Impact of political instability on economic growth, exchange rates and unemployment: Malaysian evidence

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30 March 2018

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Abstract: According to economists, political instability is harmful for economic development of any Country. This research attempts to test and analyze causal relationship between political instability and economic growth along with unemployment and exchange rate in the context of Malaysia. Malaysia was faced with political instability issues due to the differences and existence of various races. However according to recent studies, it is viewed as a politically stable economy. There are only a few studies carried out investigating the causal relationship between political instability, exchange rate and unemployment. Our main objective of the study is to investigate the impact of political instability on economic growth along with exchange rate and unemployment. This study employs autoregressive distributed lag (ARDL) approach to cointegration proposed by Pesaran et al. (2001). It depends on a time series data over the time of 34 years starting from 1984. Based on the above rigorous methodology, our empirical results tend to suggest that there is a long run relationship between political instability, exchange rate, unemployment and economic growth and that the impact of political instability on economic growth is significant. The findings are in line with the theoretical background and have strong policy implication for countries like Malaysia.

Keywords: political instability, economic growth, ARDL, VECM, VDC

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1. Introduction

What is the nature of relationship between political instability and economic development in a nation? This question has been the focus of a long-standing debate among numerous economists and political researchers.

In this research, attempts have been made to investigate the relationship between political instability and economic growth in Malaysia along with unemployment and exchange rates. Economists consider political instability as a serious disease destructive to economic performance. Political instability has a strong impact on economic vulnerability. (Matthieu and Christian, 1999). The weak political society, shakiness of government and negligence of political parties construct the state of affairs for a politically unstable condition. (Rani and Batool, 2016) .This might be either because of the contentions or big rivalry between different political groups. Correspondingly, the episode of a government change would expand the likelihood of progressive changes. Moreover high level of unemployment leads to increasing degree of social conflict. A competitive labor market that ensures full employment offer a powerful mechanism for transmitting efficiency gains into boosts in living standards for workers. (Paul, 1998). Accordingly, exchange rate is also considered as one of the most significant economic indicators relative to a nation's international intensity. It directly affects the international trade of a country, hence influencing the economic growth.

Malaysia has for quite some time been viewed as one of Southeast Asia's examples of overcoming adversity. It is a multi-ethnic country with a population of nearly 30 million. One of main aims of Malaysia was to reach high income status by 2020 while ensuring that growth is sustainable (World Bank, 2017). It is regarded as south East Asia’s third largest economy and a rare example of successful moderate and democratic Muslim state, one where the Muslim majority lives in reasonable harmony with the nation’s other communities. However, the risk of political volatility in Malaysia is not very far. Even though Malaysia suffered from 2009 global financial crisis, it has recovered rapidly by achieving growth rates averaging 5.7 percent since 2010 (World Bank, 2017).

Malaysia has had a past filled with occasions that identifies with political unsteadiness. They confronted a socialist rebellion from 1948 to 1989; a conflict with a substantial neighbor, to be specific Indonesia nearly prompted war in the vicinity of 1963 and 1965 and an intense ethnic clash in 1969 which resulted in riots (Isa, 1996). This shakiness may have genuine outcomes to

the unemployment and exchange rates and subsequently may affect the development of the economy in an upsetting way. However, despite political instability and low quality of governance in the past, Malaysia has possessed the capacity to accomplish a steady development reliably. Even though Malaysia encountered steady economic growth, Malaysia's profitability development in the course of recent years has been underneath those in a several global and regional contenders. These interesting facts provide the inspiration to explore more about Malaysia in relation to political instability and economic growth.

Numerous studies were conducted on political instability and economic growth in Malaysia. However few studies have investigated the impact of political instability on exchange rate and unemployment and the causal relationship. The main objective of this study is to fill this gap in literature and would be great for policy makers in implementing the key decisions.

The accompanying parts of this paper are organized in a way that it begins with a brief discourse on various literature relating to political instability, exchange rates, unemployment and economic growth. After the literature review, a description of the data and methodology employed in this study as well as a discussion on the empirical findings will follow. Finally, this research ends with concluding remarks with policy implications of the current issue.

2. Literature Review

Numerous literature are available on the impact of political instability and economic growth. However a few number of literature is available on effects of political instability on unemployment and exchange rate. As a consequence we try to fill the gap with the available literature and examine the relationship both from a theoretical observation as well as from empirical work.

Aisen & Veiga (2011) investigated the effects of political instability on economic growth using data for 169 countries in the period from 1960 to 2004. They found that political instability reduces growth both statistically and economically as well as the results were in line with literature. Further they suggested that in order to achieve durable economic policies which may lead to higher economic growth, the governments in the political instable nations should address

the root causes and try to mitigate its effects on the economic design. Alesina *et al.* (1996) argue that political instability reduces growth. The methodology used in the research was Amemiya's Generalized Least Square technique with the data set of 113 countries. The finding of this investigation was that financial growth will diminish because of high possibility of the government collapsing.

Kijkul (2103) carried out a research on relationship between political instability and economic growth in Thailand from 1976 to 2010. He could not find a significant relationship between political instability and economic growth in Thailand based on socio-political instability index. He further argues as long as political instability does not affect exports it will not affect growth as export is the main driver in Thailand's economy.

According to Barro and Lee (1994) political instability has a negative impact on economic development. This finding is in line with the findings of Haan and Siermann (1996), and Gyimah-Brempong and Traynor (1999). The research was conducted by Rani and Batool (2016) Investigated the impact on political instability and foreign direct investment on economic development in Pakistan. They found that political instability does not affect economic development in the long run. However, in the long run political instability significantly and negatively affect the economic growth. Younis *at al*. (2008) examined the various factors of political instability on economic growth in selected ten Asian economies during 1990-2005. They found that Political strength is playing an important part in deciding financial development in Asian economies. Moreover, they conclude that there is a direct and indirect relationship between economic development and political stability.

Unemployment creates poverty and it leads to insecurity. Hence both poverty and unemployment have implications for national security (Akwara *el at*, 2013). Various studies claim that youth unemployment and underemployment are threat to the social, economic and political stability of nations (Urdal, 2006, 2012). Using a sample data of 24 emerging countries Azeng and Yogo (2013) carried out a study on youth unemployment and political instability in selected developing countries. They claim that youth unemployment causes political instability and countries with youth unemployment are high at the risk of political instability. Their research shows that unemployment causes political instability and has significant relationship among them.

According to Lim (2003) political risk is regularly referred to as potential determinants of exchange rate both in well-known financial written work and scholarly research. In his study he found that political risk possibly play an important role in determining regime switches for the nominal exchange rate.

3. Data, Methodologies and Empirical Results

3.1 The data

This research explores the Malaysian political instability by using Autoregressive Distributed Lag model (ARDL) analysis by using four variables. It is also known as the Bounds testing procedure. Obtaining data for political instability was demanding and multiple sources have been used. This study observes 34 years of historical data ranging from 1984 and it was obtained from World Bank Development Indicators (WDI) and The PRS Group's report in order to investigate the causal relationship between political instability, foreign exchange rates, unemployment and economic growth.

Variable	Description
PI	Political instability which is used as a proxy for an index made up of: Government Stability, Corruption, Law and Order, Democratic Accountability, Bureaucracy Quality
EX	Official exchange rate (LCU per US$, period average)
UE	Unemployment, total (% of total labour force) (modelled ILO estimate)
GDP	Gross Domestic Product in US$ and is used as a proxy for economic growth

Table 1: Description of variables

3.2 Methodology

The main aim of this study is to examine the causal relationship among the variables. We have employed autoregressive distributed lag (ARDL) method also known as bound testing approach recommended by Pesaran, Shin and Smith (2001). There are a few motivations to choose this technique. To start with, it can satisfy our goals to discover the causality connection between the variables. Second, it can be connected regardless of whether the variables are stationary or non-stationary.

ARDL cointegration method is ideal when managing variables that are incorporated of different order I (0), I (1) or both the combinations and robust when there is a single long run connection between the important variables in a small sample size (Nkoro, Uko ,2016). The real preferred standpoint of this tactic lies in its identifiable proof of the cointegrating vectors where there are multiple cointegrating vectors. Moreover a simple linear transformation permits a dynamic error correction model (ECM) to be derived from ARDL Banerjee et al, 1993). According to Pesaran & Chin (1999) the error correction model incorporates the short run dynamics with the long run equilibrium without misplacing long run information. Pesaran and Shin (1999) have demonstrated that the ARDL technique can recognize dependent and explanatory variables and the estimation is conceivable notwithstanding when the explanatory variables are endogenous (Pesaran and Pesaran, 1997; Pesaran et al., 2001). Besides, the endogeneity is less an issue in ARDL system since it is free of residual correlation. We have an advantage in the ARDL approach as we have a mix of I(0) and I(1) variables in the sample as per the table 2, compared to the conventional Granger causality test.

Deciding the stationary of the variables has been viewed as a pre-essential step for many techniques in econometrics, since it might help in choosing the most fitting strategy. Thus before using the ARDL technique stationarity of variables is examined whether the variables are stationary at level form I (0) or differenced form I (1). The ARDL approach also does not require pre-testing for the order of integration (0 or 1) of the variables used in the model (Khalil and Dombrecht, 2011). According to Sulaiman & Abdul-Rahim, (2013) examining the sequence of integration may help with deciding the appropriateness of the strategy even though ARDL approach does not require any stationary tests. In order to check the stationarity of each variable three tests have been carried out such as ADF, test, PP test and KPSS.

The ARDL technique involves two stages. The existence of a long-run relationship among the variables is investigated first. The test comprises of computing an F-statistics testing the joint importance of the lagged levels of the variables' in every error correction model. The computed F-statistics is then contrasted with two asymptotic critical values (Masih, Al Hajji and Umar, 2008). Pesaran et al, 2001, offers two sets of asymptotic critical values for testing cointegration for a given significance level namely upper critical value and lower critical value. The null hypothesis of long run relationship is rejected if the test statistic is above an upper critical value. Other words, there is a long run relationship exists among variables if F-statistics exceeds the upper critical value. Alternatively when the F-statistics falls below the lower critical value the null hypothesis of no long run relationship is accepted despite the variables are I (0) or I (1). The result will be inconclusive if the F-Statistics falls in between the upper and lower critical values.

The second stage of ARDL method is followed only if there is long run relationship between variables. In this research the second stage of ARDL approach contains 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 allows the speed of adjustment of the dependent variable to independent variables to be evaluated. The non-existence of the long run relationship is determined by the value of zero and between -1 and 0 indicates an existence of partial adjustment. A positive value indicates that system moves away from equilibrium in the long run

First test would be to check the long run relationship between variables and it is projected through the ordinary least square method with every 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 investigation would thus be able to be introduced in the accompanying ARDL form:

$$DPI_t = \alpha_0 + \sum_{i=1}^{k} b_1 DPI_{t-i} + \sum_{i=0}^{k} b_2 DGDP_{t-i} + \sum_{i=0}^{k} b_3 DEX_{t-i} + \sum_{i=0}^{k} b_4 DUE_{t-i} + \delta_1 LPI_{t-1} + \delta_2 LGDP_{t-1} + \delta_3 LEX_{t-1} + \delta_4 LUE_{t-1} + u_t$$

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

ARDL approach allows us to take into concern 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 |LGDP,LEX,LUE) and the other variables in Eq. (1) are used as dependent variables also denoted with F_{LGDP} (|LGDP |LPI,LEX,LUE), F_{LEX} (|LEX |LGDP,LPI, LUE), F_{LUE} (|LUE |LGDP,LPI, LEX) is verified alongside the alternative hypothesis of the existence of co-integration. $H_o = b_1 = b_2 = b_3 = b_4 = 0$ Against $H_1 = b_1 \neq b_2 \neq b_3 \neq b_4 \neq 0$. After assessing the existence of long run relationship among variables the second step is choosing optimal lag length by using of Akaike Information (AIC) or standard criteria such as Swartz Bayesian (SBC). Prediction of long run short run coefficient is done afterwards. ARDL long run method is shown as follows:

$$LPI_t = \alpha_0 + \sum_{i=1}^{k} b_1 LPI_{t-i} + \sum_{i=0}^{k} b_2 LGDP_{t-i} + \sum_{i=0}^{k} b_3 LEX_{t-i} + \sum_{i=0}^{k} b_4 LUE_{t-i} + u_t$$

The Error correction term which was engaged in the ARDL Short run model to portray the short run dynamics is as follows:

$$DPI_t = \alpha_0 + \sum_{i=1}^{k} b_1 DPI_{t-i} + \sum_{i=0}^{k} b_2 DGDP_{t-i} + \sum_{i=0}^{k} b_3 DEX_{t-i} + \sum_{i=0}^{k} b_3 DUE_{t-i} + b_7 ECT_{t-1}$$

Where, ECT = Lagged error correction term

Our null hypothesis (H_0) is non-existence of long run relationship and the alternative (H_1) is the existence of the long run relationship

$$H_o = b_1 = b_2 = b_3 = b_4 = 0$$

$$H_1 = b_1 \neq b_2 \neq b_3 \neq b_4 \neq 0$$

In this research we began our empirical testing by determining stationary of all the variables and logarithm transformation of variables were occupied to achieve the stationarity in variance. Since this is vital for us to proceed with the co-integration later. Preferably our variables should be I (1) and only after the first difference they become stationary (Md Akther Uddin and Mansur Masih, June 2015). We have created the difference form of each variable by taking the difference of log forms.

4. Empirical Results

This research determines the stationarity of the variables as a beginning of the empirical testing. A stationary series has a mean, a finite variance, shocks are transitory, autocorrelation coefficients expire as the amount of lags grows, whereas a non-stationary series has an unlimited variance (it grows over time), shocks are permanent and its autocorrelations tend to be unity. In this study we have conducted two unit root test such as ADF test and PP test in order to test the stationary of all the variables before applying ARDL. Table 2 summarizes the unit root test results.

ADF TEST				**PP TEST**			
variables	**test statistics**	**critical value**	**implication**	**variables**	**test statistics**	**critical value 95%**	**implication**
LPI	-4.4857	-3.5867	***stationary***	LPI	-1.852	-3.572	non stationary
LUE	-4.2809	-3.5867	***stationary***	LUE	-1.439	-3.572	non stationary
LEX	-2.0251	-3.5867	non stationary	LEX	-2.028	-3.572	non stationary
LGDP	-2.2710	-3.5867	non stationary	LGDP	-2.539	-3.572	non stationary
DPI	-6.1563	-3.5943	stationary	DPI	-4.300	-3.576	stationary
DUE	-4.3561	-3.5943	stationary	DUE	-4.300	-3.576	stationary
DEX	-3.0568	-3.5943	***non stationary***	DEX	-4.243	-3.576	stationary
DGDP	-3.6690	-3.0568	stationary	DGDP	-4.708	-3.576	stationary

Table 2: Unit Root Test Results

From the above unit root test table we can observe that our results are mixed in terms of stationary and non-stationary variables. ADF test results show that two variables are stationary and two variables are non-stationary in the level form while three variables are stationary and one variable is non stationary in the differenced form. If we assess unit root tests of all variables in the level form, we see that PI and UE shows different result from ADF and PP tests. Hence it is apparent that the outcomes are not constant across different tests.

Since the unit roots test results are inconsistent the variables considered to be mixture of I (0) and I (1). Also each test shows different results. Hence ARDL technique is occupied to test the long run relationship among the variables since there is a strong evidence to move to ARDL approach as the unit root test results are not constant.

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

Dependent Variables	F-Statistics	Critical value lower (95%)	Critical value upper (95%)	Decision Rule
F_{PI} (LPI| LGDP,LEX,LUE)	6.2601*	2.850	4.049	Co-integration
F_{GDP} (LGDP|LPI,LEX,LUE)	4.1954	2.850	4.049	Co-integration
F_{EX} (LEX| LGDP,LPI, LUE)	2.2503	2.850	4.049	No Co-integration
F_{UE} (LUE|LEX, LPI, LGDP)	9.2259*	2.850	4.049	Co-integration

Table 3: F-Statistics (Variable Addition Test)

Based on the long run relationship variable addition test results, we observe that there is long run relationship among variables. As per the results above F statistics for variables PI (Political instability), GDP (economic growth) and UE (Unemployment) higher than the upper bound of critical value at the 5% significance level. The calculated F statistics for variable PI is 6.2601 and it is greater than the upper bound critical value of 4.049 at the 5% significance level. This implies that the null hypothesis of no co-integrating of long-run relationship can be rejected since F-statistics is greater than critical value. Therefore as per the results it is evident that there is a long run relationship exists between political instability, exchange rates, unemployment and economic growth of Malaysia. Confirmation of long run relationship precludes the likelihood of any bogus relationship existing between the variables. At the end of the day, there is a theoretical relationship existing between the variables. In any case, there is a need to affirm the endogeneity and exogeneity of the variables.

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

After finding the long run relationship among the variables using F statistics the next step encloses estimating appropriate lag-length selection criteria based on the Akaike Information Criterion (AIC) and its results of the estimates are summarized below:

	Model (1) **PI**	**Model (2)** **GDP**	**Model (3)** **EX**	**Model (4)** **UE**
C	24.1745*	34.5126*	-736.1713	10.9640*
PI	---	-1.2514*	28.4434	-.21701
GDP	-.71740*	---	20.0755	-.37027*
EX	.79677	.72528	---	.80478
UE	-1.9008*	-2.7462*	62.2618	----

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

We have estimated four models to test the long run coefficients as per the table 4. As per the model 1 we found that there is a long run relationship between political instability, economic growth and unemployment. This indicates that in the long run changes in the political instability will have a significant impact on economic growth and unemployment. Both results implies that there is a negative relationship political instability, economic growth and unemployment. In the model 2 the results suggest that there is a long run relationship between economic growths, political instability and unemployment. We could not find any long run relationship in the model 3 and it indicates that changes in the exchange rates will not affect other variables in the long run. Finally in the model 4 we found a long run relation between unemployment and economic growth. This finding shows that increase in the unemployment will decrease the economic growth.

4.3 Error Correction Model of ARDL

The following table shows the representation of ECM for the ARDL model selected with AIC criteria.

Variables	Coefficient	Standard error	T-Ratio[Prob]	Implication
ecm(-1) dLPI	-.49040	.099891	-4.9093[.000]*	Endogenous
ecm(-1) dLGDP	-.020488	.031658	-.64717[.524]	Exogenous
ecm(-1) dLDEX	-.028805	.056626	-.50869[.616]	Exogenous
ecm(-1) dLDUE	-.60256	.16440	-3.6651[.001]*	Endogenous

Table 5: Error correction model of ARDL Note: denotes significant at 5 percent level

The causal relationship among the variables is determined by the significance of error correction model (ECM) in each model. If the ECM is significant, it elaborate that the dependent variable in the model is an endogenous variable, and if the ECM is insignificant, it suggests that the dependent variable of the model is an exogenous variable. Since the P value of the variables of PI and UE falls below 5% we reject the null of the variable is exogenous. Hence these two variables are endogenous variables.

The results show that GDP and exchange rate variables are exogenous while other two are endogenous. The exogenous variables are the leaders and endogenous variables are the followers. From these results we can arrive the conclusion of PI and UE follows the movement of exogenous variables. The coefficient of error correction term specifies the quickness of adjustment of disequilibrium in the model because of the occurrence of any shock. Also it suggests that the higher the scale of the coefficient the better the speed of adjustment.

The negative sign in the coefficient affirmed the presence of co-integration. The coefficients of ECM of political instability and unemployment are (-.49040) and (-.60256) respectively. Hence this suggests that rapid speed of adjustment compared to GDP and exchange rates. It is potentially because of the intercession of government by implementing laws, level of discipline and length of detainment to control political insecurity and defilement.

Based on the VECM test we found our two variables are exogenous and two variables are endogenous. At this progression, we can contend that VECM has given a definite indication of short and long run relationship among the variables. However VECM estimates only provides

absolute exogeneity and endogeneity. It does not reveal the relative exogeneity and endogeneity. Therefore we could not determine which variable is the most exogenous and endogenous in our sample. Along these lines, we chose to direct the additional steps such as VDC and IRF simulation to test the relative exogeneity and endogeneity, and to perceive to what extent it takes for the variables to backpedal to equilibrium if there is a shock in one of the variables.

4.4 Variance Decompositions (VDC)

Since we were unable to find a relative exogeneity and endogenity from previous test, we apply generalized VDC approach to test which variables are most exogenous and endogenous. The relative exogeneity or endogeneity of a variable is determined by the amount of the variance described by its own past (Domingos, 2000). Following evidence was obtained through generalized VDC.

Horizon	DPI	DGDP	DEX	DUE	Horizon	DPI	DGDP	DEX	DUE
5	41.09%	12.19%	20.24%	26.30%	10	37.65%	14.98%	21.75%	25.62%
5	14.28%	32.03%	28.95%	24.74	10	15.95%	31.51%	28.41%	24.13%
5	6.99%	29.52%	31.47%	32.01%	10	8.84%	29.06%	30.87%	31.02%
5	19.76%	20.78%	28.55%	30.91%	10	19.78%	20.98%	28.22%	31.02%
Exogenity	41.09%	32.03%	31.47%	30.91%	Exogenity	37.65%	31.51%	30.87%	31.02%
Rank	1	2	3	4	Rank	1	2	4	3

Horizon	DPI	DGDP	DEX	DUE	Horizon	DPI	DGDP	DEX	DUE
15	37.11%	15.22%	21.92%	25.75%	20	37.06%	15.30%	21.94%	25.70%
15	15.97%	31.33%	28.43%	24.27%	20	15.96%	31.33%	28.43%	24.28%
15	8.92%	28.98%	30.85%	31.25%	20	8.93%	28.97%	30.83%	31.27%
15	19.35%	21.00%	28.27%	31.20%	20	19.52%	21.07%	28.26%	31.15%
Exogenity	37.11%	31.33%	30.85%	31.20%	Exogenity	37.06%	31.33%	30.83%	31.15%
Rank	1	2	4	3	Rank	1	2	4	3

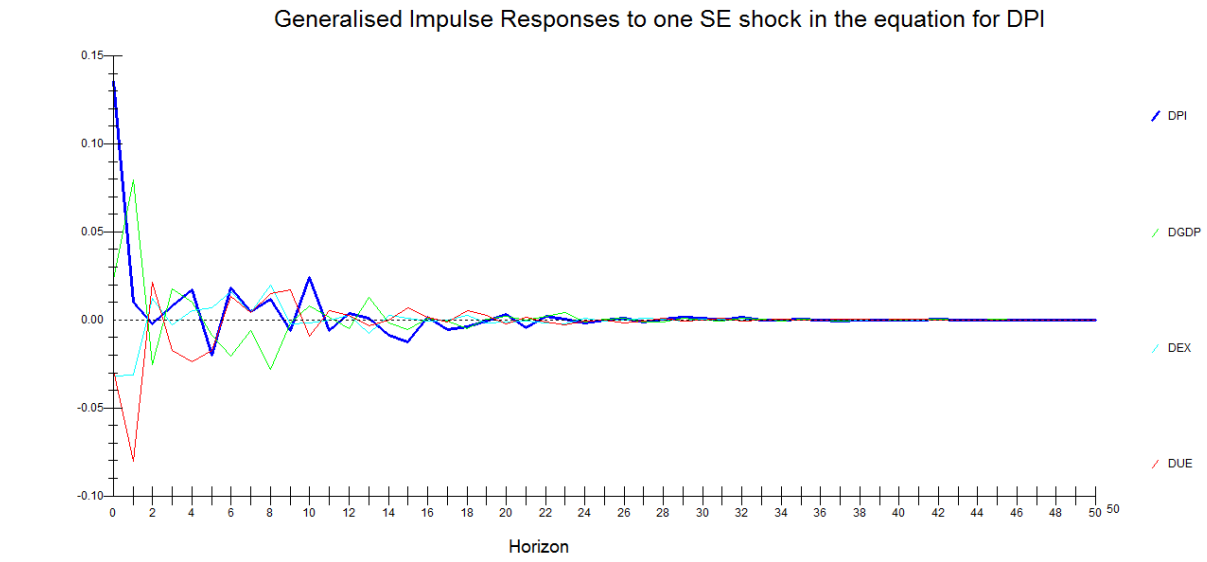
Table 6: Generalized VDC

It is apparent that the most exogenous variable is political instability at the 5 year horizon while most endogenous variable being the unemployment at the same horizon. Moreover, GDP is the next most exogenous variable and exchange rate ranked third most exogenous variable at the five year horizon. In the 10, 15 and 20 horizons the, political instability still remains the most exogenous variable however exchange rate variable became the most endogenous variable. That implies exchange rate does not change significantly as the political instability changes. All these variables remained the same ranking throughout the horizons except for the 5 year horizon. Nonetheless most exogenous variable remained throughout the 4 horizons. That indicates that leader remained leader.

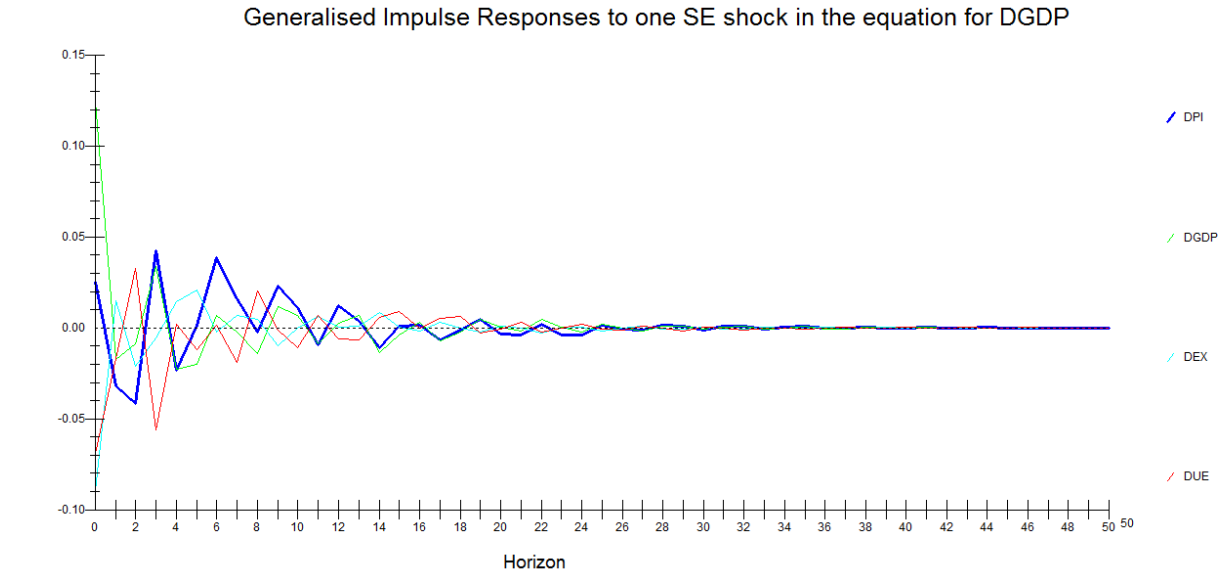
However our VDC results are not fully consistent with the VECM results. As per the VECM results we found that GDP and exchange rates are exogenous variables. Political instability found to be endogenous in VECM while it is found to be most exogenous variable in the VDC estimations. Therefore we believe VDC estimates to be more precise as it suggests that political instability can influence all other variables in the long run. Given the nature of the relationship of the variables, policy makers should more focus on implementing political stability in the context of Malaysia. Thus all the variables follow the as per the changes in the most exogenous variable.

4.5 Impulse response (IR)

The analysis of impulse response is based on the VAR model and the information provided is similar to those in VDC. Impulses response is a graphical representation comparing to VDC. This analysis provides information to policy makers on relative exogenity/endogenity. Thus policy makers would shock one variable which is the most exogenous to achieve the economic goal. By shocking one variable we will be able to see the response of other variables. The information obtained by the impulse response are impact of shock of one variable on others, their degree of response, and how long it would take to normalize.



Graph 1: Shock of political instability (PI) to other variables



Graph 3: Shock of economic growth (GDP) to other variables

We examine the graphs of generalized IR for each variable shocked into the system and observe the magnitude of reaction and duration for other variables to normalize. Impulse response

additionally enables us to witness to what extent it takes for the variables to return to equilibrium if there is a shock in one specific variable.

The graph 1 shows the response of other variables when we shocked the political instability variable. As the VDC results indicated, when we shock our main variable other variables follow the leader. I t is apparent from the graph 1 that all the other variables such as GDP, exchange rate and unemployment follow the pattern of political instability. However, all the variables take time to return to equilibrium. Therefore policy makers should more focus on the measure to implement the political stability in order to achieve growth and employment.

As per the graph 2, when we shock the GDP variable, the most affected variable is unemployment. It closely follows the pattern of political instability. It is also in line with many studies that political instability will affect the unemployment. Also the graph shows that higher volatility in in political instability comparing GDP in the early years. Based on our both analysis VDC and IR indicates that political instability is the leader and other variables follow the effects of political instability.

5. Conclusion and Policy Implications

The effect of political instability on economic growth has been empirically addressed by many scholars but with mixed results. This study attempts to approximate the consequence of political instability which is an index made of: Government Stability, Corruption, Law and Order, Democratic Accountability, and economic growth which. The evidence we obtained from ARDL bounds testing method evidently indicate that political instability, economic growth, exchange rate and unemployment have a long run relationship.

Our findings obtained from VDC, imply that Political instability is the most exogenous variable followed by GDP, unemployment and exchange rate. The results are according to the theoretical frameworks that suggest political instability impact negatively on economic growth. All the other variables are driven and follow the changes in political instability. Therefore Government should control political instability in order to achieve higher economic growth in Malaysia.

As per the results, we could not find a significant relationship among political instability, exchange rates and unemployment. However, all the variables together are significant in relation to the political instability and move along in the long run. The limitation of this research is the lack of a number of variables. Hence increasing the number of variables would provide a better picture on the impact of political instability on economic growth.

References:

Alesina, A., S. Özler, N. Roubini and P. Swagel (1996). Political instability and economic growth. Journal of Economic Growth, 1(2), 189-211.

Ari Aisen and Francisco Jose Veiga (2011), How Does Political Instability Affect Economic Growth? IMF Working Paper, WP/11/12

Barro, R. J. (1991). Economic Growth in a Cross Section of Countries. The Quarterly Journal of Economics, 106 (2), 407-443.

Domingos, P. (2000). A Unified Bias-Variance Decomposition for Zero-One and Squared Loss, In: Seventeenth National Conference on Artificial Intelligence, AAAI, 564 569.

Masih, M., Umar, Y. H. and Al-Hajji, M. (2008). Empirical Test of the Long-Run Fisher Effect: An Application of the ARDL Bounds Technique to Saudi Arabia. Journal of International Finance & Economics*,* 8(1), 53-64.

Pesaran, M.H., Shin, Y., and Smith, R, J.(2001), Bounds testing approaches to the analysis of long-run relationships, Journal of Applied Econometrics, 16, 289-326.

Pesaran, M. H. and Shin, Y. (1999). An autoregressive distributed-lag modelling approach to cointegration analysis. Econometric Society Monographs, 31(7), 371–413.

Pesaran, M. H., Shin, Y. and Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. Journal of Applied Econometrics, 16 (3), 289 – 326

Rani, K. and Batool, Z. (2016). Impact of Political Instability and Foreign Direct Investment on Economic Development in Pakistan. Asian Economic and Financial Review, 6(2), 83-89.

Sulaiman, C. and Abdul-Rahim, A. S. (2013). The short- and long-run effects of sustainable forest management practices on trade in Thailand's forest products, Global Conference on Business and Economics Research (GCBER), 103-113.

Uddin, A. M. and Masih, M. (2015) Finance, growth and human development: An Islamic economic development perspective, MPRA Paper No. 65818.

Woo, J.Y. and Heo, H. (2009), Corruption and Foreign Direct Investment Attractiveness in Asia, Asian Politics & Policy, 1(2), 223-238.