

## **EVALUATING THE ROLE OF ECONOMIC FREEDOM IN MEDIATING FOREIGN DIRECT INVESTMENT ON MALAYSIAN ECONOMIC GROWTH**

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### **ABSTRACT**

This study focuses on three important issues; economic freedom, foreign direct investment (FDI) and economic growth. The threshold estimation method proposed by Hansen (1999, 2000) is employed to analyze the selected sample period from 1980 to 2012 of the Malaysian economy. Past scholar state that, FDI is the main factor contribute to the country's growth and economic freedom is among important factors to encourage inflows of FDI. Thus the main focus of this study is to evaluate the role of economic freedom as a mediating factor of FDI on economic growth. The findings indicate that at a certain level, economic freedom plays an important role in mediating FDI on economic growth in Malaysia.

**Keywords:** Economic Freedom, Foreign Direct Investment; Economic growth; Threshold estimation; Malaysia.

### **1.1 INTRODUCTION**

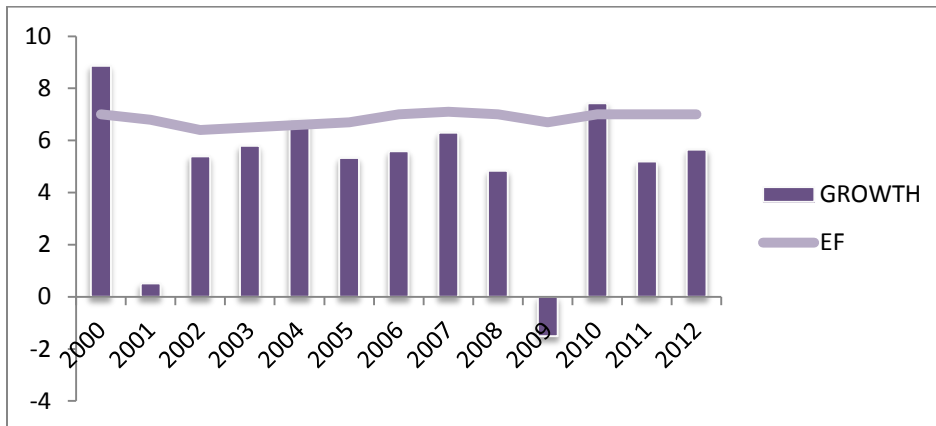
Economic freedom is a major determinant of countries of living standards, economic growth, and other indicators of social and economic well-being. Economic freedom cover all the liberties and rights of all economic activities like production, consumption, distribution of goods and services in the economy. The highest value of economic freedom shows the fully freedoms of labor, capital and goods movement, absolute right of property ownership and absolute absence of constraint of economic liberty, that is individuals in an economically free society would be free and entitled to work, produce, consume, and invest in any way they choose under a rule of law,

with their freedom at once both protected and respected by the state or in other words the freedom to prosper within a country without intervention from a government or economic authority.

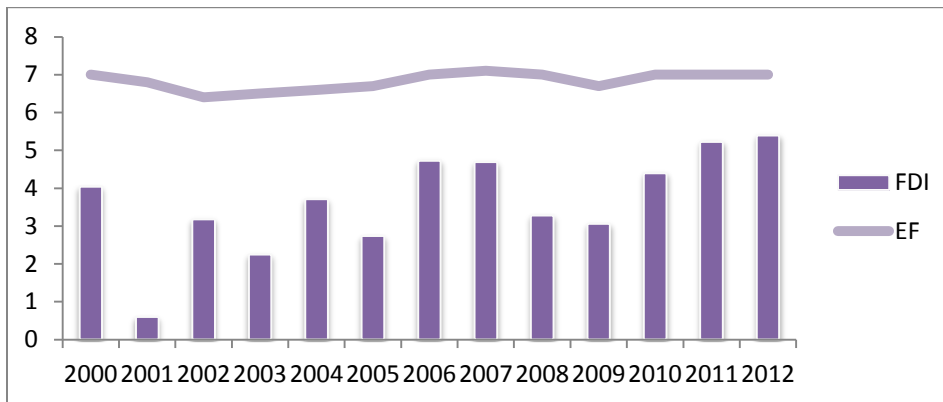
According to the Miller and Kim (2013), the goal of economic freedom is not simply an absence of government coercion or constraint, but the creation and maintenance of a sense of liberty for all. As individuals enjoy the blessings of economic freedom, they in turn have a responsibility to respect the economic rights and freedoms of others. Governments are instituted to create basic protections against the ravages of nature or the predations of one citizen over another so that positive economic rights such as property and contracts are given societal as well as individual defense against the destructive tendencies of others. Researchers have stressed the importance of economic freedom because this index will affect every aspect of an economic activity and individual life. Living in a society with high levels of economic freedom leads to higher income, lower poverty and less unemployment.

There are two index of economic freedom; Fraser Index and Heritage Index of economic freedom. This study used the economic freedom index based on Fraser Index because Fraser Index shows the complete data set for all indexes compared to Heritage Index. There are five areas and twenty-four components under the Fraser Index in order to measure the economic freedom. The areas are; (1) Size of Government; (2) Legal system and security of property rights; (3) Sound money; (4) Freedom to Trade internationally; (5) Regulation. The first area have four components indicates the extent to which countries rely on the political process to allocate resources and goods and services. The second areas of legal system and property rights measure protection of person and their rightfully acquired property is a central element of economic freedom and a civil society and it is the most important function of government. The key components are rule of law, security of property rights, an independent and unbiased judiciary, and impartial and effective enforcement of law. The third area measure an access to sound money. There are four components index in this area, that three of them are designed to measure the consistency of monetary policy or institutions with long term price stability and the fourth component in this area is designed to measure the ease with which other currencies can be used via domestic and foreign bank accounts. The fourth area indicates the freedom to trade contributes substantially to modern living standards, which is in our modern world of high technology and low costs of communication and transportation, freedom of exchange across boundaries is key ingredient for economic freedom. Finally, the fifth area focuses on regulatory restraints that limit the freedom of exchange in credit, labor and product market. The comprehensive explanation of Fraser Indexes is in Appendix.

Based on Annual Report of Economic Freedom of the World (2014), Hong Kong is in the first ranking with the highest value of economic freedom index with 8.98, the second place is Singapore with the index is 8.54 followed by New Zealand with the index of 8.25. Malaysia is at the 74<sup>th</sup> place from 152 countries with 7.0 value of economic freedom index. Although the ranking of Malaysia is in the middle place but the important role of economic freedom cannot be denied in explaining the economic growth and FDI. Figure 1 and Figure 2 indicates the relationship between the level of economic freedom with the inflows of FDI and economic growth. From the figure, there is a positive direct relationship between the economic freedom and growth and economic freedom and FDI for Malaysia for the year 2000 to 2012.



**Figure 1: Economic Freedom and Growth in Malaysia (2000-2012)**



**Figure 2: Economic Freedom and FDI in Malaysia (2000-2012)**

## 1.2 Issue of Study

The indexes of economic freedom are developed by Gwartney et al. (1996). Pioneer economist Milton Friedman believed that, if economic freedom could be measured with greater accuracy, this would enhance the ability of researchers to identify more clearly the key elements affecting the performance of economies. The index of economic freedom based on Fraser Index takes the value of 0 to 10, whereas 0 indicates no freedom and the highest values 10 indicates full freedom. Empirical study on the role of economic freedom to act as an absorptive capacity on the FDI-growth link has been proved by Azman-Saini et al. (2010) and the positive impact of economic freedom on growth has been explore by Gwartney et al. (1998), Kneller et al. (1999) and Grubel (1998). However, study on the level of economic freedom is significantly influence the FDI on the economic growth does not explore by the past researchers. Thus in order to filled the gap of the past research, we used threshold estimation method to estimate the level of economic freedom in mediating FDI on economic growth.

### 1.3 Conceptual Framework

Based on the goal of this study, we proposed a conceptual framework that diagrammatically reflects the intention.

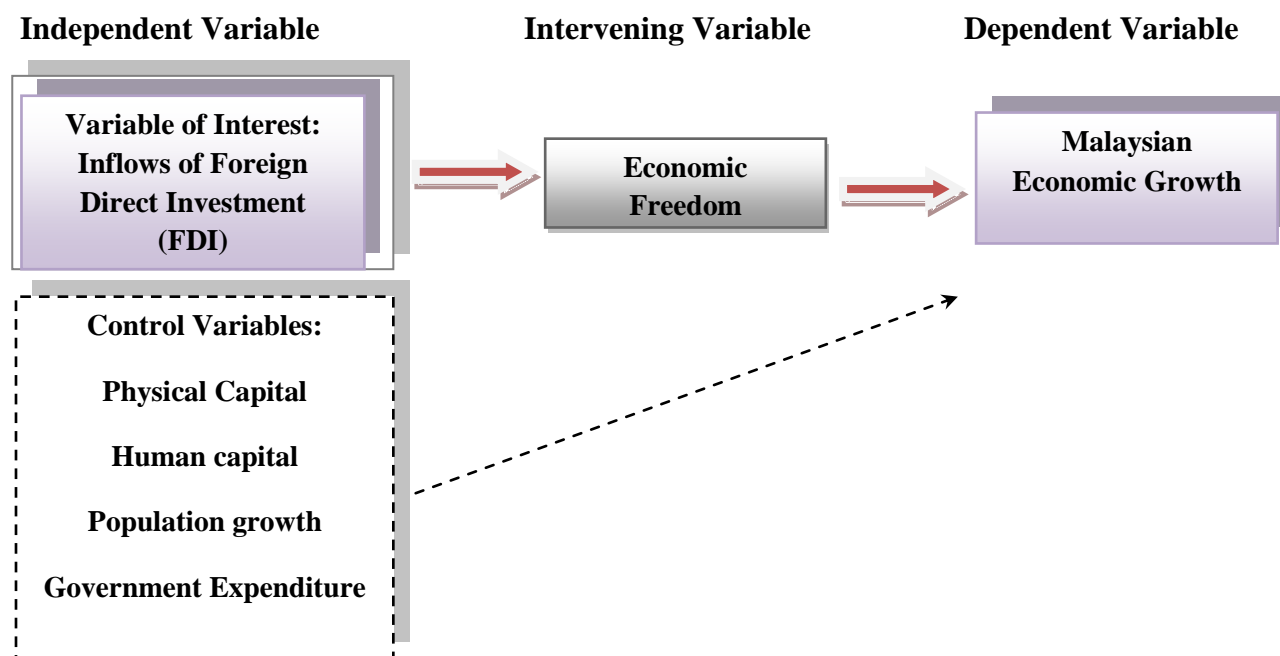


Figure 3: The Conceptual framework

### 1.4 Significant of the study.

This study contributes to the literature by providing an empirical evidence on the significant role of economic freedom in mediating the impact of FDI on economic growth. Threshold estimation analysis is a better way to estimate the level of economic freedom that will influence the FDI-growth link. This study will accommodate the meaningful possibility that economic freedom will kick in Malaysian economic growth through inflows of FDI only after the economic freedom exceeded a certain level of economic freedom index.

### 1.5 Organization of study.

The rest of the study is structured as follows. In section 2, we provide an overview of related empirical work on FDI, economic freedom and growth. In section 3, we describe the data set that we use and methodology to analyze. The empirical analysis based on threshold in is section 4 and finally in section 5 is conclusion and recommendation.

## 2.0 LITERATURE REVIEW

The issue of FDI in promoting growth have been analyzed by numerous researchers (i.e Lipsey (2000), De Mello (1997); Oliva and Rivera-Batiz, (2002); and Choe (2003)). Some of them study

on the significance of FDI and growth in specific countries. Study in Latin America countries by Bengoa et al. (2003) for a sample of 18 countries for 1970-1999 shows that FDI is positively correlated with economic growth in the host countries and De Gregorio (1992) finds a positive and significant impact of FDI and growth in a panel of 12 countries over the period of 1950-1985. Other state-specific surveys find the positive link between FDI and economic growth includes Mattaya and Veeman (1996) on Malawi and Ouattara (2005) on Senegal. Dees (1998) found that FDI played an important part in advancing economic growth in China. By analyzing on a sample of OECD and non-OECD countries for the period 1970-1990, De Mello (1999) claimed that FDI has a positive impact on growth. In order for a newly industrializing economy to catch up with the world's most modern countries, Yao and Wei (2007) stress that FDI is a potent driver of economic development.

Consistence with Chakraborty and Basu (2002) analyzed on India from 1974 to 1996 in the short and long run and found that FDI had a positive and important impact on growth. The relationship between FDI and growth has been investigated by Zhang (2001) looking at East-Asia and Latin America from the 1960s to 1997 found mixed evidence on the impact of FDI on growth, whereas the result for Taiwan, Mexico, Hong Kong, Malaysia, and Indonesia, FDI was found to be growth enhancing in the long run while this was not the case in Columbia, Korea, Argentina, Brazil, Thailand, Malaysia, and Singapore (however in Singapore FDI has a positive impact of growth in the short run). Balasubramanayam et al. (1996) found that in 10 to 18 of developing countries, higher inward FDI flows were associated with faster growth. In case of four Asian countries Merican (2009), have proven that the importance of FDI compared to domestic investment on growth.

The ambiguous explanation of FDI-growth link as explained by past researchers is because of “absorptive capacity”. Absorptive capacity as defined by Narula and Marin (2003) includes the ability to internalize knowledge created by others and modifying it to fit their own specific applications, processes and routines. Cohen and Levinthal (1989), define absorptive capacity as technology capability that will help host countries benefited from MNC's that similar with Aitken and Harrison (1999) and Girma and Wakelin (2000). Based on Blomstrom and Kokko (2003) the level of absorptive capacity is important for host country to receive positive FDI spillovers and this finding is similar with Kokko (1994) that state the important role of absorptive capacity as a determinant of inward investment. In the literature several factors have been mentioned as a role of absorptive capacity like economic freedom, institution, financial market, human capital, regulation, and domestic investment.

Institution is one of the important factors in FDI-growth link. North (1990) defined institution as the rule of game in a society or organizations. The indicators of institution that used by the past literature is property rights, political stability, political freedom, and economic freedom. Study by North (1990) and Rodrik et al. (2004) shows the important role of institution on economic growth. By referring to economic freedom, many empirical studies have found a positive relationship between economic freedom and growth (Barro, 1991; De Vanssay and Spindler, 1994; Gwartney et al. 1998; Kneller et al. 1999; Grubel 1998; Hanke and Walters 1997). Azman-Saini et al. (2010) using generalized method of moment analyses on 85 countries and found that countries promote greater freedom of economic activities will gain significantly from the presence of MNC's.

Economic freedom is the other issues considered in FDI-growth model. The important role of economic freedom and growth have been emphasizes by Berggren (2003; De Haan et al. (2006). Azman-Saini et al. (2010), investigate the FDI-growth link by using generalized method-of-moment (GMM) and their findings indicate that FDI alone has no direct impact on growth, but the effect of FDI is contingent on the level of economic freedom in the host countries that indicate most freest economies will gain more benefits from the MNC's.

The institutional which stresses the importance of making an institutional and policy environment conducive for smooth functioning of markets and the recognition of gains from trade and entrepreneurs activity (North, 1990; Hayek 1945, 1960). Keseljevic (2007) economic freedoms are freedom of exchange, freedom to compete, personal choice and protection and private belongings. Economic freedom means the absence of government intervention, a constraint on the yield, distribution or use of goods and services. The central purpose of government should be the protection of private property and the provision of infrastructure for and exchange. This requires the government to perform one type of action and refrain from engaging with others. McQuillan et al. (2008) define economic freedom as a right of individuals to follow their interests through voluntary exchanges of private property under the pattern of law with the depressed degree of intervention by government in parliamentary procedure to provide safety and a stable legal basis for exchanges of individual property, legislative or juridical actions and all of this freedom will make the base of market economies. The strongest protection of private belongings and a well-functioning judicial system are the most importance for economic growth (Goldsmith 1997; Barro 1997, 1999; Nelson and Singh 1998; Hall and Jones 1999; Kneller et al. 1999; Vijayaraghavan and Ward 2001; Feld and Voight 2000). Ayal and Karras (1998), finds that six of the components economic freedom have a positive and significant effect to total factor productivity and capital accumulation.

### **3.0 METHODOLOGY**

#### **3.1 Introduction**

The objective of this study is to examine the role of economic freedom in mediating the impact of FDI on output growth. Specifically, we would like to test whether economic freedom makes a difference to the way FDI affect output growth.

#### **3.2 Model specification**

In order to test the hypothesis that economic freedom is important in FDI-growth relation, this study employs a model which is broadly similar to others (Alfaro et al. 2004, Azman-saini et al. 2010). The model can be generally expressed as follows:

$$\text{GROWTH}_t = \beta_0 + \beta_1 \text{PG}_t + \beta_2 \text{FDI}_t + \beta_3 \text{PC}_t + \beta_4 \text{HC}_t + \beta_5 \text{GE}_t + \beta_6 \text{EF}_t + \varepsilon_t \quad (3.1)$$

where GROWTH is the growth rate of real GDP per capita, PG is population growth rate, FDI is foreign direct investment, PC is physical capital, HC is human capital and GE is government expenditure and EF is an index of economic freedom.

#### **3.3 Threshold Regression Analysis**

This paper uses panel threshold regression analysis proposed by Hansen (1999) to assess the hypothesis that economic freedom plays important role in mediating the impact of FDI on growth. This method allows the data to endogenously determine the numbers and locations of the threshold points. We argue that a model particularly well suited to capture the presence of contingency effects and to offer a rich way of modeling the influence of economic freedom on dynamic of FDI and growth in the following thresholds specification:

$$\text{GROWTH} = \alpha X_t \begin{cases} \beta_1 \text{FDI}_t + \varepsilon_t; & \text{EF} \leq \gamma \\ \beta_2 \text{FDI}_t + \varepsilon_t; & \text{EF} > \gamma \end{cases} \quad (3.2)$$

where GROWTH is a growth rates of real GDP over the 1980-2012 period, FDI is foreign direct investment, and  $X$  is a vector of variables hypothesized to affect output growth which includes population growth rate, physical capital, human capital and government expenditure. In this model, economic freedom (EF) acts as sample splitting (or threshold) variables. The above specification allows the effects of FDI on growth to take two different values depending on whether the level of economic freedom is smaller or larger than a threshold level  $\gamma$ . The impact of FDI on growth will be  $\beta_1$  ( $\beta_2$ ) for countries in low (high) regime.

In order to estimate this model we first need to jointly estimate the threshold value  $\gamma$  and the slope parameters. Chan (1993) and Hansen (2000) recommend obtaining the least squares estimate of  $\gamma$  as the value that minimizes the concentrated sum of squared errors across all possible values of  $\gamma$  (see Hansen, 2000). After obtaining a value of  $\gamma$ , we can estimate the parameters of our growth model. Having found the threshold we need to identify whether it is statistically significant. To do this we need to test the null hypothesis that  $\beta_1 = \beta_2$ . Rejecting the null hypothesis allows us to conclude that a threshold exists in the EF-FDI-growth relationship. Once complication in testing for the significance of significant threshold is that the threshold  $\gamma$  is not identified under the null hypothesis, implying that the classical test does not have standard distribution tables and critical values cannot be read off standard distribution tables. We follow Hansen (1996) of bootstrap to obtain the p-value for the test of a significant threshold. The procedure for this test is as follows. Firstly, one estimates the model under the null (linearity) and alternative (threshold occurring at  $\gamma$ ). This gives the actual value of the likelihood ratio test, ( $F_1$ ).

$$F_1 = \frac{S_0 - S_1(\text{EF}^*)}{\hat{\sigma}^2} \quad (3.3) \quad \text{where} \quad \hat{\sigma}^2 = \frac{1}{n(t-1)} S_1(\text{EF}^*) \quad (3.4)$$

Then a bootstrap is created by drawing from the normal distribution of the residuals of the estimated threshold model. Using this generated sample, the model is estimated under the null and alternative and likelihood ratio  $F_1$  is obtained. The bootstrap estimate of the p-value for  $F_1$  under the null is given by the percentage of draws for which the stimulated statistic  $F_1$  exceed the actual one. If evidence is found in favor of a threshold we need to be able to form some kind of confidence interval around the value in order to be able to place countries into the two regimes. Once again standard methods of doing this are not ideal when estimating an unknown threshold (sees Dufour, 1997). Hansen (2000) derives the correct distribution function and provide the appropriate critical values  $c(\alpha)$ , for the likelihood ratio statistic as is given by  $LR_n = n \frac{S_n - S_n(\gamma)}{S_n(\gamma)}$ . The confidence interval of the threshold estimate  $\gamma$  consists of those values of EF for which the likelihood ratio statistic is less than  $c(\alpha)$ .

### 3.4 Data Descriptions

The data set consists of observations for Malaysian over the 1980-2012 period. The data on the growth rate of real GDP per capita were extracted from the World Development Indicators (WDI). FDI is net inflows of foreign direct investment which is expressed as a ratio to GDP and the data were extracted from the WDI. Physical capital is measured as a ratio of gross fixed capital formations to GDP and proxy for human capital is life expectancy at birth. Both data were extracted from the WDI. The data on final government expenditure is expressed as a ratio to GDP. Finally, economic freedom index were obtained from Economic Freedom report published by Fraser Institute. The Index is scaled from 0 to 10 with higher value indicates higher level of economic freedom. Table 3.1 provides a summary of all data used in this study.

**Table 3.1. Summary of Data**

Variable	Measurement	Source of data
Growth	Growth rate of real GDP per capita.	World Development Indicator (WDI)
FDI	Net inflows of FDI as ratio to GDP.	World Development Indicator (WDI)
Economic freedom	Overall freedom index	Fraser Institute (Economic Freedom Index)
Population Growth	Percentage of Population growth rates.	World Development Indicator (WDI)
Physical Capital	Gross fixed capital formation ratio to GDP.	World Development Indicator (WDI)
Human Capital	Life Expectancy at birth.	World Development Indicator (WDI)
Government Expenditure	Final Government expenditure as ratio to GDP	World Development Indicator (WDI)

## 4.0 RESULT AND DISCUSSION

This section discusses an estimation result to test the role of economic freedom in mediating the impact of FDI on economic growth. The analysis is based Malaysian data over the 1980 -2012 period. Our empirical results are presented in Tables 4.1 – 4.5. Table 4.1 and Table 4.2 provide summary statistics and correlation.

**Table 4.1: Summary of descriptive statistics 1980-2012**

Variable	Mean	Standard deviation	Minimum	Maximum
GROWTH	0.6509	0.0927	-0.2859	0.9474
PG	0.2728	0.0108	0.2197	0.3552
FDI	0.3631	0.1498	-1.2465	0.7178
EF	6.8308	0.0634	6.2000	7.5000
PC	1.3578	0.0083	1.3132	1.4090
GE	1.7623	0.0053	1.7317	1.7959
HC	1.8683	0.0010	1.8624	1.8741

Notes: GROWTH= output growth per capita, PG = population growth, FDI = foreign direct investment, EF=economic freedom, PC= physical capital, HC = human capital, GE= government expenditure.



**Table 4.2: Correlation matrix 1980-2012**

	<b>GROWTH</b>	<b>PG</b>	<b>FDI</b>	<b>EF</b>	<b>PC</b>	<b>GE</b>	<b>HC</b>
GROWTH	1.0000						
PG	-0.1942	1.0000					
FDI	0.7443	-0.0330	1.0000				
EF	0.1572	-0.3008	0.3031	1.0000			
PC	-0.2203	0.3895	-0.0325	0.1077	1.0000		
GE	-0.3135	-0.6517	-0.4361	-0.0113	0.1725	1.0000	
HC	0.1559	-0.9632	0.0029	0.4766	-0.2385	0.6915	1.0000

Notes: GROWTH= output growth per capita, PG = population growth, FDI = foreign direct investment, EF= economic freedom, PC= physical capital, HC= human capital, GE= government expenditure.

Table 4.2 provides correlation for the variables used in this analysis. Three variables indicate positive correlation with growth per capita which is foreign direct investment, economic freedom and human capital. The other three variables indicate negative correlation with growth (population growth, physical capital and government expenditure). Based on the past literature, the correlation of population growth and growth rate can be either positive or negative. The result of negative result is indicated by Kelly and Smith (1994) while the positive correlation between population growth and growth rate similar with finding Kremer (1993). The finding from Boucekkine et al. (2002) is similar with estimation in Table 4.2 of positive correlation of human capital and growth rate. The positive correlation result of FDI with growth per capita similar with Alfaro et al. (2004) and positive correlation between economic freedom and growth rate are similar with Gwartney et al. (1996). Physical capital and government expenditure indicate negative correlation with growth rate and this finding are similar with Barro (1990) and Slemrod et al. (1995), Folster and Henrekson (2001) indicates negative effect of government expenditure on growth and the finding of negative correlation physical capital is study by Gylfason and Zoega (2006) on 85 countries from 1965 to 1998 suggests that abundant natural capital may on average crowd out physical capital thereby inhibiting economic growth.

**Table 4.3. Linear Model and Linear Interaction Model**

	<b>Linear Model</b>			<b>Linear Interaction Model</b>		
	<b>Coefficient</b>	<b>s.e</b>	<b>t-stat</b>	<b>Coefficient</b>	<b>s.e</b>	<b>t-stat</b>
PG	-0.0528	0.0319	0.0982*	-0.0546	0.0324	0.0929*
FDI	0.3701	0.0204	0.0702*	0.5981	0.1946	0.0021 ***
EF	0.2476	0.0874	0.0047 *	0.4737	0.1235	0.0001 ***
PC	0.0094	0.0141	0.5037	0.0106	0.0143	0.4554
GE	-0.1587	0.0304	0.2947	-0.3320	0.0886	0.4936
HC	0.1530	0.0253	0.0000 ***	0.1045	0.0240	0.0000 ***
EF x FDI				0.5390	0.1953	0.0059 ***
Constant	-0.6126	0.2089	0.00344 **	0.0875	4.7757	0.9853
Multiple R <sup>2</sup>		0.0591		0.0560	0.0000 ***	
F-statistics		10.82			6.115	

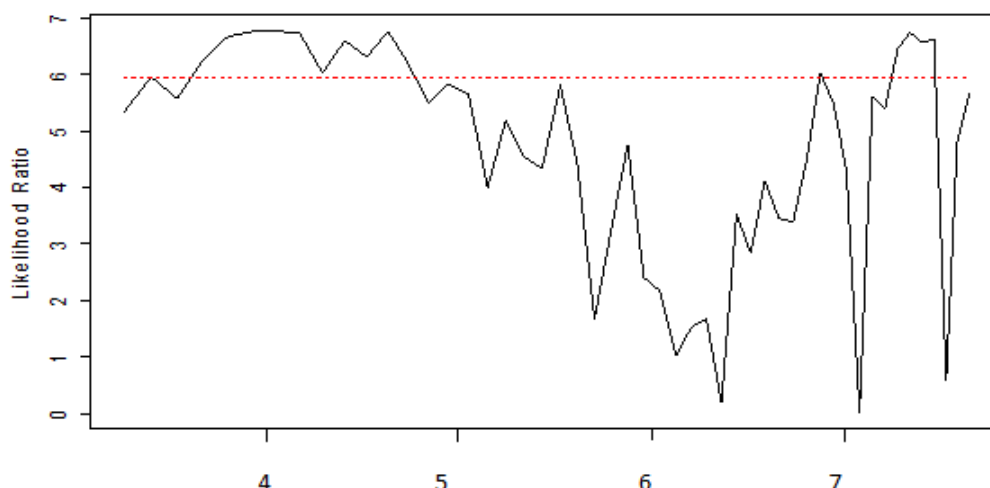
Note: The dependent variable is output growth per capita, period (1980-2012).

Table 4.3 presents the result without interaction model and result of linear interaction model. As presented in the Table 4.3, the model without interaction variable shows for both of interest variables FDI and economic freedom indicate the direct effect and significant at 10 per cent significant level. For the linear interaction model, we find that FDI is highly important in determining growth rate and is significant at 1 per cent. This finding is consistent with the past the literature of De Mello (1997), Lipsey (2000), Olivia and Rivera-Batiz (2002), Choe (2003) who also find that the crucial role of FDI in promoting country growth rate and the interaction variable of economic freedom and FDI also show there are significantly influence of Malaysia economic growth.

## **4.2 Threshold Regression Analysis**

Most of the studies that explored the impact of absorptive capacity on the FDI-growth link have relied on the use of a linear interaction model. A major limitation of this type of modeling strategy is that they impose a priori restrictions on the effect of FDI on growth such that the effect of FDI on growth to increase (or decrease) monotonically with absorptive capacity. Therefore, this study uses an alternative method that allows some economic freedom in modeling the conditional impact of FDI on output growth. The main goal of our study is to determine whether there is threshold effect in the FDI-growth link. Specifically is to determine whether the impact of FDI on growth can be characterized as a nonlinear process where the impact of FDI on growth could be positive, negative, or neutral depending on some unknown critical level of economic freedom. According to Hansen (1996, 1999 and 2000), the existence of threshold effect can be examined using a bootstrap approach in estimating the p-value based on replications for all bootstrap tests. Thus we estimate the threshold value by using bootstrap methods with 1000 replications and 10 per cent trimming percentage.

Results for threshold regression analysis are reported in Table 4.4. Figure 4.1 show the plot of the concentrated likelihood ratio function of threshold estimate  $LR(\gamma)$  with 90 per cent confidence intervals. The point estimate are the values of  $\gamma$ . The point estimates are the value of  $\gamma$  at which the likelihood ratio hits the zero axis as is in the Figure 4.1. As shown in Table 4.4 and Figure 4.1, the threshold estimate is 6.3000 and the test of no threshold effect yields a p-value of 0.0278. Thus we can split into two groups according to the index of economic freedom namely low economic freedom and high economic freedom. The coefficient on FDI of high regime is 0.1790 while for low regime is 0.0073. However, only coefficient of high regime of economic freedom is found to be significant at the usual level. This suggests that FDI will have an important impact on economic growth only when economic freedom has achieved certain level of economic freedom index. Before that, the impact is non-existence. Therefore, we can conclude that economic freedom is important in mediating the impact of FDI on economic growth for Malaysia economy. This result is consistent with Azman-Saini et al. (2010) who find that economic freedom is important in attracting the inflows of FDI.



**Figure 4.1. Plots of the concentrated likelihood ratio**

(Note: 90 per cent confidence intervals)

**Table 4.4. Threshold regression**

Regressor	Coefficient estimate	s.e	t-stat
<i>PG</i>	-0.1171	0.6762	0.7977
<i>PC</i>	0.5458	0.2580	0.0226**
<i>GE</i>	0.1221	0.0538	0.0441**
<i>HC</i>	-0.4391	0.3338	0.4011
<i>FDI</i>	0.7686	0.3289	0.0356**
Low EF - ( $EF \leq 6.3$ )	0.0073	0.0261	0.0308
High EF - ( $EF > 6.3$ )	0.1790	0.0606	0.0509***
Threshold estimate	2.1041		
LR Threshold estimate	9.1722		
Bootstrap p-value	0.0236**		

Note: The dependent variable is output growth per capita, p-value was bootstrapped with 1000 replications and 10% trimming value.

We have conducted several sensitivity tests to check the robustness of the above estimation. The first test is we estimate the sensitivity of the p-value by using different number of bootstrap replication and trimming percentage. The results are reported in Table 5.6.

**Table 4.5. Bootstrap p-value**

Threshold Estimate: 6.3 LR test of threshold: 9.1722	Trimming Percentage				
	Bootstrap Replication	10	15	20	25
1000	0.0236	0.0229	0.0210	0.0187	0.0165
5000	0.0213	0.0201	0.0196	0.0182	0.0167
10000	0.0201	0.0192	0.0187	0.0174	0.0162

Note: Bootstrap replication and trimming percentage obtain by using R statistical software.

Based on the results, we can conclude that at all bootstrap replications that we examined (1000, 5000 and 10,000) and with 10 per cent, 15 per cent, 20 per cent, 25 percent and 30 per cent of trimming percentage, we can easily reject the null hypotheses of no threshold, which indicate that the existence of threshold value at all bootstrap replication and trimming percentage tested.

## 5.0 CONCLUSION AND RECOMMENDATION

This study investigates the role of economic freedom in mediating the impact of FDI on Malaysian economic growth with time spanning the period 1980 to 2010. Threshold estimation analysis that proposed by Hansen (1999, 2000) is employed in order to split the index of economic freedom into two groups of low economic freedom and high economic freedom. The threshold results indicate that economic freedom lower than 6.2 is less economic freedom and greater than the threshold value is high economic freedom. Based on the threshold estimation, the high economic freedom shows that economic freedom is highly influence as a mediating variable of FDI-growth link for Malaysian economy. Thus, this study has contribute to the empirical literature that economic freedom is one of the important variable in order to attract the inflows of FDI and at the same will boost host country economic growth. Economic environments that conducive and support economic freedom is important to support and allows greater diversity, promoting creativity, encourage new technology and innovation. Policy maker and government should provide or formulate policy and ready to reduce their intervention to ensure that country is freer because this study has prove that economic freedom is one of the main drivers of prosperity and growth. On the other hand, government and policy makers should develop policy that provide good environment for domestic firm and foreign firm do business and trade.

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## APPENDIX

1. Size of Government: Expenditures, Taxes and Enterprises.
  - i. General government consumption spending as a percentage of total consumption.
  - ii. Transfers and subsidies as a percentage of GDP.
  - iii. Government enterprises and investment as a percentage of GDP.
  - iv. Top marginal tax rate (and income threshold to which it applies).
  
2. Legal Structure and Security of Property Rights.
  - i. Judicial independence: The judiciary is independent and not subject to interference by the government or parties in disputes (GCR)<sup>1</sup>.
  - ii. Impartial courts: A trusted legal framework exists for private businesses to challenge the legality of government actions or regulations (GCR).
  - iii. Protection of intellectual property (GCR).
  - iv. Military interference in rule of law and political process (ICRG).
  - v. Integrity of the legal system (ICRG)<sup>2</sup>.
  
3. Access to sound Money.
  - i. Average annual growth of the money supply in the past five years minus average annual growth of real GDP in the past ten years.
  - ii. Standard inflation variability in the past five years.
  - iii. Recent inflation rate.
  - iv. Freedom to own foreign currency bank accounts domestically and abroad.

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<sup>1</sup> GCR (Global Competitiveness Report)

<sup>2</sup> ICRG (International Country Risk Guide)



4. Freedom to exchange with foreigners.
  - A. Taxes on international trade:
    - i. Revenue from taxes on international trade as a percentage of export plus imports.
    - ii. Mean tariff rate.
    - iii. Standard deviation of tariff rate
  - B. Regulatory trade barriers.
    - i. Hidden import barriers: no barriers other than published tariffs and quotas (GCR).
    - ii. Cost of importing: the combined effect of import tariffs, license fees, bank fees, and the time required for administrative red tape raises costs of importing equipment; 10=10% or less; 0 = more than 50% (GCR)
  - C. Actual size of trade sector compared to expected size.
  - D. Difference between the official exchange rate and the black market rate.
  - E. International capital market controls.
    - i. Access to citizens to foreign capital markets and foreign access to domestic capital markets (GCR)
    - ii. Restrictions on the freedom of citizens to engage in capital market exchange with foreigners index of capital controls among thirteen IMF categories.
5. Regulation of Credit, Labor and Business.
  - A. Credit Market Regulations.
    - i. Ownership of banks: percentage of deposits held in privately owned banks.
    - ii. Competition: Domestic bank face competition from foreign bank (GCR).
    - iii. Extension of credit: percentage of credit extended to private sector.
    - iv. Avoidance of interest-rate controls and regulations that lead to negative real interest rate.
    - v. Interest rate controls: interest rate controls on bank deposits or loans or both are freely determined by the market (GCR).
  - B. Labor Market Regulation.
    - i. Impact of minimum wage; the minimum wage, set by law, has little impact on wages because it is too low and not obeyed (GCR).
    - ii. Hiring and Firing practices of companies determined by private contract (GCR).
    - iii. The share of labor force whose wages are set by centralizing collective bargaining (GCR).
    - iv. Unemployment benefit system preserves the incentive to work (GCR).
    - v. Use of conscripts to obtain military personnel.
  - C. Business Regulations.
    - i. Price controls: the extent to which business is free to set their own prices.

- ii. Administrative conditions and new businesses: administrative procedure is an important obstacle to starting a new business (GCR).
- iii. Time that senior management spends dealing with government bureaucracy (GCR).
- iv. Starting new business is generally easy (GCR).
- v. Irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection, or loan applications are very rare (GCR).