling, including individual samples (eg countries) over a period of time. The weighting criteria are gross section weights with white heteroskedasticity covariance to get the best data run result and avoid the occurrence of singular matrix which can cause the best regression cannot be generated.

4. DATA ANALYSIS AND DISCUSSION

The expectations of investors, which are certainly influenced by the desired rate of return, can be achieved with the level of measureable / predictable risk so as not to lose money. The stronger the economic fundamentals and the smaller the constraints of a country, the more attractive it is for investors to invest in the long term. Investors who tend to invest in the short term will always be speculative. In contrast, long-term investment will be more stable and more beneficial to economic growth.

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One of the risks that must be faced is the corrupt behavior in a country. The following table illustrates the Corruption Perceptions Index (CPI) for Indonesia:

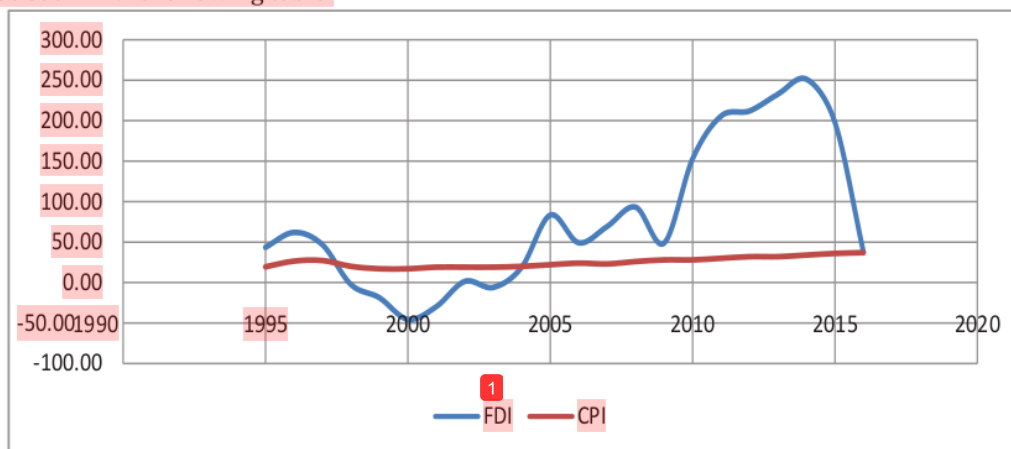
Table 2
Corruption Perceptions Index (CPI) and Ranking for Indonesia



Note: CPI score =100 means the cleanest country, CPI score = 0 means the most corrupt country. The higher the score, the cleaner the country (the less corrupt). The lower the ranking, the cleaner the country.
Source: Transparency International.

From the table above, it can be seen that Indonesia is still a country with a very high level of corruption. There is a good improvement every year, but it is still very small.

The development of foreign direct investment (FDI) to Indonesia along with the Corruption Index from the World Bank (Word Development Indicator, WDI) in the year can be seen in the following table:



Source: Word Development Indicator (WDI) and Transparancy International (TI)

Figure 1 Foreign Direct Investment Inflow (FDI in US\$*100.000.000)
At the point of Corruption Perception Index (CPI) Every Year

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From the graph it can be seen that despite an increase, the level of corruption (CPI) of Indonesia is on a very low score. It can also be seen that foreign direct investment (FDI inflow) also increased. However, towards the 2015, it began to decline. This could be caused by the world economic slowdown.

Based on Eviews output, it can be seen the correlation coefficient based on t-statistic test. The variables rejecting hypothesized assumptions that have an effect on FDI Indonesia are shown in the following table (but the variables that have no effect on FDI Indonesia are not shown in the table):

Table 3
Results of Panel Data Regression for Variables Affecting Foreign Direct Investment (FDI) to Indonesia

Variable	Coefficient	Probability	Significance	Description
C	1057785.6	0.0763	10%	
FDIC	1.43E-05	0.0753	10%	FDI flow to China
EXCR	12.28115	0.0227	5%	Bilateral exchange rate
GDPH	24940.40	0.0530	10%	Income per capita
WAGE	271.0818	0.0009	1%	Minimum wage of labor
CORR	119855	0.0000	1%	Perception of corruption
FDIW	2.29E-07	0.0995	10%	World FDI flow

Note: $R\text{-squared} = 73,13\%$, $Adjusted\ R\text{-squared} = 0.603671$. $Prob\ (F\text{-statistic}) = 0.000002$
Source: Computer Output Results (Eviews 5)

The determination coefficient (R-squared) of the regression results shows that the independent variables are able to explain the change of the dependent variable by 73.13%, and the rest is explained by other variables not included in the model. From the results of panel data regression, it can be explained the important things related to the obstacles occurring in Indonesia on the view of foreign investors about the risk of investing in Indonesia, such as:

- Minimum wage of firms in Indonesia affects FDI flow to Indonesia with positive sign coefficient. These results show that an increase in minimum wage does not cause the FDI flowing into Indonesia to decline. It turns out that foreign investors do not consider the minimum wage as an obstacle in investing their capital to Indonesia. They would be willing to adjust the cost of wages in their investments.

- Indonesia's corruption index affects FDI flow to Indonesia with positive sign coefficient. This indicates that the decrease in corruption behavior as indicated by an increase in CPI influences the increase of direct investment into the country. Conversely, agreement or "collusion" with corrupt officials will create more uncertainty in determining the budget for investment. The uncertainty caused by corruption will lead to a reduction of FDI. Therefore, if the higher index is better, the relationship between these variables and FDI is positive.
- Foreign investors are very concerned about the level of corruption committed by bureaucrats in Indonesia. They worry that if corruption is high, the actual costs to be incurred in Indonesia will be different from reality. So the calculation of investment cost in Indonesia will be very high.

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**5. CONCLUSION, IMPLICATION,
SUGGESTION, AND LIMITATION**

From the results of the research, it can be concluded that foreign investors do not see the magnitude of Indonesian economy as the dominant consideration in investing their capital to Indonesia, but the obstacles they will experience. The main risk in investing in Indonesia is bad corruption behavior seen from corruption perception index (CPI) data. This shows that the level of corruption in Indonesia is very worrying. Such a condition may weaken the attractiveness of Indonesia in the eyes of foreign investors.

The level of corruption in Indonesia should be seriously addressed by the government. The high level of corruption will actually weaken the real sector. Doing business is difficult and dirty. People will be interested more in committing corruption than in working hard. Some things that need to be improved to grow investment are to create conducive business climate, improve product efficiency, enhance business competitiveness, encourage Indonesian entrepreneurs to be more creative and innovative, and encourage clean governance, especially in vulnerable sectors of corruption.

Reform of business and investment climate needs to be done. In addition, institutional reform and bureaucratic reform are also needed, especially in the field of investment services. During this time, in terms of procedures, investors must first get some approval / licensing from the government earlier. Similarly, at the implementation stage of investment, it is often delayed because it takes a long time and high cost for investors to wait for permission to do business.

Research on corrupt behavior needs to be continued. This study is still limited to quantitative analysis. This research needs to be continued by using qualitative analysis to answer why they do not feel ashamed to

commit corruption and why corruption thrives and develops in Indonesia.

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