Impact of political instability on foreign direct investment and Economic Growth: Evidence from Malaysia

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12 May 2017

Online at https://mpra.ub.uni-muenchen.de/79418/
MPRA Paper No. 79418, posted 27 May 2017 23:33 UTC
Impact of political instability on foreign direct investment and Economic Growth: Evidence from Malaysia

Abdul Malik Nazeer¹ and Mansur Masih²

Abstract

Based on many studies, economic theories and real life experiences, we can understand that political instability has been a harmful factor that would hinder the flow of FDI and the growth of an economy. In our study, we would like to focus on Malaysia, which had its fair share of political instability issues due to the differences and existence of various races. But based on recent studies, it is considered a politically stable economy. Despite everything, Malaysia has been able to achieve consistent economic growth, therefore we believe Malaysia is an interesting country to explore further. This paper aims to analyze the impact of political instability on foreign direct investment and on economic growth of Malaysia. This study employs autoregressive distributed lag (ARDL) approach to cointegration proposed by Pesaran et al. (2001). It is based on a time series data over the period of 30 years ranging from 1984 to 2013. There has been no studies identified yet to our knowledge which has investigated the causal relationships between political instability, FDI and economic growth for Malaysia. Our study aims to fill this gap in literature and would be of great use for the policy makers and key decision makers of the economy. The empirical results reveal that there are both long and short run relationship between political instability, FDI and economic growth in Malaysia, with economic growth being the strongest driver for political instability and FDI. These findings have clear policy implications in that the government of Malaysia can make use of it by targeting the growth in the economy to impact FDI and political instability.

Keywords: political instability, foreign direct investment, economic growth, Malaysia, ARDL

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1. Introduction

Political instability is considered by economists as a serious disease harmful to economic performance. The widespread occurrence of political instability in several countries across time and its negative effects on their economic performance has arisen the interest of several economists. Political instability is defined as the tendency of a government collapse (Alesina et al., 1996). This may be either be due to the conflicts or extensive competition between various political parties. Similarly, the incident of a government change would increase the possibility of successive changes.

Our country of study, Malaysia has long been regarded as one of Southeast Asia’s success stories. With a population of 30 million, it is the region’s third-largest economy with a reasonably well-educated population. It is a rare example of a successful moderate and democratic Muslim state, one where the Muslim majority lives in reasonable harmony with the nation’s Chinese and Indian communities. But Malaysia’s delicate political and ethnic balance is starting to loosen as the country risks slipping into authoritarianism. This is indeed an upsetting change at a time when economic clouds are also darkening. Malaysia had a healthy 2014 with real GDP growth at six per cent, the second-highest performance in Southeast Asia. But the country is a major net exporter of energy, making it vulnerable to the fall in oil prices. Foreign bond ownership in Malaysia is high at more than 40 per cent and bondholders could become jittery if there is any further deterioration in the country’s economic and political outlook (Financial Times, 2015). This instability may have serious consequences to the FDI coming into Malaysia and as a result may impact the growth of the economy in an unfavorable manner.

Political instability is likely to shorten policymakers’ horizons leading to suboptimal short term macroeconomic policies. It may also lead to a more frequent switch of policies, creating volatility and thus, negatively affecting macroeconomic performance (Aisen & Veiga, 2011). Considering its damaging repercussions on economic performance the extent at which political instability is pervasive across countries and time is quite surprising. As per Barro (1991) from his research concluded that political instability and growth are negatively correlated. Furthermore, Fosu (1992) studied political instability, instability of governments, regimes, and communities within a nation, and growth in sub-Saharan African countries and found adverse impact of political instability on economic growth. In general, political instability affects the investment climate
negatively which in turn reduces FDI inflows and would result in slow growth of the economy. Many developing countries in the world are not politically stable and mostly they suffer from poor quality of governance. However, some of those countries have been showing decent economic performance in the recent past, Malaysia is one of them.

A country’s political risks is a crucial factor which are considered by foreign investors while making an investment decision (Moosa, 2002). Political risk is linked to confiscation or damage to property, production disruption, threats to personnel including operational restrictions that impede the investors’ ability in undertaking certain actions, riots, and changes in regulatory environment or the macroeconomic management (Daniels, Radebaugh and Sullivan, 2002). Investors will prefer not to invest and risk their hard earned capital in an unstable environment. Corruption that is politically motivated significantly reduces FDI inflows in selected Asian countries (Woo and Heo, 2009).

Malaysia have had a history of events that relates to political instability. They faced a communist insurgency from 1948 to 1989; a clash with a large neighbor namely Indonesia almost led to war between 1963 and 1965 and a very serious ethnic conflict in 1969 which resulted in riots (Isa, 1996). However, despite political instability and poor governance quality which were experienced in the past, Malaysia has being able achieve a stable growth consistently and in 2014 with real GDP growth at six per cent, it was the second-highest performer in Southeast Asia. Therefore, Malaysia is an interesting country to explore further, especially on the relationship between political instability on foreign direct investment and economic growth.

There are number of studies that were carried out to identify the significant relationship between FDI and economic growth in the economy of Malaysia and other economies. Most of these studies have identified that FDI affects the economic growth positively. But there has being no studies identified yet which has investigated the causal relationships between FDI inflow, economic growth and political stability for Malaysia. The empirical results of our study reveal that there are both long and short run relationship between political instability and economic growth in Malaysia, with economic growth being the strongest driver for political instability as well as FDI. Therefore, our study aims to fill this gap in literature and would be of great use for the policy makers and key decision makers of the economy.
The following parts of this paper are structured in a way that it starts with a brief discussion on various literatures relating political instability, foreign direct investment and economic growth. This is then followed by a description of the methodology employed in this study as well as a discussion on the empirical findings. Lastly, this paper will end with some concluding remarks and policy implications of the issue at hand.

1. Literature Reviews

Quite a number of studies has been carried out on the issue of political instability and on its impact on economic growth and development. As a result we find a growing number of literature on the effects of political stability on FDI and economic performance, both from a theoretical perception and in terms of empirical work.

Political instability and economic growth

Carmignam (2003) carried out an excellent survey of the literature on the linkages between political instability and economic performance. The survey covers both theoretical modeling and empirical studies. Also, the papers by Lothian and Melvin (1991), examined the significance of political risk for investment decisions. Noteworthy individual studies which included Citron and Nickelsburg (1987), who formed a model of country risk for foreign borrowing that includes a political instability variable and Cherian and Perotti (2001), who construct a theoretical political risk model of capital investment.

Alesina et al. (1996) studied the role of political instability on economic development by using a dataset of 113 countries. Their goal was to measure economic growth and political instability by using Amemiya’s Generalized Least Square technique. The finding of this research was that economic growth will decrease as a result of high chance of the government collapsing. In addition, Barro and Lee (1994) carried out a study, to check the impact of political instability on economic development. They studied the growth rates of 116 economies for the periods between 1965-1985. They concluded that political instability has negative effects on economic development. Furthermore, Haan and Siermann (1996) had a study to check if that lack of political stability has negative relation with economic growth and development, and their study covers for the years of 1963 to 1988 and they used the sample of 96 countries to check the relationship of political instability. They concluded that political instability hindered the investment in Asia and
it also diminished the economic development. Gyimah-Brempong and Traynor (1999) studied the link between political instability and economic growth. They used sample of 39 African countries. For the assessment they used simultaneous equations model and a dynamic panel estimation method. They used time series data from the time period of 1975 to 1988. His findings also showed a negative relationship between political instability and economic growth.

**Political instability and FDI**

There is a well-developed literature that examines the relationship between host countries Political instability and FDI inflows. Habib and Zurawicki (2002) examined the impact of corruption on FDI for 89 countries over the 1996-1998 periods. The analysis displayed a negative impact of corruption on FDI. Additionally, the study found a negative effect due to the difference in corruption intensity between the host and home countries. The results suggest that foreign investors generally avoid corruption because of moral obligations and also the operational inefficiencies that arise due to corruption. More importantly, foreign investors avoid corruption because it can be difficult to manage, and is risky and costly at the same time. Robertson and Watson (2004) studied the impact of corruption on changes in levels of FDI from a strategic perspective. They incorporated strategic decisions which managers of multinational companies (MNCs) need to adopt in the presence of political risks.

However, studies such as Nye (1979), found that corruption has a positive impact on economic growth and development while Hines (1995) derived a non-significant relationship. Hence, it can be deduced that the relationship between political risk (via corruption) and economic growth is still ambiguous. Thus, our present study aims to explore the political risk indices and learn the respective indicator’s impact on FDI.

**FDI and economic growth**

Foreign direct investment (FDI) refers to an investment made by a company or individual in one country in business interests in another country, in the form of either establishing business operations or acquiring business assets in the other country, such as ownership or controlling interest in a foreign company. With this regard we see a positive relationship between FDI and economic growth, which has being confirmed by various studies done previously.
Zhang (2001) showed the link between economic development and foreign direct investment in case of China. He used annual secondary data from the year 1960 to 2001. By using Granger causality test and Johansen Co-integration technique, he concluded that there is positive relationship between economic development and foreign direct investment. He stated that foreign direct investment encourages economic growth. In addition, Anyamele (2010) conducted a study on economic expansion in Sub-Saharan African countries. He found that foreign direct investment had positive impact on economic growth.

2. Data, Methodologies and Empirical Results

3.1 The data

This study examines the political instability in the case of Malaysia by applying the Autoregressive Distributed Lag model (ARDL) analysis (also known as the Bounds testing procedure) by using three variables. In this analysis, we use 30 years’ historical data from 1984 to 2013. Due to the challenges of obtaining data related to political instability data we have to use multiple sources for collecting data for its variable in the study. In order to investigate the causal relationship between political instability, foreign direct investment (FDI) and economic growth, the following annual time series data of Malaysia was taken from the World Bank Development Indicators (WDI) and The PRS Group's report:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI</td>
<td>Political instability which is used as a proxy for an index made up of: Government Stability, Corruption, Law and Order, Democratic Accountability, Bureaucracy Quality</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign direct investment, net inflows (BOP, current US$)</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product in US$ and is used as a proxy for economic growth</td>
</tr>
</tbody>
</table>

*Table 1: Description of variables.*
3.2 Methodology

This study adopted autoregressive distributed lag (ARDL) framework also known as bounds testing approach suggested by Pesaran and Shin (1995, 1999), Pesaran et al. (1996) and Pesaran (1997) to establish cointegration and hence the direction of causation between variables.

There are several reasons to select this method. First, it can fulfill our objectives to find the causality relationship between the variables. Second, it can be applied irrespective of whether the variables are stationary or non stationary and also has better small sample properties (Narayan & Smyth, 2005). In addition, a simple linear transformation allows a dynamic error correction model (ECM) to be derived from ARDL (Banerjee et al, 1993). The ECM integrates the short-run dynamics with the long-run equilibrium without losing long-run information (Pesaran & Chin, 1999). Furthermore, the endogeneity is less a problem in ARDL framework because it is free of residual correlation (Jalil et al., 2013). Pesaran and Shin (1999) have shown that the ARDL method can distinguish between dependent and explanatory variables and the estimation is possible even when the explanatory variables are endogenous (Pesaran and Pesaran, 1997; Pesaran et al., 2001). Since we have a mix of I (0) and I (1) variables in the sample (Table 2), this is an advantage for us, as compared to the conventional Granger causality test of which it requires all the variable to be stationary in first difference form only.

Prior to applying ARDL, stationarity of variables is investigated whether the variables are stationary at level form I (0) or differenced form I (1). Determining the stationary of the variables has been regarded as a pre-requisite step for many methods in econometrics, since it may help in selecting the most appropriate method. Although ARDL does not require any stationary test, examining the sequence of the integration may assist in determining the suitability of the method (Sulaiman & Abdul-Rahim, 2013). To test the stationarity of each variable, three tests, namely ADF test, PP test and KPSS test has been carried out.

There are two stages involved in ARDL. The first stage involves investigating the existence of the long-run relationship between the variables by computing the F-statistic to test the significance of the lagged levels of the variables in the error correction form of the underlying ARDL model. Pesaran et al, 2001, present two sets of asymptotic critical values for testing cointegration for a given significance level. The set with lower value is computed assuming that the regressors are I(0) and the other set with upper value is computed assuming that the regressors
are I(1). If the computed F statistics exceeds the upper critical value, the null hypothesis of no cointegration can be rejected. If it falls below the lower critical value the null hypothesis cannot be rejected. Finally, if the F-statistics value falls between the lower and upper critical values the result is inconclusive.

The second stage is pursued only if the first stage is satisfied i.e. that there is long run relationship between the variables. The second stage in this study involves estimating the long run model by selecting the orders of ARDL model using AIC and estimating an Error Correction Model (ECM) using the long-run estimates. This enables the speed of adjustment of the dependent variable to independent variables to be estimated. A value of zero indicates non-existence of long-run relationships whilst a value of between -1 and 0 indicates existence of partial adjustment. A value smaller than -1 indicates the model over adjusts in the current period and a positive value indicates the system moves away from equilibrium in the long run.

First, we need to test the existence of a long-run relationship among the variables. This is estimated through the ordinary least square method with each variable in turn as a dependent variable and F-test will be conducted for each regression model to test the existence of long-run relationship among the variables. One of the initial equations for this study can thus be presented in the following ARDL form:

$$DPI_t = \alpha_0 + \sum_{i=1}^{k} b_1 DPI_{t-i} + \sum_{i=0}^{k} b_2 DF DI_{t-i} + \sum_{i=0}^{k} b_3 DGDP_{t-i} + \delta_1 LPI_{t-1} + \delta_2 LFDI_{t-1} + \delta_3 LGDP_{t-1} + u_t$$

*Equation 1: Functional Relationship Model Specification. (k=Lag order)*

ARDL bounds testing procedure permit us to take into consideration I (0) and I (1) variables together. The null hypothesis of the non-existence of a long-run relationship which is denoted by $F_{LPI}(\{ LPI | LFDI, LGDP \})$ and the other variables in Eq. (1) are used as dependent variables also denoted with $F_{LFDI}(\{ LFDI | LPI, LGDP \})$, $F_{LGDP}(\{ LGDP | LFDI, LPI \})$ is tested against the alternative hypothesis of the existence of co-integration. $H_o = \delta_1 = \delta_2 = \delta_3 = 0$ Against $H_1 = \delta_1 \neq \delta_2 \neq \delta_3 \neq 0$. After estimating the existence of long run relationship between variables the
second step is selecting optimal lag length by using of standard criteria such as Swartz Bayesian (SBC) or Akaike Information (AIC). We shall be testing the null hypothesis \((H_0)\) of ‘non-existence of the long-run relationship’ against the alternative of ‘the existence of long-run relationship’

\[ H_0 = b_1 = b_2 = b_3 = 0 \]

\[ H_1 = b_1 \neq b_2 \neq b_3 \neq 0 \]

Logarithm transformations of all variables were taken to achieve stationarity in variance. Thereafter we began our empirical testing by determining the stationarity of all variables in our consideration. This is necessary in order to proceed with the testing of Co-integration later. Ideally, our variables should be I (1), in that they only become stationary after their 1st difference. The differenced form for each variable used is created by taking the difference of their log forms (e.g. \(\text{DPI} = \log \text{LDPI} - \log \text{LDPI}_{t-1}\)). The results are discussed in the section that follows.

### 3. Empirical Results

We begin our empirical testing by determining the stationarity of the variables used. A stationary series has a mean (to which it tends to return), a finite variance, shocks are transitory, autocorrelation coefficients die out as the number of lags grows, whereas a non-stationary series has an infinite variance (it grows over time), shocks are permanent (on the series) and its autocorrelations tend to be unity. Before applying the ARDL, we test the stationarity of all the variables to determine their order of integration using three unit root tests i.e. the ADF test, PP test, and KPSS test.

The unit root test results are indicated in Table 2 below:

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Test Statistics</th>
<th>Critical Value</th>
<th>Implication</th>
<th>PP Test Statistics</th>
<th>Critical Value</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPI</td>
<td>-3.3318</td>
<td>-2.9907</td>
<td>Stationary</td>
<td>-1.7726</td>
<td>-2.9447</td>
<td>Non-Stationary</td>
</tr>
<tr>
<td>LFDI</td>
<td>-2.4776</td>
<td>-2.9907</td>
<td>Non-Stationary</td>
<td>-3.4570</td>
<td>-2.9447</td>
<td>Stationary</td>
</tr>
</tbody>
</table>
Our unit root tests indicate mixed results in terms of stationary and non-stationary variables. If we evaluate unit root tests of all variables in the level form, we see that PI and FDI shows different result from ADF and PP tests. So, there is a strong evident that the results are not consistent across various tests. Therefore, variables we are using for this analysis are I (0) or I (1).

As the results of unit root test are not consistent, as our variables are found to be mixture of I (0) and I (1) and the results shown different in each test. Therefore, we decided to use ARDL technique to test the long-run relationship among the variables.

4.1 Testing the Existence of Long-Run Relationship (Variable Addition Test)

Table 3: F-Statistics (Variable Addition Test)\(^\text{†}\)

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>F-Statistics</th>
<th>Critical value lower (95%)</th>
<th>Critical value upper (95%)</th>
<th>Decision Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>F(_{PI}) (LPI</td>
<td>LFDI, LGDP)</td>
<td>4.4401*</td>
<td>3.219</td>
<td>4.379</td>
</tr>
<tr>
<td>F(_{FDI}) (FDI</td>
<td>LPI, LGDP)</td>
<td>2.5022</td>
<td>3.219</td>
<td>4.379</td>
</tr>
<tr>
<td>F(_{GDP}) (LGDP</td>
<td>LPI, LFDI)</td>
<td>.89678</td>
<td>3.219</td>
<td>4.379</td>
</tr>
</tbody>
</table>

Above table shows the calculated F-statistics for variable PI (Political instability) which is 4.4401 which is higher than the upper bound with a critical value of 4.379 at the 5% significance level. This implies that the null hypothesis of no cointegrating of long-run relationship can be rejected since F-statistics is greater than Critical value. These results reveal that long-run relationship exists between political instability, FDI and economic growth of Malaysia. The evidence of long run relationship rules out the possibility of any spurious relationship existing between the variables. In

\(^\text{†}\)The critical values are taken from Pesaran et al (2001), unrestricted intercept and no trend with five repressors. * denote rejecting the null at 5 percent level.
other words, there is a theoretical relationship existing between the variables. However, there is a need to confirm the endogeneity and exogeneity of variables.

**4.2 Results of Estimated Long-Run Coefficients using the ARDL Approach:**

After finding the F-test significant, the next step involves estimating appropriate lag-length selection criteria based on the Akaike Information Criterion (AIC) and its results of the estimations are summarized below:

<table>
<thead>
<tr>
<th></th>
<th>Model (1) PI</th>
<th>Model (2) FDI</th>
<th>Model (3) GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>44.1456 [15.4508]</td>
<td>-106.0888* [32.6950]</td>
<td>12.3922* [3.5824]</td>
</tr>
<tr>
<td>PI</td>
<td>---</td>
<td>.62363 [.52684]</td>
<td>-0.036147 [0.061332]</td>
</tr>
<tr>
<td>FDI</td>
<td>.11919 [.088538]</td>
<td>---</td>
<td>.089089* [0.017785]</td>
</tr>
<tr>
<td>GDP</td>
<td>-.83752 [.81807]</td>
<td>7.0252* [1.4024]</td>
<td>---</td>
</tr>
</tbody>
</table>

*Table 4: Long-run ARDL Model Estimation using SBC, Note percent level: denotes significant at 5%*

There are three models have been estimated based on the above table: Firstly, it has been found in model-1 that there is no long run relationship between Political instability, FDI and GDP. It means that if the level of political instability changes there will be no significant long run relationship among Political instability, FDI and economic growth which is represented by GDP. In model- 2, we find that there is a positive long run relationship between FDI and GDP, which is in line with the theoretical findings, and lastly in our model-3, we also find a positive long run relationship between GDP and FDI.

**4.3 Error Correction Model of ARDL**

In the following table, the ECM’s representation for the ARDL model is selected with AIC Criterion.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>T-Ratio[Prob]</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>ecm(-1) dLPI</td>
<td>-.35402</td>
<td>.15977</td>
<td>-2.2158[.038]*</td>
<td>Endogenous</td>
</tr>
<tr>
<td>ecm(-1) dLGDP</td>
<td>-.025725</td>
<td>.033008</td>
<td>-.77936[.444]</td>
<td>Exogenous</td>
</tr>
</tbody>
</table>
The causal connection among the variables is determined by the significance of error correction model (ECM) in each model. If the ECM is significant, it entailed that the dependent variable in the model is an endogenous variable, and if the ECM is insignificant, it implies that the dependent variable of the model is an exogenous variable.

Our results show that Political instability (PI), and Foreign direct investment (FDI) are endogenous variable, while the other variable, namely GDP, is an exogenous variable. The exogenous variables are the leaders and endogenous variables are the followers. From these results, we can conclude that Political instability (PI), and Foreign direct investment (FDI) follow the movement of the exogenous variables. The coefficient of error correction term indicates the speed of adjustment of disequilibrium in the model due to the occurrence of any shock, and the higher the magnitude of the coefficient means the better the speed of adjustment.

The negative sign in the coefficient confirmed the existence of cointegration. In our result, the coefficient of ECM of political instability is (-.35402) implies a fast speed of adjustment compared to GDP. It is possibly due to the intervention of government by enforcing laws, degree of punishment and length of imprisonment to control Political instability and corruption.

At this step, we can argue that VECM has given a clear idea of short and long run relationship among the variables. VECM shows that two of our variables are endogenous and the other one is exogenous. This helps us to argue that there is a dynamic relationship between political instability and property crime. However, from the ARDL result, we could not determine the relative exogeneity and endogeneity of each variable in our sample. Therefore, we decided to conduct the additional steps which are VDC and IRF simulation to see the relative exogeneity and endogeneity, and to see how long it takes for the variables to go back to equilibrium if there is a shock in one of the variables.

4.4 Variance Decompositions (VDC)

As we have found that GDP is exogenous, but we have not been able to say anything about the relative endogeneity and exogeneity of the remaining variables. The relative exogeneity or endogeneity of a variable is determined by the proportion of the variance explained by its own past
(Domingos, 2000). The variable that is explained mostly by its own shocks (and not by others) is deemed to be the most exogenous of all.

We started out applying generalized VDCs and obtained the following results:

<table>
<thead>
<tr>
<th>Horizon</th>
<th>DPI</th>
<th>DFDI</th>
<th>DGDP</th>
<th>Horizon</th>
<th>DPI</th>
<th>DFDI</th>
<th>DGDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>48%</td>
<td>31%</td>
<td>21%</td>
<td>10</td>
<td>40%</td>
<td>33%</td>
<td>27%</td>
</tr>
<tr>
<td>5</td>
<td>0%</td>
<td>60%</td>
<td>40%</td>
<td>10</td>
<td>1%</td>
<td>59%</td>
<td>40%</td>
</tr>
<tr>
<td>5</td>
<td>1%</td>
<td>37%</td>
<td>62%</td>
<td>10</td>
<td>1%</td>
<td>37%</td>
<td>62%</td>
</tr>
<tr>
<td>Exogeneity</td>
<td>48%</td>
<td>60%</td>
<td>62%</td>
<td>Exogeneity</td>
<td>40%</td>
<td>59%</td>
<td>62%</td>
</tr>
<tr>
<td>RANK</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>RANK</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizon</th>
<th>DPI</th>
<th>DFDI</th>
<th>DGDP</th>
<th>Horizon</th>
<th>DPI</th>
<th>DFDI</th>
<th>DGDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>39%</td>
<td>33%</td>
<td>28%</td>
<td>20</td>
<td>39%</td>
<td>33%</td>
<td>27%</td>
</tr>
<tr>
<td>15</td>
<td>1%</td>
<td>59%</td>
<td>40%</td>
<td>20</td>
<td>1%</td>
<td>59%</td>
<td>40%</td>
</tr>
<tr>
<td>15</td>
<td>1%</td>
<td>37%</td>
<td>62%</td>
<td>20</td>
<td>1%</td>
<td>37%</td>
<td>62%</td>
</tr>
<tr>
<td>Exogeneity</td>
<td>39%</td>
<td>59%</td>
<td>62%</td>
<td>Exogeneity</td>
<td>39%</td>
<td>59%</td>
<td>62%</td>
</tr>
<tr>
<td>RANK</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>RANK</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

*Table 6: Generalized VDC*

From the table above, it can be seen that at the 5-year horizon, GDP is the most exogenous while Political instability is the most endogenous followed by FDI. In the 10, 15 and 20-year horizons, GDP still remained the most exogenous and Political instability still remained became most endogenous. All these variables maintained the same trend and ranking throughout the horizons shown above in Table 5. In other words, leader remained leader and follower remained follower.

We found that this result somewhat consistent to our findings in the VECM model as the political instability was found to be the endogenous variable and GDP was found to be the exogenous variable which means that it is an endogenous variable political instability is highly influenced and dependent on other variables such as economic growth and FDI. Given the nature and relationship of these variables, it is important for policy makers to implement a strategy that would ensure that the benefits of economic growth are translated into a reduction in the level political instability and an increase in the inflows of FDI to Malaysia.
It shows that GDP is the most exogenous, it reacts less to the variations to the other variables: FDI and Political instability. Therefore, the government policies should target the GDP growth because the other variables in this model will follow the direction of it.

4.5 Impulse response (IR)

Impulse response (IR) analysis is based on VAR model. For the advantages of IR analysis, it provides policy makers with additional information that which variable is the most exogenous and relative exogeneity/endogeneity. Therefore policy makers would shock on one variable which is the most exogenous to achieve the economic target. Moreover, the impulse response functions (IRFs) essentially produce the same information as the VDCs, except that they can be presented in graphical form. If any specific one variable was shocked, we will see the immediate effect on others.

This study also uses impulse response to find the impact of shock of one variable on others, their degree of response, and how long it would take to normalize. In this study, the objective is to find the reaction of other variables when Political Instability has been shocked.

Graph 1: Shock of political instability (PI) to other variables
Impulse response also allows us to observe how long it takes for the variables to get back to equilibrium if there is a shock in one particular variable. For the purposes of this analysis, we will study the graphs of generalized IR for each variable shocked into the system and see the degree of response and how long it would take for other variables to normalise.

The first that is shocked is Political instability. Since this variable is our focal variable we expect big outcome on other variables. Graph 1 shows that FDI in the Malaysia will take a long time to close to its equilibrium and Malaysia’s GDP is not affected much as a result of the shock in political instability.

Overall, we can say that FDI is most affected as a results of shocks of political instability, economic growth (GDP) and shocks in itself. And the least responsive to shock is the level of economic growth. As GDP to be impacted severely needs many other factors other than merely political instability that has an impact on the level of GDP growth.

4.6 VDC and Impulse response analysis and findings

From the analysis of VDC and impulse response (IR), it appears that both economic growth (GDP) and foreign direct investment (FDI) dominate the system to some extent as their forecast errors are largely attributable to their own innovations: about 62% and 59% respectively of the forecast error variance are explained by their own innovations at the horizons of 5, 10, 15 and 20
year period. When we shocked political instability to see the effect on other variables we found that FDI and response largely than GDP and fluctuates more and takes more time to reach the level of equilibrium. Here we can argue that when the level of political instability increase the level of FDI will be impacted severely and this movement is in line with most of the studies, whereby they concluded that FDI and political instability are negatively related. On the other hand, when we shocked GDP to observe the reaction of other variables we found that FDI takes the longest time to reach the normal equilibrium and political instability have a very minimal level of fluctuation. This shows us that FDI is most prone to move away from equilibrium when the variables political instability and GDP are shocked.

5. Conclusion and Policy Implications

The effect of political instability on FDI and economic growth has been empirically addressed by many scholars but with mixed results. This paper attempts to estimate the effect of political instability which is an index made of: Government Stability, Corruption, Law and Order, Democratic Accountability, Bureaucracy Quality on FDI and economic growth which. The empirical results obtained from ARDL bounds testing approach clearly indicate that political instability is cointegrated with FDI and economic growth. Our findings of the study in Malaysia are consistent with other findings that are done with regards to the long term cointegration between political instability, FDI and economic growth. For instance Barro and Lee (1994), carried out a study, to check the impact of political instability on economic development on 116 economies for the periods of 1965-1985 and found out that political instability has negative effects on economic development. Furthermore, Habib and Zurawicki (2002) examined the impact of corruption on FDI for 89 countries over the 1996-1998 periods and found a negative relationship between corruption and FDI.

Our finding from VDC, which found out that GDP is the most exogenous followed by FDI and the most endogenous variable was Political instability, meaning to say GDP reacts less to the variations to the other variables: FDI and Political instability. Therefore, the government policies should target the GDP growth because the other variables in this model will follow the direction of it. Given the nature and relationship of these variables, it is important for policy makers to implement a strategy that would ensure that the benefits of economic growth are translated into a
reduction in the level political instability and an increase in the inflows of FDI to Malaysia. However, this study is also not without any limitations. We considered only three variables which we believe was important. Future studies should include more variables to give a more comprehensive picture of the situation at hand. Lastly, we sincerely hope that this study can contribute to the growing awareness of the urgent need for further studies on this pertinent issue.

6. References:


