FOREIGN DIRECT INVESTMENTS (FDI) IN MALAYSIA: DETERMINANTS AND POLICY ISSUES

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Abstract

One of the key indicators for evaluating the economic growth of a country is Foreign Direct Investment (FDI). FDI activity will generate multiplier effects such as the influx of capital investment, technological advancement and increase in productivity levels especially in knowledge management and human capital development. As shown in other studies, Malaysia has always been considered to have attained its economic growth through FDI. The Malaysian economy has undergone massive structural changes; evolving from an agriculture base into a dominant producer and exporter of manufactured goods and services. Therefore, our objective here would be to test whether FDI has any significant relationships with important variables like Real GDP, Nominal Exchange Rate, Current Account Balance and Industrial Production Index. Empirical data in our paper covers a 22-year time-span and quarterly time-series data (1990: Q1–2012: Q4) are used to uncover the short–run and long–run relationship between FDI and these variables. Dynamic econometric measures including the Augmented Dickey Fuller (ADF) and Phillip–Perron (PP) unit root tests, Co-integration test and the Vector Error Correction Model (VECM) as well as the Granger Causality Test have been applied. Based on these generic models, our overall conclusion is that FDI is a very significant and dominant factor in Malaysia's development and economic diversification. The paper also highlights some major problems facing foreign investors which require immediate remedial action.

Keywords: *Foreign Direct Investment, Determinants, Policy Issues, Malaysia.*

1 Introduction

As reported in World Investment Report (2016), the recovery stage of foreign direct investment was drastic and strong enough. In general, the overall global foreign direct investment surpasses about 38 percent to $1.76 trillion, reached peak level after the financial and economic crisis of 2008 – 2009. In addition, mergers and acquisition (M&A) specifically cross- border M&A increased to $721 billion ($432 billion in 2014), and become a dominant factor despite the global recoil. The green field of investment sustained steadily at maximum level of $766 billion.

According to the World Investment Report, 2012, global foreign investment (FDI) flows rose 16 per cent in 2011 surpassing the 2005-2007 pre-crisis level for the first time, despite the continuing effects of the global financial and economic crisis of 2008-2009 and the on-going sovereign debt crises. This increase occurred against a background of higher profits of transnational corporations (TNCs) and relatively high economic growth in developing countries during those years.

As the world economy becomes more globalised and barriers to trade and capital movements become more relaxed, highly developed countries will move their funds to less developed countries seeking to set up businesses to take

advantage of lower comparative costs of capital and labor as well as favorable exchange rate differentials. The countries receiving the inflow of foreign direct investments also stand to gain from these inflows through increased employment of their factors of production such as labor, land and capital, thus increasing their growth potential as signified by GDP growth. These countries will benefit from the FDI inflows so long as they remain competitive as the demand for FDI is increasingly on the rise. FDI can come in various forms such as the setting up of Multinational Corporations (MNCs), Multinational Enterprises (MNEs) and Transnational Enterprises (TNEs).

The main determinants attracting FDI inflows into a country, as discussed in most literature would include exchange rates, openness of the economy, and interest rates of capital amongst others. To host countries therefore, attracting FDI is vital since the manifold benefits of FDI cannot be overlooked. This study aims to empirically investigate the fundamental factors that drive FDI in Malaysia. The volume of FDI inflows into certain regions of the world is notably large whereas inflows in other parts can be insignificant. Therefore, it is necessary to investigate what determines or influences the FDI inflows and what needs to be done to attract FDI so that a country can benefit from them. In addition, this study will highlight the major problems which foreign investors currently face and which must be addressed in order that Malaysia can re-establish itself as a major FDI destination as it was in the past.

Looking at the Malaysia perspective, UNCTAD reports that Malaysia's FDI grew by an impressive 22.2% (RM13.6 billion) in 2013 compared to RM10 billion in 2012. Despite this impressive growth, Malaysia is currently lagging behind its neighbors in terms of total FDI receipts,

putting Malaysia only in the fourth spot among ASEAN countries like Singapore, Indonesia and Thailand. Nevertheless, the Malaysian Investment Development Authority (MIDA) claims that the outlook for FDI in Malaysia is on the positive trend as shown by leading indicators. As reported in the MIDA Report (2013), Malaysia's Direct Investment Abroad (DIA) has recorded good performance compared with its inward Foreign Direct Investment (FDI). The increase in FDI has shown a significant upward trend in Malaysia over the past three years where it further reduced the gap between direct investment inflows and outflows. As noted in the statistical report produced by MIDA, it is very clear that FDI recorded a positive change of 24 percent where it increased from RM31.1billion in 2012 to RM38.8 billion in 2013. On the other hand, DIA for the same period scored RM42.9 billion. In addition, the Malaysia investment activities were also affected due to the changes in the nature of investments especially among Malaysian businesses. For example, the MIDA 2014 Report shows that about RM117.5 million of investment grants approved under the programme of RM1 billion Domestic Investment Strategic Fund (DISF) was concentrated on research and development. Moreover, RM36.1 million was allocated for training expenses to further upgrade human capital development. The target group of companies included both local and foreign companies.

All these rapid developments are consistent with the objective of the Economic Transformation Programme (ETP) whose main aim is to transform Malaysia into a high income nation by 2020 by reaching a Gross National Income target of RM1.7 trillion. To achieve this, Malaysia needs to attract about RM1.4 trillion during the time framework of 2011 to 2020. The major contributions of these are to come from the private sector rather than the

public sector.

The ETP provides support and business opportunities throughout the economy for both manufacturing and services sectors to add value to the Malaysian economy via its Entry–Point Projects (EPPs). There is no doubt that the opportunity to achieve the objective of ETP as Malaysian investment performance is good as shown by the nation's recent investment performance (MIDA, 2014). MIDA also reported that Malaysia attracted RM50 billion in investments up to May 2014 involving 570 projects and about 50,000 jobs. In addition, Malaysia has always been a favorite country for regional and global operations of MNCs because of its strong and flexible ecosystem and this is expected to gather greater momentum given the continuous support from the government to establish Malaysia as a global business and manufacturing hub.

The continuation of the study is sorted as follows; next part discusses literatures on foreign direct investment (FDI), later followed by discussion research methodology applied for the study is discussed, followed by the empirical finding and analysis of the results. Finally, we conclude with the discussion of policy issues and further recommendation is address in last section.

2.0   Literature Review

Despite the extensive literature covering the relationship between FDI and its determinants, there is no clear consensus on their inter-relationships. . The studies on different countries involving different time intervals and statistical methods are mostly also quite different in their conclusions. For example, Tiwari & Mutascu (2010) tried to investigate about 23 developing Asian economies for the year 1993-2009 using the dynamic panel model and OLS methods found that the level of exports enhances FDI movements which in turn enhance growth. On the other hand, Dar et.al (2004) in his research on FDI in Pakistan found that economic growth, exchange rate and level of interest rates, employment levels and political stability were important determinants for FDI inflows into Pakistan between 1970-2002 and the inter-relationships were a two-way causality relationship.

A study by Yusof and Choong (2002) examines the relationships between GNP, exchange rate differentials, current account deficits, uncertainty and inflation and FDI in the Malaysian manufacturing sector between the periods 1965-1999. Their results showed that current account deficit and inflation were the crucial factors for the FDI inflows. In addition, Zhang (2001) attempted to identify the relationship between FDI and economic growth for 11 developing countries from East Asia and Latin America. Applying Johanssen and Juselius cointegration tests, Zhang managed to prove that FDI is enhanced by trade regime and macroeconomic stability but the rapid increases in FDI was mainly contributed by growth in Real GDP. This result is consistent with Basu et al. (2003) but Basu et al. focuses on a panel of 23 countries and trade openness is found to be one of the crucial components that can enhance the growth of FDI. They also found that trade openness and FDI has bidirectional relationships in both the short-run and long-run.

Another study on 3 three ASEAN countries namely, Malaysia, Thailand and Philippines done by Ismail and Yusof (2003) investigated the relationship between labor market competitiveness and FDI inflows and it was found that there was no significant relationship between the two. Shahrudin et al. (2010) conducted a study on FDI determinants by using an Autoregressive Distributed Lag Model (ARDL). They concluded that the key determinants were financial development and economic growth which

mattered most amongst all other variables tested. Similarly, Chowdury and Mavrotas (2006) also did a paper on Malaysian and Thailand's FDIs by employing Granger Causality Test and the Toda Yamamoto Analysis. Using data covering 1969 to 2000, they found there is bidirectional causal relationship between macroeconomic variables and FDI.

Zubair Hasan (2003) found that exchange rate, export expansion and infrastructural development being the important factors of FDI determination in Malaysia. In addition, Hooi (2008) on the other hand did a study using Error Correction Method and Granger Casualty Test to examine FDI in Malaysian manufacturing sector and concluded that there is a strong relationship between economic growth and FDI. Conversely, Ang (2008) had used a wide range of variables such as government spending on infrastructure, openness and exchange rate for the period 1960-2005 and concluded that economic growth has the least effect on FDI while exchange rate seemed to have the biggest impact in the study.

Hence, this paper attempts to fill the existing gap in FDI research in the Malaysian case by incorporating Industrial Production Index (IPI) as an additional independent variable and we have taken the more recent year's i.e.1990-2012 to analyze trends so that it would be more useful and appropriate as pointers for policy makers. Additionally, this paper uses the Error Correction Method (ECM) to examine both the short-run and long-run effects of the chosen variables on FDI. In a later section, this study will also discuss policy issues that should be considered to enhance FDI inflows into Malaysia in the face of intense competition for FDIs among the ASEAN countries.

3.0   Data Source and Empirical

Approach

The empirical data and analyses in this paper cover a 22-year-period using quarterly time - series data (1990: Q1-2012: Q4) which should be adequate to test the long run relationship between the independent and dependent variables. The data series required involves foreign direct investment, real gross domestic product, nominal exchange rate, current account balance and industrial production index. The data are obtained from Bank Negara Statistics; IMF's International Financial Statistics database (IFS) which are complemented by data from www.econstats.com for chosen years. First of all, we assume that foreign direct investment is a function of its macroeconomic variables as expressed by the equation below;

$$FDI = f(RGDP, NOMEXC, CA, IPI) \qquad \text{Eq(1)}$$

Next, to examine this relationship the generic model applied takes the form as follows;

$$\ln FDI_t = \beta_0 + \beta_1 \ln RGDP_t + \beta_2 NOMEXC_t + \beta_3 \ln CA_t + \beta_4 IPI_t + \varepsilon_t \quad \text{Eq(2)}$$

where:

lnFDI	= Natural Log of Foreign Direct Investment
lnRGDP	= Natural Log of Real Gross Domestic Product
NOMEXC	= Nominal Exchange Rate
lnCA	= Natural Log of Current Account Balance
IPI	= Industrial Production Index

Unit Root Test

In order to avoid spurious results, we have conducted the test for the stationarity. Time series is considered as stationary if a series is mean-reverting, that is, the series repeatedly returns to its mean and does not have a tendency to drift. Therefore, if the mean and variance of the series are constant over time, while the value of the covariance between two periods depends only on the gap between the periods and not on the actual time at which the covariance is considered, then the series is stationary. But if one of the above conditions is not fulfilled, then the series is non-stationary (Paramaiah and Akway, 2008). This study uses the most commonly used tests, namely; the Augmented Dickey – Fuller (ADF) and

the Phillips – Perron (PP) tests. ADF is applied when the error term (Ut) is correlated. If it is not, we can only use the Dickey – Fuller test. ADF is performed by adding the lagged values of the dependent variable ΔY_t. The null hypothesis for ADF test for unit root test is $\square$ $\square\square\_1 = 0$. We can apply the example of Gujarati (2009) for running the ADF. The following regression is for the ADF test purpose;

(Eq: 3)

$$\Delta Y_t = \beta_1 + \beta_{2t} + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} Y_{t-1} + \varepsilon_t$$

where and are parameters, t is the time or trend variable, indicates drift, is a pure white noise error term and etc. However, ADF also has its own critics. Paramaia and Akway (2008) claimed that the ADF test has good size but poor power properties. On the other hand, the Philip – Perron test (PP) is used to control the higher – order serial correlation. PP test use non – parametric statistical methods and avoid the use of adding lagged difference terms as in the ADF test. The null hypothesis for PP test is $\square$ ß $\square\_1 = 0$. The equation for PP test (Jeong; Fanara; Mahone, 2002) is as follows;

$Y\_t = ß\_0 + ß\_1 Y\_(t-1) + e\_t$
(Eq:4)

Cointegration Tests

This analysis is to determine whether the time series of these variables display a stationary process in a linear combination. Generally speaking, co-integration means that data from a linear combination of two variables can be stationary despite them being individually non – stationary (Gujarati, 2009). Therefore, we have employed the Johansen (1991) method of multivariate co-integration. The result from co-integration explains the existence of a long – term relationship between the dependent and the independent variables. If there is at least one co-integrating relationship among the variables, then the causal relationship among these variables can be determined by estimating the VECM.

The Johansen and Juselius method uses two tests to determine the number of co-integrating vectors (Adebiyi, 2007), namely the "Likelihood Trace Statistic" test (LTS) and the "Maximum Eigenvalue" test (ME). The equation for Likelihood Trace Statistics is as follows:

$LTS = -T \sum\_(i-i+1)^n \square \ln \square (1-\mu i) \square$
(Eq:5)

For this null hypothesis, it is said that the number of co-integrating vectors is less than or equal to r, in which r is 0,1,2,3,4,5,6 and so on. The alternate hypothesis against this is that r=n. The equation for Maximum Eigenvalue test is as follows:

$ME = -T \ln (1-\mu\_t)$
(Eq:6)

For this null hypothesis is that the existence of r co-integrating vector and the alternate hypothesis is r +1 co-integrating vectors.

Vector Error Correction Model (VECM)

If co-integration is found from the series of variables, the Error Correction Term (ECT) must be taken into account in causality test in order to avoid misspecification of the functional form. To test the misspecification, we will use Ramsey's Reset Test. VECM is widely known as restricted Vector Auto Regression (VAR) and used for non-stationary variables known to be co-integrated. Generally speaking, VECM restricts the long-run behavior of endogenous variables to converge to their co-integrating relationship whereby induced short-run adjustment dynamics take place. Moreover, by using VECM, it allows us to differentiate between the short –run and long – run association of the variables over a given specified time period. The variables might

have dispersed in the short – run from one another which may cause disequilibrium in the system. Therefore, the statistical significance with regards to the coefficient associated with ECT (-1) will give us an error correction that drives the variable back to the long- run relationship (Gujarati, 2009).

Granger Causality Tests

Next, the Granger Causality will let us know in how many directions the variables will have relationships. The short-run relationship can be identified using Granger Causality Tests. The reason for checking the short-run relationship is to know whether the lags of one variable enter into the equation for another variable (Gujarati, 2009). Basically, there are two major steps involved in conducting Granger Causality Tests namely; (i) data that are stationary needed and (ii) selection of lag length criteria. Therefore, for this study, we used the Akaike Information Criterion (AIC) to determine lag structure.

4.0   Estimation   Procedure   and Initial Results
Unit Root Tests

In order to check on the stationarity of the variables, we use the Augmented Dickey-Fuller and Phillip-Perron tests for unit root tests. The reason for running these tests is to check whether the null hypothesis has a unit root against the alternatives that it does not. Both of these tests are conducted with trend and intercept. In addition, we have used the Akaike Information Criterion (AIC) to determine the optimal lags after testing for first and higher order serial correlation in the residuals.

The investigation using the Augmented Dickey Fuller (ADF) and PP summarized in Table 1 and 2 shows that there are no variables having unit root at level. However, unit root is obtained when the

first difference condition of all variables are conducted using the same ADF and

Table 1: Unit Root Tests (ADF and PP Unit Root Tests)

Variables	Level		First Difference	
	ADF	PP	ADF	PP
ln(FDI)	-1.0036	-2.3727	-6.1546	-6.5107
	(0.7146)	(0.3012)	(0.0000)***	(0.0000)***
ln(RGDP)	-2.6818	-2.6818	-9.9606	-10.207
	(0.2466)	(0.2466)	(0.0000)***	(0.0000)***
NOMEXC	-1.7511	-1.5367	-5.8257	-5.8202
	(0.3265)	(0.8719)	(0.0000)***	(0.0001)***
ln(CA)	-3.0581	-3.0600	-9.9801	-9.9483
	(0.1274)	(0.1223)	(0.0000)***	(0.0000)***
IPI	-0.8806	-1.9845	-7.7787	-7.2596
	(0.9529)	(0.6010)	(0.0001)***	(0.0000)***

Note: The Table 1 shows the unit root tests result. The value based on Mackinnon (1996). The signs of *, ** *** indicates significance in 10%, 5% and 1%

PP test by comparing the level using 1%, 5% and 10% alpha values.

Cointegration test

A set of variables will be cointegrated if a linear combination among the variables is stationary even though the variables are not stationary individually. If there exists cointegration, then there will be long - run equilibrium among the variables In this study, by employing the Johansen and Juselius Cointegration Test, we compare the value of the Likelihood Trace Statistic (LTS) with the 5% critical value and it was found that there exists only one cointegration in the long run (see Table 3). Therefore, there is a long run unique cointegrating vector governing the long run relationship among the variables. It means that there is a one cointegrating long - run association among Foreign Direct Investment with

Table 2: Johansen – Juselius Cointegration Tests

Hypothesized No. of CE(s)	Trace Statistic	Max-Eigen Statistic	Critical Values (5%)	
			Trace	Max-Eigen
r = 0	76.7487**	34.0661**	69.8188**	33.8768**
r ≤ 1	42.6826	19.3073	47.8561	27.5843
r ≤ 2	23.3752	17.6759	29.7970	21.1316
r ≤ 3	5.6993	4.4190	15.4947	14.2640

Normalized Cointegrating Coefficients:
ln(FDI) = -44.627 + 3.1297ln*(RGDP) – 4.4493ln*(NOMEXC) + 9.1746*ln(CA) + 0.0666*(IPI)

Note: The Table 2 provides the result of cointegration test. The signs of *, **, *** indicates significance in 10%, 5% and 1%. The lag selection was based on Akaike Information Criterion and the lag selected was 2

Real GDP, Nominal Exchange rate, Current Account and Industrial Production Index (See Table 2).

Based on the normalized cointegrating coefficient, it is shown that 1 percent increase (decrease) in GDP is equivalent to 3.1297 percent increase in FDI. The coefficient for CA and IPI are also significant and its value shows that 1 percent increase in CA and IPI are associated with 0.1746 and 0.0466 percent increase in FDI respectively. On the other hand, the result for NOMEXC is different where 1 percent increase in NOMEXC will represent a decrease of 4.4493 percent in FDI with statistically significant coefficient value. Thus, FDI elasticity with respect to GDP and NOMEXC are more elastic as compared to FDI elasticity with respect to CA and IPI.

The positive sign for the real GDP shows that any increase in real GDP will cause an increase in FDI activity. Increase in real GDP for any country will increase the confidence level among multinational companies to diversify their businesses. This will increase the revenue of the country as more foreign direct investment will take place and expand the economic activity. In addition, it will also indirectly contribute to the active labor market position where more job opportunities will be created thereby leading to an increased standard of living.

Malaysia is one of the fastest growing economies in South East Asian since Independence in 1957. In addition, Malaysia has undergone rapid changes in economic activity by moving away from agriculture-based activities to more industrial export oriented businesses. Therefore, Malaysia is becoming a very good platform for FDI and this success is contributed by many factors such as political stability, economy stability and good environment. Our finding is consistent with Mun et. al (2008) Malaysia's case where they have analyzed the relationship between FDI and economic, they proved statistically that there is a direct relationship between FDI and economic growth. A similar result was obtained by Balasubramanyam et. al (1996) where the result shows that FDI has a positive effect on economic growth especially in those countries that are export–oriented.

The estimation results also show that Nominal Exchange Rate has a negative relationship with the FDI in the long–-run. One of the possibilities why exchange rate may have a negative relationship with the FDI is because when the exchange rate is depreciating, MNCs would prefer to invest in the host country as their currency is less expensive. Moreover, as suggested by Nakamura and Oyama (1998), normally, when the MNCs decides on which country to explore for investment purposes, they will look at the exchange rate as a benchmark to decide whether to make investment or not. This is consistent with Marwah and Tavakoli (2004). On the other hand, an interesting result was found by Chakrabati and Scholnick (2002) where they examined the relationship of USD exchange rate and FDI by taking into account about 20 OECD countries from 1982 till 1995 and their result seems to be inconclusive and it is very difficult to see the robustness of the impact of the exchange rate variable.

Next, current account reflects the financial stability of a host country. In our study, current account has positive long – run association with the FDI which means if the current account is in surplus, it will lead to higher FDI as it will convince MNCs and investors to involve themselves in the investment. This may be due to the cheaper cost of investment because when the current is in surplus (trade surplus), it indicates that the local currency is depreciating and this will encourage more economic activity such as FDI and increase in export activity. Our

findings are consistent with Hassan (2003) where he managed to prove that in Malaysia, the current account has positive implication for FDIs. But on the other hand, Schneider and Frey (1985) found that FDI has negative relationship with the current account especially in developing countries.

Lastly, FDI is found to have a positive relationship with Industrial Production Index (IPI). Generally speaking, any country with good growth in macroeconomic stability will tend to perform well and will attract greater inflow of FDI activity. As mentioned by Nonnenberg and Mendonca (2004), a country with this kind of scenario will have implications where MNCs and investors will prefer to invest in that particular country as the degree of uncertainty is lesser. MNCs will use IPI as a benchmark to examine certain industries' growth rate to determine in which industry they can venture into to maximize their utility.

This is so true for Malaysia's case where the economic structure has undergone significant changes. In Malaysia, the manufacturing sector continues to show rapid growth among existing sectors. The industrial sector is expected to contribute about 28.5 percent to GDP by 2020 and the government has invested heavily in this sector and it is estimated that by

Table 5: Summary of VECM results

	Δln(FDI)	Δln(RGDP)	Δ (NOMEXC)	Δln (CA)	ΔIPI
Constant	0.0062 (2.3142)**	0.0257 (2.7946)***	2.0085 (0.0155)***	0.01327 (0.2172)**	0.8299 (2.5275)***
ECT(-1)	-0.1062 (-3.2416)**	0.1012 (4.0445)***	-0.0080 (-1.5806)**	0.01756 (0.0004)**	0.0187 (0.0197)**
R-Squared	0.2756	0.2000	0.3383	0.0696	0.2057
Adjusted R-Squared	0.1691	0.1034	0.2438	0.0032	0.0922
S.E of Equation	0.0464	0.0702	0.0155	0.4660	2.5032
F-Stat	2.6191	2.5030	3.3794	0.2242	1.8130

2020, RM412 billion worth of investments will be ploughed into the manufacturing sector. The most recent IPI in manufacturing industry rose at 4.8% in the beginning of 2014. This will further convince MNCs to take an opportunity in Malaysia's manufacturing sector.

By running the VECM test, it will allow us to detect the long-run tendency of the variables of the endogenous variables to congregate to their long-run relationship while allowing a broad range of short-run dynamic causal relationship. Based on Table 3, the coefficient of the error correction term (ECT) for FDI carries the proper sign and it is statistically significant at 5 percent with the speed of convergence to equilibrium of 10.62 percent quarterly. Hence, in the short-run, FDI will be accustomed by 10.62 percent of the past year's quarterly variation from equilibrium position. This further confirms the stability of the system. Theoretically speaking, a large value of the coefficient of ECT shows that equilibrium agents eliminate a big proportion of disequilibrium in each period. It means the speed of adjustment will be fast towards long-run equilibrium restoration and vice versa. Given this, the speed of adjustment in FDI towards long-run equilibrium restoration is just very slow as the value absolute coefficient is small.

The coefficient of the ECT for RGDP, CA and IPI are all having positive signs and it is statistically significant at 5% and 1% respectively. It shows that, if there is any disturbance occurring in the properties system, the deviation will take place in the system and this will cause instability of the system. On the other hand, the coefficient of ECT for NOMEXC is negative and statistically significant at 5%. It implies that there is stability in the system if there is any deviation taking

place due to disturbance in the system but the restoration towards long-run equilibrium will take a much longer time because the value of ECT is very small (0.0060).

To test the robustness of the Error Correction Model, researchers tend to apply a number of diagnostic tests such as Durbin Watson Test, Lagrange Multiplier and Ramsey's Reset Test. No evidence was found for normality failure, serial correlation, and misspecification of the functional form. Therefore, the model is applicable for our study.
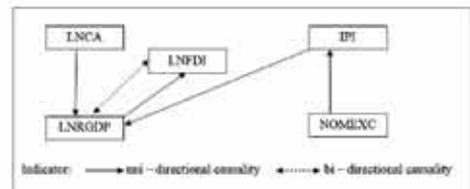
Granger Causality Test

After the estimation of long–run equation using Vector Error Correction Model (VECM), we can expand the analysis to find out the dynamic causality or interaction among the variables in the short run. Granger Causality will let us know in how many directions the variables will have

Table 4: Granger Causality Results based on VECM

Dependent Variable	Independent Variables				
	χ^2 -statistics of lagged 1st differenced terms [p-value]				
	ΔLNFDI	ΔLNRGDP	ΔNOMEXC	ΔLNCA	ΔIPI
ΔLNFDI		2.7116 (0.0503)***	1.5603 (0.2053)	1.3906 (0.2515)	1.8499 (0.1843)
ΔLNRGDP	3.0123 (0.0347)**	–	1.0899 (0.3581)	1.2785 (0.2872)	0.2920 (0.8310)
ΔNOMEXC	1.2979 (0.2807)	0.8355 (0.4782)	–	6.1718 (0.1711)	2.9559 (0.0372)**
ΔLNCA	0.1997 (0.8963)	3.0167 (0.0345)**	0.1533 (0.9272)	–	0.5386 (0.6571)
ΔIPI	1.0693 (0.3668)	2.6486 (0.0543)***	1.8552 (0.1437)	2.1485 (0.1004)	–

Note: The Table 4 reveals the Granger Causality results. The signs of *, **, *** denotes significant at 10%, 5% and 1% significance level, respectively. The figure in the parenthesis (…) denote the t- statistic and the figure in the squared brackets [...] represent the p-value.

relationships resulting from cointegration among the variables. Given this, we can check the causality relationship of FDI with Real GDP, Nominal Exchange Rate, Current Account and Industrial Production Index. The summary of Granger Causality Test is shown in Table 4.

Note: The Table 4 reveals the Granger Causality results. The signs of *, **, *** denotes significant at 10%, 5% and 1% significance level, respectively. The figure in the parenthesis (…) denote the t- statis-

tic and the figure in the squared brackets […] represent the p-value.

As shown in the Table 4, it is very clear that in the short-run there is bidirectional causality between LNFDI and LNRGDP. Therefore, we can reject the null hypothesis and the LNFDI Granger-cause LNRGDP as it is significant at 10 percent.

In addition, the majority of the variables have unidirectional causality in the short–run where LNRGDP Granger-

Figure 1: The Pattern of Short - Term Granger Causality

Indicator: ——→ uni – directional causality   ◄——► bi – directional causality

Note: The Figure 1 shows the area of short - term association among variables based on the Granger Causality test.

cause LNFDI, NOMEXC Granger-cause IPI, LNCA Granger-cause LNRGDP and lastly IPI also Granger-cause LNRGDP. All these variables are statistically significant at 10 percent and 5 percent respectively. The directional inter-relationships are illustrated in Figure 1 below.

5.0   Policy Issues and Consideration

It is clear that FDI operating through MNCs has been the lynchpin and a key factor for Malaysia's successful transformation from a primary and agriculture-based economy into an advanced manufacturing and service-based modern economy. Given the crucial role of FDI as an agent of growth in Malaysia, the Government has spared no efforts to attract MNCs into the country and this has been evident in all the Five-Year Development Plans, starting with the First Malaysia Development Plan in 1966.

To date, Malaysia has implemented a continuous series of Five-Year Development Plans culminating in the Tenth Malaysian Plan (2011 – 2015). The country has also launched the even more ambitious Ten-year Outline Perspective Plans, Vision 2020, National Vision Policy (NVP) as well as its latest Economic Transformation Plan (ETP). The latter development plan, especially, emphasize the role of FDIs as an important agent of development.

In addition to these Plans, special efforts and investment activities were conducted by the Ministry of Trade and Industry (MITI) and other federal agencies such as the Malaysian Investment Development Authority (MIDA) and special investment vehicles such as Invest-Penang and Invest-KL. The latter agency has achieved considerable success in attracting MNCs from the United States and other industrial nations to set up their companies' headquarters in Malaysia . Also, the Performance Management Delivery Unit (PEMANDU) which initiates economic planning in Malaysia, was specifically created to drive Malaysia towards a high income status nation via FDIs by 2020. More importantly, the creation of New Key Economic Areas (NKEA) as well as the Special Task Force to Facilitate Business (PEMUDAH) also contributed in no small way to the success in attracting foreign investment into Malaysia in recent years.

Beside all these, Government-led foreign investment missions abroad usually involving the Prime Minister and leading local business tycoons were also a visible and significant part of the nation's strategic drive to entice FDIs over the last 3 decades. For example, MIDA notes that investment from Chinese investors snowballed to RM4 billion in June 2014 from a mere RM300 million 5 years ago and this was a result of Malaysia encouraging the Chinese investors to set up their regional headquarters in Malaysia where they can enjoy tariff-free access to regional markets with which Malaysia has free trade agreements such as India and Australia in addition to its ASEAN counterparts. As a result of all these efforts since 2010, FDIs have again increased their presence in Malaysia after a significant drop in their level of participation in the country since the 2008 Financial Crisis. Malaysia is now ranked as 7th top-FDI recipient in Asia ahead of South Korea, Vietnam and Taiwan (www1malaysia.com.my) with net FDI inflows of USD12billion in 2014 – a significant 22% increase compared to the 9% increase achieved in 2013. Malaysia also seems to be on track to meet UNCTAD's sustainable goals with incentives given by government to both the private and public sectors.

The global economic downturn of 2008 and the emergence of China and other low-cost ASEAN competitors like Thailand, Vietnam and Indonesia necessitated drastic policy changes to revitalize the Malaysian economy. These policy changes led to the creation of new investment vehicles such as Invest-KL, PEMANDU, PEMUDAH, etc. and these have, to date, been relatively successful in rejuvenating the Malaysian investment climate. The Economic Transformation Program (ETP) stands out with its emphasis on massive multi-billion dollar projects, such as the Iskandar Malaysia Corridor and City Transformation Program, the RM36billion Mass Rapid Transit (MRT) project and the PETRONAS' RM60 billion Refinery and Petrochemical Integrated Development (RAPID) Project which are all to be catalysts in the growth process wherein

FDIs are to participate. All these projects under the ETP program are postured at making Malaysia an attractive investment destination especially for high technology capital-intensive and knowledge-based industries where MNCs have advantages in and in which they can fully participate. These are all laudable and praise-worthy efforts but the Government must be wary that many problems which presently exist that impede FDIs in Malaysia need to be quickly addressed and dealt with effectively so that more FDIs can once again feel encouraged to enter Malaysia. Such issues would include the eradication of corruption, the enhancing of overall capital and labor productivity and the provision of transparency and equity in business dealings between local and foreign investors as well as the Government.

Invest-KL attracted 6 MNCs to locate in Malaysia in 2012 and this figure increased to 40 in 2014 entailing a total realized MNC investment sum exceeding RM700 million. These MNCs were all top Fortune 500 corporations. – The Star, 1/9/2014
The Star, 5/8/2014

Invest Penang, another state investment vehicle like InvestKL specifically established by the northern state of Penang has also identified three major problems which MNCs and small and medium enterprises faced . Based on survey feedback, the first problem is the rising cost of doing business due to rising inflation, higher electricity tariffs and increasing minimum wages all of which will erode Malaysia's competitiveness as a manufacturing hub. Next, the foreign businesses have complained that the country faces a disproportionate shortage of science and technology workers. In addition, owing to high labor turnover, a large proportion of foreign and low-skilled workers still need

to be recruited. Thirdly, there is inadequate infrastructure connectivity in terms of communication and infrastructural needs such as faster broadband speeds and port and air cargo transport facilities. These problems may render Malaysia less attractive as an investment destination. These issues are major to be stumbling blocks to greater FDIs in Malaysia.

Apart from these issues, qualitative challenges also need to be worked on and this would include closing the performance versus perception gap in areas of corruption, crime and low factor productivity growth - which needs to be pushed up to international levels - and uplifting investment confidence . This confidence can be boosted by the provision of greater security to MNCs in the form of the ease of redress in cases of industrial disputes. All in, these serious obstacles have to be eradicated and Malaysia has to push further its economic, social and institutional reforms to create a conducive environment for businesses to flourish and to be more attractive to FDIs.

6.0   Conclusion
Our objective has been to identify the short–run and long–run relationships between foreign direct investments (FDIs) with selected variables (determinants) in Malaysia. Four variables have been employed in this study and they are Real GDP, Nominal Exchange Rate, Current Account and Industrial Production Index. The analysis was conducted using the Vector Error Correction Model (VECM) to analyze the long-run relationship between FDI and the abovementioned variables. Our conclusion is that in the long–run, Real GDP, Current Account Balance and Industrial Production Index all have positive relationships with the FDI in Malaysia. However, Nominal Exchange

rate is found to have a negative relationship with the FDI. To test the short–run dynamic relationship, the Granger Causality test was used and it is very clear that only the GDP variable has a bidirectional relationship with FDI while the rest have unidirectional relationship in the short–-run. Future research is nevertheless still required in this broad area of FDI activity in Malaysia whereby other relevant variables and more sophisticated statistical measures are applied. This paper has also highlighted some major problems which are currently experienced by foreign investors in Malaysia. These problems must be quickly resolved so that the inflow of FDI into the country can once again flourish and Malaysia can re-establish itself as a premier investment destination in the ASEAN region.

The Star, 20/8/2014
Malaysia's World Competitiveness Index has reached the 20th spot according to the World Economic Forum (WEF) Global Competitiveness Report 2014-2015. However, it recorded a drop of six places to 44th position in the Macroeconomic Environmental Ranking and it also suffered a nine places decline from 51st to 60th position in terms of technological readiness index. (The Star, 4/9/2014)

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