

Linkages between Foreign Direct Investment, Domestic Investment and Economic Growth in Malaysia

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This paper examines the linkages between foreign direct investment (FDI), domestic investment and economic growth in Malaysia for the period of 1970-2009. Specifically, it attempts to determine the impact of FDI and domestic investment on economic growth respectively and whether FDI crowds in or crowds out domestic investment. It is expected that the empirical analysis and findings would show some insightful implications to the policy makers and market players. Furthermore, the recently announced Tenth Malaysia Plan attaches an important mission of leading the country towards a high-income nation. The private sector is in a critical position to drive this new growth aspiration. The question of how to attract investment is foreseen to become a “hot” debate topic once again despite numerous previous studies on the subject.

Introduction

For more than a century, foreign direct investment (FDI) has contributed significantly to the economic growth of Malaysia. Debate on the relationship between FDI and economic growth is ample and not new in the literature (see, for example, Jackman, 1982; de Mello, 1997; de Mello, 1999; Feridun, 2004; Duasa, 2007; Pradhan, 2009). Many studies found that FDI and economic growth are closely related. However, Wong and Jomo (2005) argued that the role of FDI in stimulating a host country's economic growth is not consistent in the aftermath of the Asian financial crisis. Nevertheless, Duasa (2007) and Pradhan (2009)

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supported the view that there was no strong relationship between FDI and economic growth in Malaysia. They also suggested that the inflow of FDI contributes to less volatility of economic growth. Hence, it is noted that the existing empirical studies focused on analyzing the broad relationship between FDI and economic growth in the case of Malaysia.

On the other hand, the empirical studies relating domestic investment (DI) and economic growth are restricted for the case of Malaysia. DI is claimed to be the most important source of economic growth and also an effective instrument in creating jobs for an economy. Firebaugh (1992) added that DI is more likely to build relationship within the domestic industries. Apart from that, DI plays a dual role in the economy as part of aggregate demand and enlarges a nation's stock of productive assets. Thus, it is believed that DI is an important factor in accounting for business cycles and the policy makers would now consider DI when reforming their policies on investment sources.

For this reason, the revitalize research's attention is shifted to empirically analyze the dynamic linkages between FDI and DI in influencing the economic growth, both separately and together (see, for example, Choe, 2003; Razin, 2003; Kim and Seo, 2003; Hecht et al., 2004; Apergis et al., 2006; Tang et al., 2008; Adams, 2009; Merican, 2009). The studies found the existence of the long run relationship among FDI, DI and economic growth but the direction of causality among the variables remains vague. For example, Choe (2003), Kim and Seo (2003), Hecht et al. (2004) and Apergis et al. (2006) found bilateral causal relationship between FDI and economic growth. In contrast, Tang et al. (2008) determined that there is only one way causality from FDI to DI and FDI to GDP in China, while the causal link between DI and economic growth is bilateral.

Furthermore, the linkage between FDI and DI raises a question: does FDI crowd in or crowd out DI? Agosin and Machado (2005) claimed that if FDI crowds out DI, the increase in total investment is smaller than the increase in FDI. If there is a crowding in, the increase in total investment will be more than the increase in FDI. Interestingly, Kim and Seo (2003) showed that an expansion in FDI neither crowds in nor crowds out the DI in South Korea. However, Wang (2010) found that

contemporaneous FDI crowds out DI in the developing countries. Empirical findings of FDI crowds in and/or crowds out DI from previous studies suggest that the effects are not on the scale and need further analysis to prove the complementary and substitution effects between FDI and DI.

This paper seeks to contribute on country-specific study for the dynamic linkages among FDI, DI and economic growth in Malaysia. Most of the studies in the literature (see, for example, Choe, 2003; Hetch et al., 2004; Apergis et al., 2006; Adams, 2009; Wang, 2010) employed cross-sectional or panel data to investigate the relationship between FDI, DI and economic growth that are likely to suffer from the problem of data comparability and heterogeneity. Adams (2009) used panel data analysis to conduct a study on FDI and DI in 42 Sub-Saharan Africa countries. The study found that FDI did not have positive impact on economic growth due to the low level of development in sub-Saharan Africa but DI was shown to have positive and significant correlation with economic growth. The study also revealed a net crowd out effect of FDI on DI as FDI is negatively correlated with DI. On the other hand, Hecht et al. (2004) explored that most of the DI has significant impact on FDI, while the impact of FDI inflow towards DI is weaker among the 64 estimation countries. In addition, Choe (2003) found that the causal relationship is bilateral between FDI and economic growth; while only a unilateral causal relationship runs from economic growth to DI in the 80 observed countries. Nonetheless, the results show that the causal relationship between FDI and DI remains controversial.

In the case of Malaysia, studies that focus on analyzing the effect of FDI and DI to economic growth are limited (see, for example, Ang, 2009; Merican, 2009). Ang (2009) examined the long-run relationship between private DI, public investment and FDI in Malaysia for the period of 1960-2003. The results show that public investment, private DI and FDI are cointegrated in the long run. Moreover, both FDI and public investment are statistically significant and positively related to the private DI. Merican (2009) examined the linkages between FDI, DI and economic growth in four ASEAN members namely, Indonesia, Malaysia, Thailand and Philippines over the period of 1970-2001. Focusing on Malaysia, the study found that FDI was better than DI in promoting

economic growth in Malaysia. Nevertheless, both of these studies did not test the causality between the variables which are contradicted to the earlier studies that assumed at least a unilateral causal relationship between FDI and economic growth (see, for example, Zhang, 2001; Feridun, 2004; Pradhan, 2009) or from DI and economic growth (see, for example, Liwan and Lau, 2007; Balcioglu and Vural, 2009). Obviously, the causal relationship between FDI, DI and economic growth remains as an ambiguous question. Against this backdrop, the causal relationship among the variables for a country specific analysis is very important for policy makers to design the appropriate investment policy.

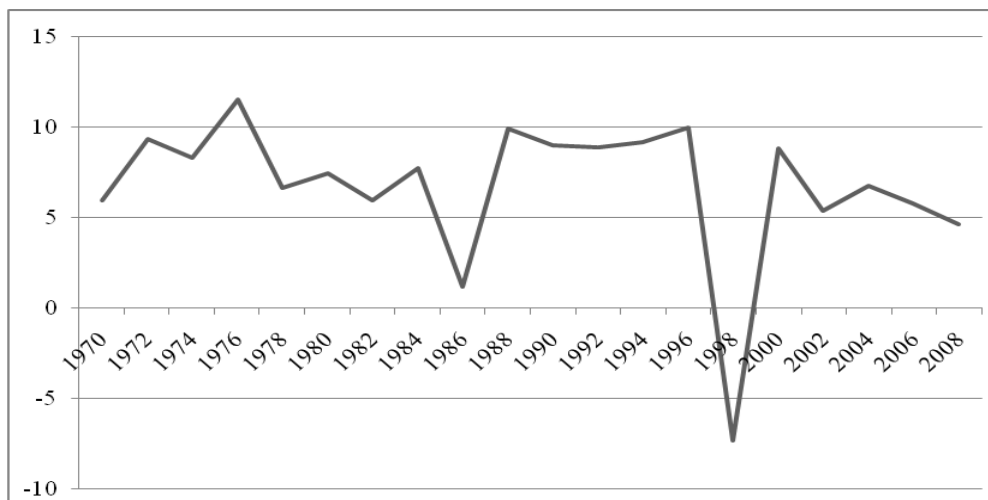
This study attempts to generate a better understanding of the dynamic linkages between FDI, DI and economic growth in Malaysia over the period of 1970 to 2009. Specifically, it aims to determine the impact of FDI and DI on economic growth respectively. Furthermore, this study intends to find out the effect of FDI on DI in order to examine whether FDI crowds in or crowds out DI. The objectives of this study can be achieved through the following analyses. First, we employ the conventional Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests to check the stationarity of each series. Second, the Johansen and Juselius (1990) multivariate cointegration test will be used to detect the potential long-run relationship among the variables. Third, we normalize the cointegrating vector by DI to discover the crowding effect of FDI to DI. Finally, the Granger causality test will be implemented to examine the causal relationship between FDI, DI and economic growth.

The rest of this paper is organized as follows. Section 2 gives an overview of the relationship between the FDI, DI and economic growth in Malaysia. Section 3 discusses data, model specification and methodology used in this study. The empirical findings are reported in Section 4. Lastly, the conclusion and policy recommendations are presented in Section 5.

Overview of Malaysia's FDI, DI and Economic Growth

Since achieving independence in 1957, Malaysia experienced solid economic performance with annual average GDP growth rate of 6 per cent during the period of 1970 to 1980. However, the GDP growth recorded nearly 0 per cent during the economic depression in the middle of 1980s. The country recovered from the crisis in the mid-1980s and achieved an average GDP growth rate of at least 9 per cent during 1990 to 1996. However, the GDP growth rate declined to -7 per cent during the Asian financial crisis. Since then, the economic growth showed a slower process of recovery. It took about four years for the economy to return to its normal growth path. However, the impact of the terrorist attack in the US in 2001 had slowed the economic growth again with an annual growth rate of 5 per cent from 2002 to 2008. Figure 1 presents the plotted time series data of the real GDP growth rate in Malaysia for the period from 1970 to 2009.

Figure 1: Annual growth rates of GDP



DI accounted for about 30 per cent of GDP from 1970s to 1980s in average. The share declined to 26.39 per cent before picking up again in the 1990s. In general, the share of DI to GDP contributed more than the share of FDI to GDP for more than half a century in Malaysia. However, FDI inflow is also a dominant factor to spur the economic growth of Malaysia as it maintains an open policy toward investment and trade

since 1980. According to the inward FDI Potential Index² (UNCTAD, 2004) and Ang (2009), Malaysia was ranked the first among the Asian developing countries for receiving FDI in 2003. Thus, the importance of FDI to economic development is therefore undeniable. However, UNCTAD (2010) reported that the FDI in Malaysia plunged 81 per cent from US\$7.32 trillion in 2008 to US\$1.38 billion in 2009 with the rank of 22nd among the Asian nations. In terms of the global competitive landscape, Malaysia faces greater competition than ever (Tenth Malaysia Plan³) due to the country's crash in FDI. China has the largest FDI with their popular free trade zones. In addition, China is also competing actively for cheap labor by offering low wages and the largest population thereby attracting export-oriented multinational firms (Zhang, 2005). Nonetheless, the Malaysian government's procurement process is a big problem for foreign investors as there is too much bureaucracy and the transaction process is slow as a consequence. Thus, suitable and effective policy enhancement is needed for the government to stabilize FDI and enhance DI in order to drive the economic growth.

A number of investment policies have been introduced to carrying on the investment path in Malaysia. The most primitive investment legislation created is the Investment Incentives Act 1968. The Act provides variety incentives to induce greater and more rapid flow of investment. Furthermore, the established of Malaysian Industrial Development Authority (MIDA) to promote and coordinate industrial development activities such as screening the investors, enhancing investors' confident by giving tax exemption and financial assistant have contributed to the investment growth in Malaysia. Therefore, the growth of DI and FDI and thus the economic growth are greatly influenced by these investment policies.

² The inward FDI Potential Index is shown for three-year period to offset annual fluctuations in the data. The index covers 141 economies for as much of the period as the data permit. However, some economies in transition could not be ranked in the early years for lack of data or because they did not exist as a separate country. The index excludes tax havens, which for tax rather than productive reasons tend to have massive FDI inflows in relation to their economic size.

³ Malaysia government allocated RM230 billion for development expenditure under the Tenth Malaysia Plan. Economic sector received 55% of the total allocation. To achieve the goal of 6 per cent per annum growth rate, the Malaysian Investment Development Authority has been corporatized and rebranded to leap the investment activities.

The DI and FDI are expressed as the ratio of GDP with five years average in Table 1. In 1970 to 1974, the shares of DI and FDI to GDP were 21.24 per cent and 2.99 per cent respectively. The number surged to 37.03 per cent and 7.18 per cent in 1990 to 1994, making it the highest throughout the sample period. On average, the DI and FDI contributed 27.72 per cent and 3.85 per cent respectively to GDP over the whole sample period. On the other hand, the proportion of FDI to DI recorded a 13.99 per cent share from the earlier 1970s and slumped down into a lower portion of 8.65 per cent in 1985-1989⁴. However, the contribution of shares of FDI to DI increased dramatically to 19.41 per cent in the following five years. Overall, the average ratio of FDI to DI is 13.75 per cent from 1970 to 2009.

Table 1: Average ratio of DI to GDP, FDI to GDP and FDI to DI (in percentage)

Year	DI/GDP	FDI/GDP	FDI/ DI
1970-1974	21.24	2.99	13.99
1975-1979	24.28	3.21	13.33
1980-1984	34.25	4.12	11.95
1985-1989	26.39	2.33	8.65
1990-1994	37.03	7.18	19.41
1995-1999	35.59	4.95	14.52
2000-2004	22.37	2.75	12.39
2005-2009	20.60	3.26	15.76
1970-2009	27.72	3.85	13.75

Methodology

Data and Model Specification

The data set consists of yearly time series data over a forty year period from 1970 to 2009, which is obtained from International Financial Statistics (IFS) published by the International Monetary Fund and World Development Indicators (WDI) published by the World Bank. Economic

⁴ This aggressive trend became incoherent due to the economic downturn in 1980s.

growth is measured by real GDP at year 2000 constant price, DI is proxied by real gross fixed capital formation (GFCF)⁵, and FDI is estimated using net FDI inflows. All variables are measured in Ringgit Malaysia (RM) in million.

All the variables are transformed into natural logarithmic form for allowing a better regression treatment as most economic time series data are characteristically exponential with respect to time, and a log transformation changes the vertical scale to linear. Furthermore, log transformation makes elasticity calculation easier, as the estimated coefficients are approximate to the percentage changes in the variables.⁶ Thus, the estimated model can be expressed in equation (1) below.

$$\ln Y_t = \beta_0 + \beta_1 \ln FDI_t + \beta_2 \ln DI_t + \varepsilon_t \quad (1)$$

where $\ln Y_t$ is real GDP, $\ln FDI_t$ is net FDI inflows and $\ln DI_t$ is the DI, β_0 is the constant parameter and ε_t is the error terms.

Estimation Method

We begin with employing the augmented Dickey-Fuller (ADF) (Dickey and Fuller, 1981) and Phillips-Perron (PP) (Phillips and Perron, 1988) unit root tests to check the stationarity properties of each variable in order to avoid any spurious regression. Then, the long-run equilibrium relationship between the three variables is tested by Johansen's multivariate cointegration procedure (Johansen, 1988; Johansen and Juselius, 1990). In order to examine the Johansen's cointegration approach, the vector autoregressive (VAR) model is estimated:

$$\Delta Y_t = \pi Y_{t-1} + \sum_{i=1}^{k-1} \Gamma_i \Delta Y_{t-i} + u_t \quad (2)$$

⁵ GFCF is used as proxy for domestic investment in many previous studies (see, for example, Braunerhjelm et al., 2005; Olubanjo et al., 2010; Almsafir et al., 2011; Bakare, 2011). GFCF includes land improvements, plant, machinery and equipment purchases; and the construction of roads, railway, private residential dwellings, commercial and industrial buildings etc but exclude all kinds of financial assets.

⁶ See Gujarati and Porter (2009), *Basic Econometrics*, 5th Edition for details.

where Δ is the first difference operator, Y_t is a vector of the three endogenous variables $(\ln Y_t, \ln FDI_t, \ln DI_t)$. Γ is a matrix of VAR parameters for lag i and π is a coefficient matrix which contain information about the long run relationship between variables in the vector. If the variables are cointegrated, the cointegrating rank, r , is given as $\pi = \alpha\beta'$, where α is the matrix of parameters denoting the speed of convergence to the long-run equilibrium and β represents the matrix of parameters of the cointegrating vector. Johansen-Juselius derived trace test (λ_{trace}) and maximum eigenvalues test (λ_{max}) for testing the numbers of cointegrating rank in the system.

If the variables are cointegrated, an error correction term should be included into the vector error correction model (VECM)⁷ below to examine the causality between the variables:

$$\Delta \ln Y_t = \alpha_1 + \sum_{i=1}^k \delta_{1i} \Delta \ln Y_{t-i} + \sum_{i=1}^k \delta_{2i} \Delta \ln FDI_{t-i} + \sum_{i=1}^k \delta_{3i} \Delta \ln DI_{t-i} + \beta_1 EC_{t-1} + \varepsilon_{1t} \quad (3)$$

$$\Delta \ln FDI_t = \alpha_2 + \sum_{i=1}^k \varrho_{1i} \Delta \ln Y_{t-i} + \sum_{i=1}^k \varrho_{2i} \Delta \ln FDI_{t-i} + \sum_{i=1}^k \varrho_{3i} \Delta \ln DI_{t-i} + \beta_2 EC_{t-1} + \varepsilon_{2t} \quad (4)$$

$$\Delta \ln DI_t = \alpha_3 + \sum_{i=1}^k \kappa_{1i} \Delta \ln Y_{t-i} + \sum_{i=1}^k \kappa_{2i} \Delta \ln FDI_{t-i} + \sum_{i=1}^k \kappa_{3i} \Delta \ln DI_{t-i} + \beta_3 EC_{t-1} + \varepsilon_{3t} \quad (5)$$

From the equations above, Δ is the first difference operator and the residuals ε_{it} are assumed to be normally distributed and white noise.

EC_{t-1} is the one period lagged error correction term derives from the cointegrating equation⁸. The error correction term will delay the speed of short-run adjustment toward the long-run equilibrium. The significance of the EC_{t-1} term represents the long-run causality, while the joint F-tests on the differenced explanatory variables depict the short-run causality.

⁷ According to Engle and Granger (1987), if the variables are cointegrated, Granger causality test within the first difference VAR model will be misleading. Therefore, an error correction term should be included into the VECM model.

⁸ This term must be included to avoid misspecification and omission of important constraints and will be excluded if the variables are not cointegrated.

Empirical Findings

The results of ADF and PP unit root tests are tabulated in Table 2. At the 5 per cent significant level, both ADF and PP tests cannot reject the null hypothesis of unit root for FDI, DI and GDP at level, but all variables are stationary after first differencing. Hence, we conclude that all variables are $I(1)$ ⁹. Given that the variables are $I(1)$, we proceed to test the long-run equilibrium relationship with the multivariate Johansen-Juselius cointegration test. In order to specify the model, the Akaike's information criterion (AIC) statistic suggests that three year is the optimal lag length in this VAR system. Table 3 Panel A summarizes the results of likelihood ratio tests for cointegration. Surprisingly, both the trace and maximum eigenvalues statistics indicate that the null hypothesis of zero cointegration is rejected at the 1 per cent significant level. Hence, we conclude the existence of at least one cointegration relationship among the variables.

Table 2: The results of unit root tests

Variables	Test statistics	
	ADF	PP
$\ln Y_t$	-2.086 (0)	-2.091 (1)
$\Delta \ln Y_t$	-5.056 (0)***	-5.062 (1)***
$\ln FDI_t$	-1.715 (0)	-1.630 (1)
$\Delta \ln FDI_t$	-8.186 (0)***	-8.184 (1)***
$\ln DI_t$	-1.776 (1)	-2.726 (1)*
$\Delta \ln DI_t$	-4.181 (0)***	-4.222 (1)***

Note: The asterisks ***, ** and * denote the significance at 1, 5 and 10 per cent levels respectively. ADF is the augmented Dickey-Fuller test and PP is the Phillips-Perron test. \ln denotes as natural logarithm and Δ is the first different operator. Figure in the parentheses indicate the optimal lag length for ADF test and bandwidth for PP test. The optimal lag length and bandwidth are selected by Akaike's information criterion (AIC) and Newey-West Bartlett kernel. The critical values are obtained from MacKinnon (1996).

⁹ Nelson and Plosser (1982) indicated that most of the macroeconomic variables are not stationary at level but it will stationary after the first differencing.

Table 3: The result of Johansen-Juselius cointegration test

Panel A: Multivariate cointegration test				
Series: $\ln Y_t \ln FDI_t \ln DI_t$		LR tests statistics	Critical values [#]	
Hypotheses			1 per cent	5 per cent
H_0	H_1			
$LR(\lambda_{\text{trace}})$				
$r = 0$	$r \geq 1$	59.872 ^{***}	34.99	41.07
$r \leq 1$	$r \geq 2$	14.469	19.96	24.60
$r \leq 2$	$r \geq 3$	4.725	9.24	12.97
$LR(\lambda_{\text{max}})$				
$r = 0$	$r = 1$	45.403 ^{***}	22.00	26.81
$r \leq 1$	$r = 2$	9.744	15.67	20.20
$r \leq 2$	$r = 3$	4.725	9.24	12.97
Panel B: Normalized long run coefficients				
$\ln Y_t$	$\ln FDI_t$	$\ln DI_t$	<i>Intercept</i>	
1.000	4.796 ^{***}	-4.520 ^{***}	21.456 ^{***}	

Note: *** denotes the significant level at 1 per cent. # represent that the critical values were obtained from Osterwald-Lenum (1992). The Akaike's Information Criterion (AIC) is used to select the optimal lag order.

As the variables are cointegrated and the interest of this study is to evaluate the response of real output on FDI and DI respectively, we normalized the coefficient of $\ln Y_t$ to 1 to obtain the long-run coefficients of $\ln Y_t$ with respect to FDI and DI. The long-run coefficients are reported in Table 2 Panel B. It is shown that $\ln FDI_t$ is positively related to $\ln Y_t$ but $\ln DI_t$ is in a reverse direction. Conversely, the coefficients of both variables are statistically significant at the 1 per cent level. This result infers that the real output will increase in the long-run if FDI increases. As documented in Moran et al. (2005), FDI may contribute to the economic growth through its impact on capital stock,

market competition and technology transfer to the local firms in Malaysia.

In contrast, increase of DI will depreciate GDP growth. This result although contradicts with Tang et al. (2008) and Merican (2009) but it is consistent with Elboiashi et al. (2009). The contradiction may be due to different framework and sample period used for the investigation. According to Elboiashi et al. (2009), there may be an offsetting effect between FDI and DI in the country. Both local and foreign firms are competing for the human capital and scarce production factors. Foreign firms which are more productive and efficient will be the winner. Nevertheless, by normalizing the coefficient of DI to 1, we find that FDI is positively significant at 1 per cent level with the coefficient of 1.0612. In other words, a 1 per cent increase in FDI will lead to 1.06 per cent increase in DI. Therefore, we can verify that FDI crowds in DI in Malaysia. This finding is consistent with Ang (2009) that FDI has a complementary role to DI.

Table 4: The results of Granger causality tests based on VECM

Dependent variable	χ^2 statistics [p-values]			
	$\sum \Delta \ln Y_t$	$\sum \Delta \ln FDI_t$	$\sum \Delta \ln DI_t$	ECT_{t-1} [t-statistics]
$\Delta \ln Y_t$	—	2.2761 [0.5171]	1.3662 [0.7135]	-0.0044 [-0.0581]
$\Delta \ln FDI_t$	11.2346* [0.0105]	—	8.7705** [0.0325]	-0.6021*** [-3.5820]
$\Delta \ln DI_t$	0.5644 [0.9045]	1.3254 [0.7231]	—	-0.0362 [-0.2375]

Note: ***, ** and * denote the significant level at 1, 5 and 10 per cent levels respectively.

In view of the fact that the series are cointegrated, we proceed to determine the direction of causality within the VECM framework. The results of both long-run and short-run Granger causality tests are

presented in Table 4. For the long-run Granger causality, we find that the one period lagged error correction term has a negative sign but it is only statistically significant when FDI as the dependent variable. This infers that FDI has significant causality relationship with DI and economic growth in the long-run. For the short-run causality analysis, we find that only unilateral Granger causality running from GDP to FDI and from DI to FDI. The results are consistent with Zhang (2001) but contradicted with Balcioglu and Vurul (2009) and Pradhan (2009). The contradiction may be due to different methods of analysis and sample used in their studies. Nevertheless, our result implies that the foreign investors are concerned about the economic growth and the local investment sentiment to make their investment decision in Malaysia. In other words, the growth-enhancing effect of FDI differs depending on host country characteristics, including the quality of institutions, the extend of trade openness, the level of technological sophistication and the stock of human capital (see, for example, North, 1991; Borensztein et al., 1998; Rodrik, 1999; Xu, 2000; Fortarnier, 2007).

Conclusion and Policy Recommendations

This paper analyzes the dynamic linkages between FDI, DI and economic growth in Malaysia from 1970 to 2009. The empirical results of this study can be summarized as follows. First, the FDI, DI and economic growth are cointegrated in the long run. Second, FDI has positive impact on the economic growth, while DI is negatively affecting the economic growth in the long run. Third, an increase of FDI will bring positive impact to the DI. In other words, FDI crowds in DI and there appears complementary effect from FDI to DI. Forth, there is a one way causal relationship from DI to FDI and from economic growth to FDI in the short run.

We support the view that high economic growth will attract FDI inflow in Malaysia. DI is also an important factor in attracting FDI in the short run. With the crowd in effect of FDI on DI, the expansion in FDI inflows may be associated with an incredible boost in DI, and both FDI and DI can collaborate together for the development of the country. Therefore, the government may encourage foreign investors to invest in the high risk areas where the DI is lack of the technology and

experiences. At the same time, domestic firms may learn from the foreign firms by collaborating with them in the supply chain where there will be a greater tendency that the foreign firm will transfer the management, production and technology know-how to their local suppliers, enhancing the transfer of technology and skills. As reported in Singapore's 2011 Budget, the government focuses on providing improved financial opportunities in the areas of education and employment as well as continuing the productivity measures commenced that promotes skills development and innovation. More recently, under the Tenth Malaysian Plan, the government upgrades the early childhood education right through to up skilling the existing adult workforce. Malaysia is then in the process of nurturing top talent to meet industry's requirement and drive productivity improvements to move up the value chain. Nevertheless, small and medium enterprises (SMEs) are targeted to be the growth drives of private domestic investment. Thus, policies to ensure adequate access and availability of financing for SME are of great importance. For this reason, the Malaysian government must continue to give the higher financial priority to SMEs such as *SME Bank Business Financing Scheme*, *Co-operative Financing Fund* and *Rural Economy Funding Scheme*. Eventually, domestic promotions and attractive packages such as taxes incentives, finance and credit facilities, reduction of the transaction costs and improvement of the delivery system by cutting down on bureaucracy and corruption can be launched.

The Ministry of International Trade and Industry has targeted that DI to make up 40 per cent of the country's aggregate investment in year 2010. On the other hand, Malaysia is en route to improving the quality of retaining and attracting FDI inflows in order to woo the economic growth after the recent global financial/economic crisis. As proposed in the Tenth Malaysia Plan, initiatives such as benchmarking Malaysia's attractiveness, empowering Malaysian Investment Development Authority to attract investment and investing in talent recruitment can be undertaken.

The exact types of DI and inward FDI that will contribute most to the output growth is beyond the scope of this paper. This might be an interesting issue for future research. Moreover, the proxy variable of DI

and the decomposition of DI to private and public funds may give a clearer picture of its impact in the country.

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