Impact of Corruption on Foreign Direct Investments (FDI) in Malaysia

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ABSTRACT

This paper discusses the impact of corruption on foreign direct investment (FDI) in Malaysia. Corruption is an abuse of power to obtain personal benefits while foreign direct investment (FDI) refers to a growing investment relationship between nation, people and economic activities. In this regard, this study examines the relationship between corruption and FDI in Malaysia. Since this study need the latest information, this study uses quantitative secondary data. The data were obtained from 1995 to 2016. This study covers time series data, then the statistical test such as Unit Root Test, Vector Autoregression Estimates (VAR) Test, ARDL Method Test, Breusch-Godfrey Test, White Test Heteroskedasticity and the Ramsey Reset Test are used. The results of the study show that when foreign direct investment in a country increases, the level of corruption in the country will increases as well. The corruption can be reduced by certain actions and strict laws.

Keywords: Corruption, Foreign Direct Investment, Malaysia

1. INTRODUCTION

The main purpose of this study is to identify the factors that cause widespread corruption and how the phenomenon of corruption and foreign direct investment (FDI) are related to each other. Among the issues highlighted is the ongoing economic situation, rising violence, spreading epidemics and online attacks on confidential information. As citizens, we can not concentrate on each of these issues but we can think of how these issues are related to each other.

One of the issues that need to be given important attention immediately is the symptoms of corruption. The effects of corruption have had a devastating impact on the economy and institutions of a country. Among them is undermining the rule of law, enabling crony capitalists and causing economic and political power savings to have no effect.

Furthermore, coruption cause widespread poverty worldwide. It happens at all levels of society, from local governments and national governments, civil society, judicial functions of the judiciary, big and small businesses, troops and other services. Corruption has a major impact on the poorest countries, in rich or poor countries if all elements of society are involved in some ways corruption will undermine

the development of politics, democracy, economic development, the environment, human health and so forth.

Accordingly, foreign direct investment (FDI) has taken the majority of the economy in developing countries. Castro and Nunes (2013) found that in Malaysia it creates opportunities for companies to make foreign investments and most countries actively strive to attract FDI inflows into their countries to stimulate economic growth. In addition, corruption has reduced benefits in Malaysia and FDI falls into one of the major sources of benefits (Shang, 2001). Thus, Malaysia has made an issue to control corruption. The level of corruption in Malaysia is one of the factors that determines the location of FDI and investors will take into account when making decisions. It is especially important in Malaysia as FDI plays an important role. Additionally, based on two theories of grabbing hand and helping hand proposed earlier, they opposed each other and most of the researchers have proven the accountability of both theories. Thus, corruption has different effects on different countries based on theory.

The study explains that corruption and FDI have both positive and negative relationships within the chosen period. Studies in Malaysia do not show consistent relationships but the level of corruption in malaysia does not change over the chosen period. This suggests that at a low level of corruption has an opposite effect on FDI over the period. Therefore, this study may be considered as whether positive or negative relationships arise between corruption and FDI in Malaysia. This shows that corruption has no permanent effect on Malaysia and it depends on the political structure of a country.

Corruption has become an important issue in Malaysia. Pertiwi (2011) states that there are two main reasons for this statement. Firstly, corruption cases in Malaysia have increased and undermined the stability of political and economic growth in Malaysia which affected overall economic performance. Second, migrants who bribe and often flee to other countries have been arrested and converted the issue to cross-border crimes that fall under the responsibility of Malaysia (Pertiwi, 2011).

Malaysia is one of the regions with high economic potential and is the focus of western countries. About 5% is income for the Malaysian region from the world's total income. This illustrates that the economic situation in Malaysia is stable and safe. In fact, the situation in Malaysia will have a very bad impact if corrupt practices are rampant without any initiatives that need to be taken to address them.

Nepotism, corruption and fraud can cause economic slowdown and exacerbate poverty. Corruption practices that channel money for public services have had a deeper impact on the poor because they need more social security networks. This also caused foreign investment which contributed to the country's economic growth also had a negative impact. If corruption is rising in Malaysia and if it fails to deal with it then it will threaten the economic progress in Malaysia and will lead to a setback.

2. Literature Review and Background Theory

2.1 Corruption

According to the theory of helping hand corruption acts as a lubricant when countries have strict economic rules especially in developing countries (Lui, 1983; Beck and Maher, 1986; Bjorvatn and Soreide, 2005). By offering a bribe to host the country, it can avoid strict rules and complex processes for easy investment projects. From this point of view, corruption can encourage FDI inflows. On the

other hand, the grabbing hand theory states that corruption will harm FDI by increasing transaction costs and reducing investment incentives (Shleifer and Vishny, 1993; Mauro, 1995). Corruption will also reduce the positive spillover of investment returns. This is also supported by a study conducted by Kaufmann (1997), suggesting that corruption investment costs are high at 20%. Between the two views, most researchers agree on the theory of hand grabbing.

2.2 FDI

According to the definition of the IMF and the OECD (2010), FDI reflects the goal of securing a permanent interest by a resident entity of one economy, which is a direct investor in a company resident in another economy such as a direct investment company. Direct investment involves both initial transactions that establish the relationship between the investor and the company and all subsequent capital transactions between them and the joint venture, both incorporated and unincorporated. It should be noted that capital transactions that do not result in any settlement, such as the exchange of shares between affiliated companies, also need to be recorded in the Balance of Payments.

2.3 GDP per capita

GDP per capita was chosen as one of the variables controlled in this study because GDP per capita is considered one of the factors that drives FDI. According to Chien and Linh (2013), GDP per capita was one of the most important determinants of attracting FDI inflows during phases 2000 to 2010. This study focuses on the 2001 to 2013 timelines, which statement made by Chien and Linh helped to strengthen the decision. taking per capita GDP as one of the variables in this study. In addition, GDP per capita is important in attracting FDI inflows as it is important for a country's well-being.

2.4 Political stability

Kinyanjui and Murshed (2014), state that governance change has a significant relationship with FDI in Malaysia as a robust institution that reflects the government's participation in resource allocation. And they explained that the country would be more attractive to foreign investors with guaranteed political stability. This can be proven by the flow of FDI in the manufacturing sector due to the diversification of the economy. While in the case of Kenya, it shows that democracy has a significant impact on FDI inflows in the short and long term. It seems to be an important factor for FDI inflows as Kenya aims at restructuring programs to achieve sound macroeconomic management and market efficiency.

2.5 Trade Openness

Trade openness is important as it includes exports and imports of the country. Balasubramanyam (2006), emphasized that open trade is important in the country to obtain the impact of FDI growth. Trade openness is important as a vehicle for new and emerging technologies of production technology knowledge from countries known as technology overflows. In theory, trade openness can affect FDI inflows either positively or negatively.

2.6 Previous Studies

There are some past studies that have been made about the effects of corruption on foreign direct investment (FDI) across the country. Hakkala and Svaleryd (2013) state that they use the corruption

perception index as a measure of corruption for its strengths and the results show that other countries will receive lower investment if those countries have high corruption. They also anticipate that corruption perception index will be linked to FDI inflows positively as indexes that score scores to other countries from 10 (very clean) to 0 (high corruption). Thus, a country with the highest index of index and corruption perception index tends to have higher inflows of foreign direct investment.

The study also tends to find out whether FDI inflows influence corruption and the relationship between corruption and other controlled variables such as GDP per capita, political stability, trade openness. Ata and Arvas (2011) concluded that economic development, inflation and the economy of liberty are a factor in determining corruption and economic freedom is used as an indicator of political stability. In addition, they also prove from the previous study that economic openness is closely linked to the level of corruption. They argue that there is a negative correlation between trade openness and corruption.

Klitgaard (2008) found that corruption is rampant when monopoly power is combined with low discretion and accountability. Incentives against corruption do not exist among the people who carry out all economic activities in a perfect competition environment and there is no sole agent capable of affecting the price or quantity of commodities sold or purchased. In this regard, corruption can be reduced when economic rent does not depend on discretionary authority by some public officials.

In addition, corruption has many forms including practices such as corruption, extortion, fraud and embezzlement. However, for the purpose of this study, corruption is widely defined as activities that affect the cost of investment operations in the host country. Wheeler and Mody (2012) state that with strict rules and inefficient bureaucracy, corruption can increase bureaucracy efficiency by speeding up the decision-making process. Regulatory frameworks, bureaucratic barriers, judicial transparency and bribe level in the host country were found to be unimportant in their analysis of US Data firms. However, it is argued that the reason why failing to find a significant relationship between corruption and FDI is that corruption is not clearly included in their model. They combine corruption with 12 other clues to form a regressor (RISK), but some of these indicators may be slightly significant for FDI.

In addition, some other empirical studies provide evidence of a negative relationship between corruption and FDI and therefore suggest that corruption is a barrier factor for foreign investors. For example, Rahman (2000), found that corruption had a significant negative impact on FDI. Rahman also concluded after using three different measures of corruption, that the increase in whether tax rates on multinational firms or bribe levels in host countries would reduce FDI.

Subsequently, the volume and productivity of investments increase when corruption is reduced. The resources spent on this area can be made rich by dividends in the form of enhanced economic performance. Hope (2000) state that that rent-seeking activity tends to grow the cost of doing business. Hope also pointed out that illegal corruption and commissions owed to public officials only increased to the final cost of contracts, equipment, and supplies, among others. Due to the immediate situation entrepreneurs are potentially withdrawing from investing, and the affected economy loses the benefits of multipliers that will be accompanied by the investment. Thus, corruption reduces investment, which results in a reduction in the rate of growth. Reducing such investments is assumed as a result of higher costs and uncertainty made by corruption.

The empirical analysis of small samples has shown that the term correction errors statistically provide further information to support the presence of long-term relationships (Ghatak, 1997). Finally, based on the results and findings obtained from the analysis, the study highlights the importance of these factors explaining the effects of corruption on FDI.

3. METHODOLOGY AND MODEL SPECIFICATION

This study uses quantitative secondary data because researchers need the latest information from certain sources such as internet, books, articles and journals to collect information and data on Foreign Direct Investment (FDI), gross domestic product (GDP per capita) political stability (POLT), and trade openness (OPE) and corruption (CPI). Designs that have been carefully planned and organized help to assess the information and data needed for this study. The study aims to find out the impact of corruption on FDI in Malaysia. The design of the study is quantitative. This method is chosen because of the low cost and the time required to implement it is brief (Uma Sekaran, 2013).

This study focuses on independent variables such as Foreign Direct Investment (FDI), gross domestic product (GDP per capita), political stability (POLT), and trade openness (OPE) and corruption (CPI) as a dependent variable. The type of data used in this study to determine the relationship between independent variables and dependent variables is secondary data. The data for all the variables were obtained from 1995 to 2016 for Malaysia. All the data on these variables were obtained from World Bank, International Monetary Fund Data (IMF) and Transparency International. In this study, to obtain significant results, the collected data has been applied in the EViews (Econometric Views) Software using the ARDL method.

The tests selected to conduct research using existing data to recognize the relationship between dependent variables and independent variables is whether positive or negative. This study covers time series data, so tests related to time series data are used to carry out this study. This is why, the Unit Root Test, Vector Autoregression Estimates (VAR) Test, ARDL method, Breusch-Godfrey Test, White Test Heteroskedasticity, and the Ramsey Reset Test are used.

3.1 Design of the Study Model

$$CPI_y = \beta_0 + \beta_1 \ln FDI_y + \beta_2 \ln GDP_y + \beta_3 POLT_y + \beta_4 \ln OPE_y + \text{\euro}_y$$

SIMBOL	MAKNA SIMBOL
CPI_y	Corruption perception index
$\ln FDI_y$	Foreign direct investment
$\ln GDP_y$	GDP per capita
$POLT_y$	Political stability
$\ln OPE_y$	Trade openness
$\ln$	Logarithm
y	Year
β_0 β_1 β_2 β_3 β_4	The coefficient value of the independent variable
€	Terms of Error Estimated and Considered as Zero

4. RESULTS AND ANALYSIS

4.1 Unit Root Test

The presence of Unit Root Test in the data series of time causes the usual statistical test not to be scattered and result in a biased interpretation (Patterson, 2012). Experimental data was performed using Augmented Dickey - Fuller (ADF) and Phillips Perron (PP) tests. ADF tests have been used in this study.

Table 4.1: Results of Unit Root Test

VARIABLES	MALAYSIA	
	UNIT ROOT TEST ADF	
	AT LEVEL	1ST DIFF
CPI	-2.555917* (0.1175)	-3.225348** (0.0362)
LFDI	-3.985657*** (0.0065)	-5.233248*** (0.0005)
LGDP	-4.660646*** (0.0015)	-5.194818*** (0.0006)
LOPE	0.680928* (0.9885)	-3.007490** (0.0513)
POLT	-2.471256* (0.1361)	-4.689077*** (0.0015)

H_o: All independent variables have no relation to the dependent variable

H_1: All independent variables have relationships with dependent variables

When the absolute approximate value of this study exceeds the critical value at 1 percent, 5 percent and 10 percent, then the null hypothesis is rejected. It indicates that there are no root unit problems for these variables.

4.2 Vector Autoregression Estimates (VAR) Test

Vector Autoregression (VAR) is a stochastic process model used to capture linear interdependence between multiple time series (Hatemi, 2004). The VAR model outlines the autoregressive univariate model (AR model) by allowing more than one variable to change. All the variables in the VAR enter the model in the same way.

Table 4.2: VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria
Endogenous variables: CPI LFDI LGDP LOPE
POLT
Exogenous variables: C

Date: 03/15/18   Time: 13:59
Sample: 1995 2016
Included observations: 20

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-14.38058	NA	4.78e-06	1.938058	2.186991	1.986653
1	62.96115	108.2784*	2.80e-08*	-3.296115	-1.802517*	-3.004549
2	91.35297	25.55263	3.60e-08	-3.635297*	-0.897033	-3.100759*

According to Table 4.2, the results of the Vector Autoregression Estimates (VAR) Lag Order Selection Criteria results indicate that the VAR specification has three (k = 3) endogenous variables ie CPI, LFDI, LGDP, LOPE and POLT that bypass exogenous C (d = 1), and includes lag 1 to 2 (p = 2). Thus, there is (kp + d = 7) regressor in every five equations in the VAR. VAR results state that the optimal endogeneous variables in lag 1.

4.3 ARDL Method Test

ARDL method test is used for testing for joint integration using a bound test approach is provided in the model (Professor Steve Makambi, 2013) . It includes provisions for estimating the term error ie coefficient of joint integration, short term and long-term coefficient directly.

Table 4.3: Results of ARDL Method Test

R-squared	0.838957	Mean dependent var	4.940000
Adjusted R-squared	0.617522	S.D. dependent var	0.262378
S.E. of regression	0.162267	Akaike info criterion	-0.515439
Sum squared resid	0.210644	Schwarz criterion	0.082001
Log likelihood	17.15439	Hannan-Quinn criter.	-0.398812
F-statistic	3.788738	Durbin-Watson stat	2.373312
Prob(F-statistic)	0.034591		

The value of the Akaike info criterion is -0.515439 and shows the entire independent variable can explain the dependent variable as the smaller value shows improved results. Durbin Watson value obtained is 2.373312 and indicates that this model has no autocorrelation problem where the value exceeds 2.

4.4 Breusch-Godfrey Test

The Breusch-Godfrey correlation method of the LM test series is a test for autocorrelation in errors in the regression model (Zeileis and Achim, 2008). It uses the remnants of the models considered in the regression analysis, and the test statistics obtained from this.

Table 4.4: Results of **Breusch-Godfrey Test (LAG 2)**

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.938957	Prob. F(2,6)	0.1289
Obs*R-squared	9.897216	Prob. Chi-Square(2)	0.0071

Based on table 4.4, the Breusch-Godfrey series of LM test correlations above did not show autocorrelation because chi-square was significant at 1% level. The chi-square ratio statistics is 0.0071.

4.5 White Test Heteroskedasticity

White Test Heteroskedasticity is a test that assesses whether variance inequality from the residuals for all observations on the linear regression model (Tabachnick dan Fidell, 2007). This test is one of the classic assay tests to be performed on linear regression.

Table 4.5: Results of White Test Heteroskedasticity

Heteroskedasticity Test: White

F-statistic	0.997122	Prob. F(11,8)	0.5157
Obs*R-squared	11.56489	Prob. Chi-Square(11)	0.3972
Scaled explained SS	1.968468	Prob. Chi-Square(11)	0.9986

Based on table 4.6, results show no Heteroskedasticity problem that occurred in this study. This study has the same variance, all variables are consistent and stable.

4.6 Ramsey Reset Test

Ramsey Reset Test is a way of testing whether there are some significant non linear relationships when it has built the Linear Regression Model (Akshay, 2016).

Table 4.6: Results of Ramsey Reset Test

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.012797	7	0.3449
F-statistic	1.025759	(1, 7)	0.3449

H$_0$: Model has no omitted problem variable

H$_1$: Model has omitted problem variable

Based on table 4.6, do not rule out H$_0$. Therefore, the Model has no omitted problem variable.

5. CONCLUSION

This study was conducted to identify the factors that led to widespread corruption in foreign direct investment (FDI) and the relationship between them. Therefore, this study is to identify where the level of corruption was positively or negatively affected by these factors. In addition, six types of tests were conducted to test the relationship between corruption and FDI, namely the Unit Root Test, Vector Autoregression Estimates (VAR) Test, ARDL method, Breusch-Godfrey Test, White Test Heteroskedasticity, and Ramsey Test Test . Based on the results of the independent variables of FDI, GDP per capita and POLT have positive relationship with CPI, when FDI, GDP per capita and POLT increase, the level of corruption has also increased. Furthermore, OPE has a negative correlation with the CPI that when OPE decreases, the level of corruption can be reduced.

Furthermore, this study was conducted to identify the extent to which corruption is positively or negatively affected by these factors. In addition, six types of tests were conducted to test the relationship between corruption and FDI, namely Unit Root Test, Vector Autoregression Estimates (VAR) test, ARDL method test, Breusch-Godfrey test, White Heteroskedasticity Test and Ramsey Reset Test . Based on the results of the independent variable analysis of FDI, GDP per capita and POLT has a positive relationship with CPI that as FDI, GDP per capita and POLT increase, the level of corruption also increases. Furthermore, OPE has a negative relationship with the CPI that when OPE decreases the level of corruption can be reduced.

This study is based on previous studies by several researchers, for example, Paolo Mauro (1995), in his journal entitled Corruption and Growth explaining that there is a negative relationship between corruption, foreign direct investment and development and that it is significant economically. and statistics. Furthermore, Aizenman and Noy (2006), conclude that countries that adopt high economic openness also exhibit high FDI mobility along with low levels of corruption. Hsu (2007), arguing that an increase in savings has a negative impact on FDI and leads to an increase in corruption and this statement is also supported by Larrainand Tavares (2004), finding that an increase in FDI increases corruption.

In addition, Rahman (2000), found that FDI has a significant negative impact on corruption while Wei (2000) concludes after using three different measures of corruption, that the increase in either tax rates on multinational companies or corruption levels in the host country will reduce FDI inflation. In this regard, FDI led to the development of prudent investments by investing wisely and trying to lay strong policies to improve infrastructure and manpower and the impact of this could reduce corruption in every country.

From the results of the study, the effects on corruption symptoms by each of the following factors for Malaysian countries have different trending effects for each independent variable. Besides, positive effects of corruption may also due to the high level of corruption in the particular county where the bribing system is more organized which in turn reduced the uncertainty of corruption. In conclusion,

foreign direct investment factors, GDP per capita and political stability have positive relationships with levels of corruption while trade openness has a negative correlation with levels of corruption. So, the Malaysian Anti-Corruption Commission (MACC) should take effective measures to curb corruption in Malaysia.

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