Chapter 2: Literature Review

2.1 Introduction

The conventional neo-classical welfare tools, trade and growth theory have been widely used in analysing the effects of foreign direct investment on the host economy. Basically, these standard tools treat the direct investment inflow as a 'general' inflow of capital, not to be distinguished from other types of capital inflows (loans and portfolio investment) from abroad, the whole being treated as foreign 'borrowing' (Lall & Streeten, 1977). Loans refer to official loans and private commercial bank loans, whereas portfolio investment refers to investment which takes the form of fixed-interest-bearing securities, issued by public listed companies or public authorities. Such portfolio investment is rarely accompanied by any management participation or the transference of knowledge from the investing country to the host country. Given the assumption that a rise in 'borrowing' takes place in a competitive market, a strong presumption has been established that *foreign investment is beneficial unless there is excessive protection or externalities which are unfavourable* (Lall & Streeten, 1977).

The neo-classical "welfare paradigm" within the international economic context is grounded on a basic presumption that *foreign investment raises incomes and social welfare in recipient countries unless the 'optimum' conditions are significantly distorted by protection, monopoly and externalities.* MNCs are treated as simply neutral providers of capital and various other 'advantages'. Thus, economists concerned with

the conventional welfare theory would make such a conclusion that MNCs raises 'welfare (by satisfying individual preferences expressed in the market, income-distribution being a 'non-economic' matter) and also qualitatively add a number of extra benefits (Lall & Streeten, 1977). For example, in terms of contribution to the welfare of host economy, the effects of foreign direct investment may take the form of investment stimulation in related industries, filling the gap between domestic savings and investment, enhancement of competitiveness and provide access to new technology.

Formal analysis of the effects of foreign direct investment in a neo-classical welfare framework specifically dates from an article by MacDougall (1972) and subsequent analysis which extended Macdougall's welfare analysis such as Bos et al (1974). A review of these two neo-classical welfare models of foreign direct investment is done in the following section. In addition, recent empirical studies concerning the impact of foreign direct investment on Asia and South East Asian countries and local empirical studies are reviewed as well in order to catch the trend of foreign direct investment analysis and the missing links within the analysis.

2.2 Neo-classical Welfare Growth Models

The conventional dominant theory concerning the benefits or impact of foreign direct investment to the host countries are those ideas derived from neo- classical welfare growth models. Neo-classical growth models, such as Solow (1956), Cass (1965) and Koopmans (1965) advocated that a country's per capita growth rate tends to

be inversely related to its starting level of income per person (Barro, 1991). Somehow, this implies that poor countries with relatively low ratios of capital to labour, have high marginal products of capital and thereby tend to grow at high rates.

The hypotheses that low income countries grow at high rates is the foundation theory in neo-classical models to support the viewpoint that capital scarcity in a country enhances benefit from capital inflows from capital abundant country. These form the grounds for neo-classical "welfare paradigm" analysis concerning foreign capital inflows which can also be applied in the discussion of foreign direct investment (Lall & Streeten, 1977).

MacDougall (1972) adopted the neo-classical framework, using the partial equation, comparative static approach to show the gains from marginal increments in foreign investment shared between labour and domestic and foreign capital. Through a theoretical perspective, he attempts to analyse the benefits and costs of private investment from abroad to Australia. His study is mainly a static analysis, ignoring dynamic considerations. His study is not merely static but simplifies the complex effects of capital inflows by only considering small changes in the stock of foreign capital.

He made a bold assumption that differences in capital inflow are unlikely to make a large proportionate difference to the foreign capital stock. In the economic sense itself, this may not be the case, capital flows are not the same as capital stock as this may under or over estimate the effects of foreign investment on the host economy.

Using highly simplified assumptions, MacDougal analysed the distribution gains derived from private foreign investment between labour and domestic and foreign capitalists. The conclusions from his analysis were that the most important gains to Australia from private investment abroad seems likely come through higher tax revenue from foreign profits. Moreover, gains through economies of scale and externalities. However, real wages would rise at the expense of profits because of the declining marginal productivity of capital.

The shortcomings of his study are mainly the static approach adopted in the analysis and the inflexibility of the analysis. The analysis can not be applied in countries other than Australia without modification. For example, in Macdougal's analysis, it is assumed that there is full employment in the economy, whereas in many underdeveloped and developing countries, heavy unemployment or under employment is often the case where marginal product is far less than the wage rate. Hence, it fails to hold as a generally applicable analysis to analyse the effects of private foreign investment in all countries.

Bos & Sanders (1974) realising the lack of dynamic analysis in the neo-classical growth model, attempted to construct dynamic growth models with foreign investment and trade in less developed countries (LDC). In the midst of arguments against and for regarding the effects of private foreign investment (PFI) on economies of LDC, he tried to construct a dynamic macro-economic model to evaluate the effects of

FI. The model is structured based on a two sector formulation and four determinant ffects are explicitly evaluated. These are income effects, saving effects, public saving ffects and balance of payment effects.

He used two approaches to evaluate the effects of PFI, one is the umulative effect approach which refers to the effect of a given variable in t period under he assumption that they are obtained by differencing, with two alternative solutions, one vith PFI from 0 to t periods and the other without PFI from time 0 to t. The other is the narginal effect approach which considers the changes in endogenous variables with espect to the four effects mentioned above. Bos & Sanders(1974) introduced the ;ectoral breakdown in the original model. According to him, no particular problem arises n any empirical application of the methodology to substitute the "economies with PFI")y any major sector or manufacturing sub-sector. This hypothesis is adopted in my study vhere the effects of DFI on the manufacturing sector are evaluated.

The conclusions drawn from the study done by Bos & Sanders (1974) with respect to the four effects were that in terms of income effects, the results of the marginal calculations showed that in general private foreign investment plays a minor role. In most cases, overall private foreign investment on income is less than the direct effect imputable to it, however the degree varies from country to country. The cumulative effects show a much more favourable impact on income.

The PFI effect on private savings is given by the increase in income imputable to PFI and by the marginal propensity to save. Whereas the public savings effect taking into account both the PFI sector and the rest of the economy, is the difference between total taxation revenue and government expenditure. PFI seems to have a positive effect on both private savings and public savings (except for Argentina) but to varying degrees as a consequence of the structure of taxation and of public expenditure. As for the balance of payments effect, both marginal and cumulative results showed that in general PFI tends to pose a heavy burden on the deficit. Nevertheless, for Philippines, PFI has a deficit decreasing effect.

The main contribution of Bos & Sanders (1974)'s analysis is the inclusion of dynamic elements in the model. The construction of a dynamic model by Bos & Sanders (1974) brought the analysis of the effects of foreign direct investment closer to the real situation and since then dynamic analysis of the effects of foreign investment and trade is widely adopted.

Although generally the neo-classical welfare theory supports the view that PFI impact on growth is positive, controversies arise about the macro-economic effects of less developed countries' (LDC) general foreign investment. Arguments included were that PFI reduces domestic savings and increases capital intensity which is not compatible with the labour intensive economies of LDC, so affecting growth and the pattern and productivity of investments. Latest tests also strongly oppose the argument

that FDI helped growth, rather it is domestic savings and foreign aid that boost growth.

However, regarding the impact of foreign direct investment on economic growth, Dunning, H. John (1970) in his article " Foreign Capital and Economies Growth in Europe" came to the same agreement with economists such as Kuznets (1955), Rostow (1961), Berill (1963) and others that foreign investment can play a major role in stimulating national economic growth. They have shown that the economic growth effect of the foreign investment was even more obvious when the capital embodies or is accompanied by technological and managerial expertise, by which it can decisively effect the whole course and framework of economic progress.

According to Dunning (1970), when a country imports capital, it does not just increase its foreign reserves. In most instances, it buys a package of factor inputs which represents a package containing technical expertise, managerial attitudes and investment funds. Most kinds of direct investment involve the transference of both human (or knowledge) capital and money capital (Kenen 1965). In his another article "American Investment in British Manufacturing Industry" (1958), Dunning has shown that due to the presence of US subsidiaries in the UK, British industry enjoys direct access to a far greater volume of trans-Atlantic research and development than it itself generates each year.

[1] See Lall, S and Streeten, P, 1977, *Foreign Investment, Transnational & Developing Countries*, London :The Macmillan Press LTD, p. 83.

However, Dunning admitted that it was much more difficult to assess the effects of foreign investment on European growth in quantitative terms. Although he was able to find the association between investment and growth in output, he failed to determine the direction of causality between the two.

From the point of view of Paul and Streeten (1977), all those developments in neo-classical trade theory in analysing the effects of foreign capital inflows have taken place at a fairly high level of abstraction. Besides, they have been based on models which greatly simplify reality – the empirical applications have been very limited. De Mello (1997) pointed out that the basic shortcoming of conventional neo-classical growth models is that long run growth can only results from technological progress and population or labour force growth which are both exogenous. According to him, if growth determinants are taken as endogenous and FDI is thought of as a composite bundle of capital stocks, know how and technology, then FDI can have manifold impact on growth. Recent studies have been attempted to show the effect of FDI through endogenous analysis of the impact of FDI as "it generates increasing returns in production via externalities and productivity spillovers"[2].

Despite the shortcomings, neo-classical growth models are not any less important and the methodology used in this study is basically an appreciation of the neo-classical growth model where it provides a macro economic analytical tool to assess the impact of FDI.

[2] See de Mello. L. R., 1997, 'Foreign Direct Investment in Developing Countries and Growth: A Selective Survey', *The Journal of Development Studies*, 34, p.2.

2.3 Recent Empirical Studies

There are numerous empirical analyses concerning the impact of FDI on recipient economies but since the scope of the study is limited to the Malaysia manufacturing sector, a review of Asia and ASEAN case studies is more relevant. Most of the recent studies tended to use regression analysis on pooled cross country and time series data. For instance, Husain and Jun (1992) applied similar methods on pooled data for ASEAN countries over the years 1970-1988. They assessed the effects of external capital inflows on the economies of South Asia and ASEAN, two sub groups of countries by adopting an empirical methodology developed by Lee, Rana and Iwasaki (1986).

The simultaneous equation model used by Husain and Jun (1992) consists of a growth equation and a saving equation, where the former is the traditional export-augmented neo-classical production function and the latter the traditional Keynesian-type saving function augmented by several variables.

$$G = a1 + b1.OF + b2.PF + b3.S + b4.X + b5.L + e \qquad (1)$$

$$S = a2 + b6.OF + b7.PF + b8.X + b9.GDP + b10.G + u \qquad (2)$$

Where G = growth rate of GDP, OF = official flows of loans and aid as percentage of GDP, PF = FDI as percentage of GDP, S = gross domestic saving as percentage of GDP, X = change in export as percentage of GDP, L = growth rate of labour force, GDP = GDP per capita. And e and u = error terms. They applied the reduced form of the regression model to test for total effects and then the structural equations of the model to test for direct effects.

The results based on pooled cross section and time series data for the four selected ASEAN and five Asia countries during the sample period of 1970-1988 confirmed the significant effect of PFI or FDI on the growth rate of GDP, whereas the official capital flows seem to have non-statistically significant effect on growth for both ASEAN and South Asia countries.

Husain and Jun (1992) argued that as a whole FDI contributed to growth through two ways. One way is by augmenting resources available for capital formation and second by improving the efficiency of investments.[3] Finally the conclusion they made for the empirical analysis based on two sub groups of countries was that FDI and export performance contributed more to economic growth than aid or other forms of capital inflows. Therefore they suggested that developing countries should adopt market friendly policies which encourage the inflows of private capital inflows rather than official aid for the bulk of their development assistance.

[3] Husain, I and Jun, K.W., 1992, 'Capital Flows to South Asian and Asean Countries', World Bank, Policy Research Dissemination Centre, Washington, p.18.

Jansen (1993) adopted the production equation developed by Khan and Reinhart (1990) which concentrates on the composition of investment rather than on its financing, that is split up total investment into private and public investment. Based on this concept he constructed a macroeconomic model for Thailand to explore the PFI effects on three aspects of the Thai economy such as balance of payments, the rates of investment and economic growth.

The model regression concerning the impact of PFI on economic growth adopted by Jansen is as below:

$$G=a_0 + a_1 I_p/Y + a_2 Ig/Y + a_3 g_L + a_4 g_x$$

Where I_p and I_g are private and public investment respectively, g_x the growth rate of real exports and g_l the growth rate of labour force.

By decomposition analysis as well as model simulations with respect to these three effects, he concluded that the effects of FDI on economic growth are largely indirect. The impact of FDI could only be established through the expansionary effect of FDI on private investment and on exports, and through these, on the level of output[4].

The results also showed that FDI increased import dependency and factor services payments substantially. Consequently, there was a deterioration in the current

[1] According to Jansen, there is no direct link could be established between the efficiency of the investments (ICOR) and the level of FDI.

account of Thailand. Finally, regarding the impact of FDI on Thailand's economy. Jansen concluded that the impact consists of two dimension. One is that FDI can be credited for the growth boom in Thailand in the late 1980s but it also did little to improve the balance of payments. A concluding remark he made for the analysis of Thailand is that the recent flow of DFI has not only been "very export-oriented, but also strongly import-intensive".

Fry (1993) applied a macroeconomic model which consists of simultaneous equations to assess the impact of FDI through which FDI influences saving, investment, growth and the balance of payments on current account. By testing three groups of countries, the first one as the control group for all countries selected, the second group with countries outside Southeast Asia countries and the third group comprising Southeast Asia countries. He made a conclusion that the effects of FDI flows vary significantly between different regions of the developing world. For countries outside Southeast Asia, FDI seems to have a negative effect on economic growth. FDI has come to be a form of capital to substitute for other types of foreign flows, it has not increased aggregate domestic investment.

In contrast, FDI was proven to have positive effects on economic growth in Southeast Asia countries. FDI flows are not close substitutes for other types of foreign capital flows such as aid or foreign borrowing. In the context of trade effect, the effects of FDI on exports is negative outside Southeast Asia. At the same time, an inflow of FDI is strongly associated with a higher import ratio. However, FDI inflows over the

preceding five years are associated with a significant decline in the import ratio outside Southeast Asia. As a concluding remark, his study revealed that FDI inflows appear to have increased capital formation and thus increased growth rates.

Dees (1998) adopted a different methodology to assess the impact of FDI on Chinese economy. He used a constant elasticity of substitution (CES) production function to assess its effects on growth. The basic equation is as follows:

$$Q = \gamma[\, s\,(K)^{-\rho} + (1-s)(Le^{\lambda t})^{-\rho}]^{-1/\rho}$$

Where Q, K, L denote output, capital stock and labour, t technical progress, γ a scale parameter and s the contribution of capital to growth. The elasticity of substitution (σ) is given by $1/1+\rho$.

With regard to the effects on growth, he made a conclusion that FDI affects China is growth through the diffusion of ideas. The diffusion of ideas refers to the technological spillovers effects which influence growth. Dees investigated the role of FDI in technical change through the effects of technological spillovers on growth by using theoretical models of innovation-driven growth developed by Grossman & Helpman (1995). The empirical evidence showed that FDI had a significant positive effect on Chinese long term growth through its influence on technical change.

2.4 Local Empirical Studies

There is a lack of local empirical studies concerning the impact of foreign direct investment on economy or sector such as manufacturing sector. Empirical studies in the manufacturing sector are even less which seems to explain the unsatisfactory assessment of the FDI performance in the manufacturing sector. David Lim (1974) in his study "Foreign Investment and Economic Development in Malaysia" tried to assess the position of foreign direct investment in Malaysia. Based on some empirical findings, he try to examine the utilisation of capital plant and equipment of Malaysian , foreign and mixed manufacturing companies. The utilisation of capital is an important aspect of economic efficiency, a higher rate of capital utilisation is usually associated with a higher level of efficiency for a given technology.

Using two measures of capital utilisation, U_1 which represents the number of hours capital plant is utilised a year as a percentage of 8760 hours, the maximum number of hours available per year. U_2 adjusts U_1 for the intensity of use, Lim conducted a survey for 350 establishment in the manufacturing sector of West Malaysia in 1972. The results showed that foreign companies tend to use their capital plant more intensively than their Malaysian counterparts. Somehow, this study was able to establish the empirical evidence on the role of foreign direct investment in the economic development process. However, just as noted by the author himself, capital utilisation is only one dimension to measure economic efficiency, other aspects of economic development resulted from the inflows of foreign direct investment needed to be assessed

as well. Such as the impact of foreign direct investment on the economy growth, balance of payment deficits, employment generation and other aspects.

Jayant Menon (1996), in his article "Foreign Investment and Industrialisation in Malaysia: Exports, Employment and Spillovers" attempted to assess the role of export-oriented FDI in Malaysia's rapid industrialisation. The author selected three key aspects of the FDI-industrialisation nexus: exports, employment and spillover effects to examine the impact of foreign direct investment in the case of Malaysia. Through the compiled manufactured exports data, the author concluded that the share of foreign firms in total manufactured exports from Malaysia has increased dramatically in the past two decades. In addition, the author also observed that the higher the net foreign exchange component in exports, the greater would be the benefit to the economy from FDI. By looking at the share of foreign firms in production and employment industry data, the author concludes that there has been a remarkable increase in the number of employment opportunities generated by FDI investment. The percentage of workers employed in foreign firms increased from about 30% in 1983 to 42% in 1992. Among the three effects, the author found that the spillover effects of the foreign direct investment is the most insignificant. However, the author concluded that the spread effects of FDI through backward linkages and direct technology transfer though is limited but appear to be increasing. The study of Jayant Menon seems to give a rather high appraisal of the role of FDI in the process of export-led industrialisation in Malaysia. The only lacking in his study is it did not provide concrete empirical evidence to support his views. The data presented in his paper is insufficient to present a full picture of the

role of FDI in the process of industrialisation in Malaysia. For instance, only selected years is used to analyse the impact of FDI on export growth, employment and spillovers. A more compact empirical model using times series data is needed to fully assess the impact of FDI on the growth of manufacturing sector.

A good attempt has been made by Ceesay (1993) using empirical as well as econometric analysis to assess the role of direct foreign investment (DFI or FDI) in Malaysia. His study initially aimed to evaluate the contributions of DFI to the Malaysian economy by adopting empirical methods to measure its impact on gross domestic product, manufacturing output, exports and imports. Other than this, the study also sought to determine the factors that attract DFI to the Malaysian economy. Ceesay identified four factors responsible for attracting DFI to Malaysia which needed to be quantified in the study. There are the effects of infrastructure, per capita income, the openness of the economy and the exchange rate on the flow of DFI to Malaysia. The study has found a highly significant positive impact of DFI on exports in the country. However, the positive implications of DFI for the country's balance of payments are correspondingly well matched by negative implications in the forms of dividends, royalties, management fees and profits as well as imports.

The author's study also revealed that the country's stable political and economic environment, good infrastructure, cheap labour and fairly large market outperform the government's generous fiscal and non-fiscal incentives in attracting DFI. In the aspect of employment generation, the author concluded that DFI has desirable

effects on it. In addition to be a medium of technology transfer, the author also found that DFI has a positive impact on sectoral interdependence (forward and backward linkages) in the economy. As a whole, by running regressions over times series data for the years of 1960 to 1990, Ceesay founded a highly significant positive relationship between the country's gross domestic product and DFI. The regression model adopted by the author is based on postulation that GDP is an increasing function of both domestic and foreign savings. There is a positive relationship between GDP and domestic and foreign savings. Formally,

$$GDP = F(GDS_t, FS_t)$$

Where GDS_t = gross domestic savings at time t

FS_t = foreign savings at time t

Decompose foreign savings into 2 components, DFI and external debt.

$GDP = f(GDS_t, DFI_t, ED_t)$

DFI_t = direct foreign investment at time t

ED_t= external debt at time t

The author used the ordinary least square estimation method to get the result.

The estimation result:

$$GDP = 132.667 + 3.005DFI + 0.295\ ED + 1.636\ GDS$$

(10.225) (6.662) (4.881) (11.927)

$R^2 = 0.994$

It shows that all the explanatory variables are highly significant at the 1 percent level of significance. They have exerted a highly positive influence on GDP over the period 1961-1990.

Wong (1998), in her paper titled "The Effects of Foreign Capital Inflows on the Malaysian Economy, (1966-1996)" attempts to assess the role of foreign capital inflows (FCI) in Malaysian economic development between 1966 and 1996. She used the empirical econometric method to evaluate the impact of FCI on the growth of output. She treated the inflows of capital in aggregate as well as disaggregated forms, there are debt and FDI. Similarly, the methodology undertaken in her study is regression analysis using ordinary least squares (OLS) method.

The author used the semi log-specification growth equation, relates output growth to the investment rate, labour force growth rate and manufacturing growth rate as a proxy for structural change in the Malaysian economy between the years 1966 and 1996.

The semi-log specification:

$$Lny = a + b\ I/Y + c\ L/L + d\ SC$$

Where lny = real GDP growth

I/Y = the investment rate, there is gross capital formation as a proportion of GDP

L/L= the growth rate of the actual numbers employed proxies for the rate of labour force growth

SC = is the manufacturing value added – proxies for structural change.

To test the contribution of foreign capital to the Malaysian economic growth rate, the investment rate variables, I/Y was substituted by its constituents – saving, S and FCI. Therefore, the semi- log specification growth equation become:

$$LnY = a + b_1 S/Y + b_2 FCI/Y + c\ L/L + dSC$$

Wong found that Malaysian economic growth rate is a function of capital, labour and structural change. The analysis also supports the "orthodox position" that FCI complements and not substitutes for domestic capital to finance investment. FCI augments domestic capital and thus increases the national income through the multiplier effect. However, the contribution of the domestic saving rate was found to be superior to FCI, both in terms of the size of the coefficient as well as statistical significance.

2.5 Summary of Literature Review

Table 4

Study/Country /Econometric Technique/Model	Sector/Country	Impacts of FDI on variables (statistically significant and coefficient sign)	
Macdougall (1972), Australia Partial-equation, Comparative static, Theoretical Neo-classical framework	Whole economy	Gains through higher tax revenue from foreign profits , economies of scale and external economies.	
Bos and Sanders (1974), Less Developed Countries, Dynamic neo-classical model	Whole economy	Cumulative effects income- favourable impact balance of payment - negative effect	Marginal effects income- less favourable impact balance of payment - negative effect

		private savings - positive effect public savings - positive effect	private savings - positive effect public savings - positive effect
Husain & Jun (1992) ASEAN&South Asia countries (1970-88), Simultaneous equation model	Whole economy	GDP growth positively significant	
Jansen (1993), Thailand (1987-1991) Macroeconomic Model	Whole economy	economic growth - indirect effect through expansionary effect on private investment and exports	balance of payment - increased imports dependency & factor services payment - increased exports - did little to improve balance of payment

Fry (1993), Southeast Asia (SEA) & countries outside SEA Simultaneous equations model		economic growth	domestic investment	Others
	SEA	positive effect	increase	complements to other capital flows
	Outside SEA	negative effect	does not increase	substitutes for other capital flows
Dees (1998), China, CES production function	Whole economy	economic growth (long term) Positively Significant	technological spillover effects significant	
David Lim (1974) Malaysia, Empirical studies (350 establishments)	Manufacturing	efficiency of utilisation of capital plant and equipment Higher intensity for Foreign companies		
Jayant Menon (1996) Malaysia (1983-1992)	Whole economy	manufacturing exports share of foreign firms increased significantly	employment increased significantly	spillover effects insignificant

Ceesay (1993) Malaysia(1961-1990), Econometric model	Whole economy	GDP growth highly significant positive relationship	exports significant positive impact
Wong (1998), Malaysia (1966-1996) Regression analysis on foreign capital inflows (FCI) using OLS method	Whole economy	GDP growth positive impact, however domestic saving rate was found to be superior to FCI	others FCI complements for domestic capital to finance investment

2.6 The Missing links

The review of the previous studies above indicated that most of the studies focus mainly on analysing the impact of FDI on economic growth. There were relatively fewer econometric analyses of the impact of FDI on imports, exports and employment. Fry (1993) and Jansen(1993) are the only two out of ten previous studies who built macroeconomic models to assess the impact of FDI on a variety of economic variables in Southeast Asia and Thailand respectively. Based on these models, they derived an all round assessment of FDI impacts. In the case of Malaysia, efforts have been made to analyse the impact of FDI on economic growth and exports as well but the individual econometric analysis of FDI effects on each particular sector such as output growth, imports, exports and employment have not been done yet. Therefore, this study attempts to fill this gap by analysing the impact of FDI on manufacturing output, manufacturing exports, manufacturing imports and lastly on manufacturing employment.

An overall evaluation of the impact of FDI is made based on this methodological framework.

2.7 Conclusion

From Table 4, we noticed that overall, the studies show that foreign investment or specifically foreign direct investment establish significant positive relationships with economic growth or output growth. In contrast, two studies that showed an indirect effect of FDI or negative effect of FDI are Jansen's study on Thailand and Fry's study. Generally, the most frequently adopted economic models applied in the previous studies are those derived from neo-classical growth models. These models basically followed a Cobb-Douglas production function, originally developed by Solow (1956), modified by Meade(1966) in which initially each input factor is simply related to overall output.

The previous studies showed a significant positive impact on employment and exports. However, there is an uncertain effect of FDI on the balance of payment and technology spillovers in host economy. Jansen's study revealed that FDI did little to improve the balance of payment of Thailand. This is because FDI rendered an increase in both exports and imports in Thailand. The result of Bos et al's study also showed a negative effect on balance of payment. In terms of spillover effects especially technological spillover, Jayant Menon's study on Malaysia economy showed that the spillover effects of FDI is insignificant. Whereas Dees's study on China's economy

using the Cobb-Douglas production function showed a significant technological spillover effects of FDI and as a result increased the economic growth of China. However, there are some missing links in the previous studies that need to be filled by researcher in the future. The adoption of macroeconomic models in analysing the impacts of FDI is less than enough especially in the case of Malaysia. Thus, a generalised impact of FDI on Malaysia economy is difficult to be derived. Besides, individual sector analysis of FDI impacts is even less as a whole, locally or internationally.