UNIVERSITY OF
LEADING
THE WAY
WESTMINSTER⌗

WestminsterResearch

http://www.westminster.ac.uk/research/westminsterresearch

The effect of liberalisation of foreign direct investment on the economic development of Thailand: an empirical and political economy approach

Siriwan Santipitaksakul

Westminster Business School

THE EFFECT OF LIBERALISATION OF FOREIGN DIRECT
INVESTMENT ON THE ECONOMIC DEVELOPMENT OF
THAILAND: AN EMPIRICAL AND POLITICAL ECONOMY
APPROACH

SIRIWAN SANTIPITAKSAKUL

A thesis submitted in partial fulfilment of the
requirements of the University of Westminster
for the degree of Doctor of Philosophy

December 2010

ABSTRACT

This study seeks to assess the impact of the liberalisation of Foreign Direct Investment (FDI) on the Thai economic development. The case study of Thailand is interesting because the country has embraced market-driven development policies, particularly FDI and export-led growth strategy, for nearly forty years but her economic performance is far from being excellent. The need for assessing these policies is critical because it is observed that Transnational Corporations (TNCs) have increasingly benefited from the government's investment incentive scheme more than domestic investment projects.

This study offers a multi-disciplinary literature review showing that FDI not only generates an inflow of resources into the host economy but also creates an outflow of other types of resources. While FDI may bring additional capital and advanced technology that contributing to economic growth, the introduction of superior firms into the domestic markets in developing countries may also amplify the magnitude of market imperfections. These imperfections may be found to be more beneficial to TNCs than to domestic entrepreneurs. Thus, without sufficient and appropriate government interventions, domestic entrepreneurs may find difficulties in developing their ownership-specific advantages. This advantage at the aggregate level can be regarded as the productive capability of the nation that helps to increase the country's competitive advantages along its development path. Thus, liberalising FDI without strategic planning may cause an unfavourable impact on economic development. Under these circumstances, the dependency remains tenable to explain the phenomenon.

The study's proposition is approached and validated by the use of political economy and empirical analyses. From political economy analysis, it shows that Thailand has a number of economic features suggesting it to be a capital-dependent state as argued by dependency theory. The empirical analysis is then carried out to assess the impact of inward FDI on the Thai GNI. The framework and methods used in empirical study are borrowed from the Growth Economics. The income regressions, using the quarterly time series data from Q1:1970 - Q4:2009, show that in the case of Thailand, inward FDI has been beneficial to the growth of the economy only in the short run but has a negative impact on the GNI in the long run. Moreover, the study found that the empirical evidence appears to support the claim of Thailand being a capital-dependent state. It found that inward FDI empirically explains an increase in income deficits and totals imports. These impacts render the balance of payments in a vulnerable position. The study then concludes that, given the nature of the Thai political economy, the liberalisation of FDI seems to make Thailand a capital dependent state, and that Thailand has not fully benefited from FDI.

Research Supervisory Team

Director of Studies

Dr. Sima Motamen-Samadian, B.A., M.A., Ph.D.,

Economics and Quantitative Methods

University of Westminster

Second Supervisor

Dr. Giorgio Di Pietro, B.Sc., Ph.D.,

Economics and Quantitative Methods

University of Westminster

Second Supervisor

Dr. Latif Wahid, B.Sc., M.Sc., Ph.D.,

Economics and Quantitative Methods

University of Westminster

ACKNOWLEDGMENTS

TABLE OF CONTENT

Chapter 1:   Introduction

Chapter 6:   Data, Empirical Analyses, and Discussions

Chapter 7:   Conclusions

Bibliography

Appendices

GLOSSARY OF ACRONYMS

ADB	Asian Development Bank
ADF	Augmented Dickey-Fuller Test
AIC	Akaike Information Criterion
BIBF	Bangkok International Banking Facility
BOI	Board of Investment (Thailand)
BOP	Balance of Payment
BOT	Bank of Thailand
CPI	Consumer Price Index
DWH	Durbin-Wu-Hausman Endogeneity Test
ECM	Error Correction Model
FBA	Foreign Business Act
FDI	Foreign Direct Investment
FTA	Free Trade Areas
GDP	Gross Domestic Product
GNI	Gross National Income
HQ	Hannan and Quinn Criteria
IDP	Investment Development Path
IEA	Industrial Estate Authority of Thailand
IMF	International Monetary Fund
IPA	Investment Promotion Act
IV	Instrumental Variable
M & A	Merger and Acquisition
NESDB	National Economic & Social Development Board (Thailand)
NIEs	Newly Industrialised Economies
NOI	Net Outward Investment
OECD	Organisation for Economic Cooperation and Development

OLS	Ordinary Least Square
PI	Portfolio Investment
PLC	Product Life Cycle
R & D	Research & Development
SEQ	Structural Equation
SIC	Schwarz Information Criterion
TFP	Total Factor Productivity
TNCs	Transnational Corporations
UNCTAD	United Nation Conference on Trade and Development
VAR	Vector Auto-regressions
VECM	Vector Error Correction Model
WB	World Bank

LIST OF TABLES

LIST OF FIGURES

Chapter 1: Introduction

1.1 Research Background

Prior to the Asian financial crisis in 1997, Thailand had exhibited an outstanding growth performance. At that time, it was speculated that Thailand would soon become the fifth Asian Tiger to join the club of the Newly Industrialised Economies (NIEs) which constitute Taiwan, Singapore, Hong Kong and South Korea. This speculation was sensible at that time, if one looked solely at the growth rate of the Gross Domestic Product (GDP) and the country's export performance. Thailand embarked on her modern economic development at the same time as her regional counterparts did particularly South Korea. The modern Thai economy had formally embraced an outward economic development regime since the 1970s when the country's annual Gross National Income (GNI) *per capita* stood at US$ 190[1]. At the same time, in South Korea, General Park Chung-hee ascended to his presidency and radically laid out the developmental path for South Korea's economic development (Il Sakong, 1993; Chang and Evans, 2000). South Korea's annual GNI *per capita* in 1970 was only US$ 277.

---

[1] Own calculations, World Development Indicator (2010)

Four decades later, however, South Korea has successfully transformed her relatively backward economy into an advanced one. Thailand has not even reached half-way to the experience enjoyed by South Korea. In 2009, while the current GNI per capita in South Korea was approximately US\$ 17,000 that of Thailand stood modestly at US\$ 3,700[2]. Obviously, the difference has been growing over time. Figure 1.1 depicts the dynamics of changes in categories of income *per capita* classified by the World Bank.

FIGURE 1.1: DYNAMICS OF CHANGES IN CATEGORY OF INCOME *PER CAPITA* AMONG MAJOR ASIAN COUNTRIES DURING 1960-2009
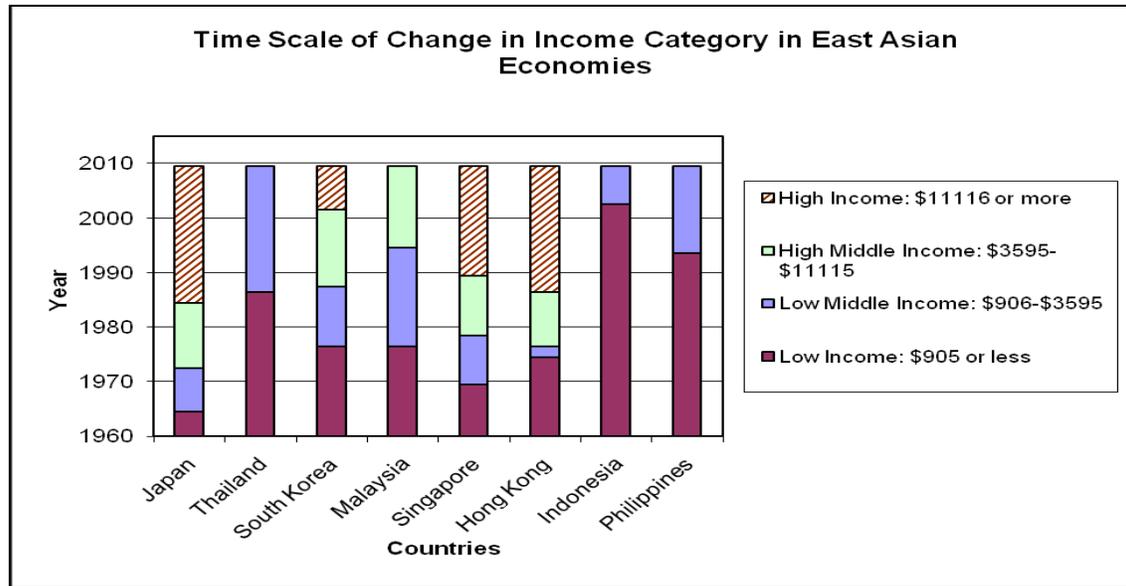
Source: Own calculations, World Development Indicators (2010)

In a broader picture, in the beginning of 1960s, it is seen that all major East Asian countries were classified as low-income countries. Over the years, Japan, Hong Kong and Singapore performed best in this league. Within 25-30 years, they repositioned themselves as rich countries, while Korea joined the club later in the very beginning of 21st century. Malaysia, even lagging behind the NIEs, performed better than Thailand, while Indonesia and Philippines in contrast appear to have progressed fairly slowly. Within the same length of time, the last three countries could not break away from the low-middle income category.

---

[2] Own calculations, World Development Indicator (2010)

It is widely known that the major contributions to Asian economic success lie in their outward strategy to growth that influenced their plans towards international trade and investment, government intervention, high saving and investment rates, macroeconomic disciplines and good public policies. However, as economic performance varies among countries, the sources of divergence must be sought in fundamental differences in the development strategies adopted in Thailand and the NIEs. A general aspect may lie in the development model. It can be said that while Japan and the NIEs had a *dirigiste* model of development, Thailand has had a pragmatic, neo-liberal model of development which emphasises extensively the liberalisation of trade and inward Foreign Direct Investment (FDI). A more specific aspect lies in the attitudes towards FDI. The chosen focus is selected on the basis of economic history of the countries. It is noted that Japan, Taiwan and South Korea had been notably unfriendly towards inward FDI during the early stage of their economic development (Dunning, 1990; Il Sakong, 1993; Kim, 2000; Chang and Evans, 2000; and Amsden and Chu, 2003). This is in the stark contrast to the Thai development model where inward FDI was thought to be the key stimulus to economic development and, therefore, the country implemented extensive policies and offered numerous incentives to attract more inward FDI.

Furthermore, it is also observed that East Asian countries that underwent successful industrialisation appear to have successful and strong domestic firms. Some of them, later on, became Transnational Corporations (TNCs). The literature from international business and industrial organisation suggests that firms survive and grow stronger because they possess competitive advantages. It must be noted that large firms and TNCs from the successful East Asian nations have not only been protected from international competitors during their inceptions but also heavily subsidised by their states. In Thailand, confined by the neo-liberal ideology, state's interventions and rigid industrial planning hardly ever took place.

In fact, a firm's competitive advantages at the aggregate level reflect the nation's productive capability. According to Chang (2010), the nation's productive capability is an ability to command the sphere of productive forces. In other words, it is the ability to produce superior knowledge embodied in technologies and institutions. Chang (2010) goes further to criticise that the contemporary notion of 'development', which largely derived from a neo-liberal,

developmental framework, appears to overlook this essential aspect of the spirit of 'development' which prevailed in the 1970s.

Chang (2009, 2010) explains that contemporary development focuses mainly on poverty reduction, provision of basic needs such as education and health care, sustenance of existing productive structure, and individual betterment. These factors, individually, would not cause a complete development. They require a strategic organisation by the state so that the productive capability can be created. However, the contemporary developmental regime undermines the role of the state as well as the necessity of industrial planning and the protection of an infant industry. This, in turn, may impede the formation of productive capability, though all objectives of contemporary development have been achieved.

The Thai Development and FDI

Before the Asian financial crisis, Warr and Nidhiprabha (1996) published a report praising the success of Thailand's macro-economic management. More specifically, they expressed an approval of the effectiveness of the country's economic policies that relied, to a large extent, on market mechanism as a principal means of resource allocation. Cleary, Thailand's economic development model has largely been influenced by the neo-liberal ideology, promoted globally by the IMF, the World Bank, and the Asian Development Bank (ADB). Hewison (2005, p.313) accurately states that Thailand has been a 'star pupil' of the above mentioned international agencies for many years.

From the Thai economic history, there were two periods when Thailand implemented liberal development policies. First, it was in the early 1970s, when Thailand shifted from an import-substitution to an export-promotion strategy. This period is crucial because, in parallel with implementing export-led growth strategy, Thailand also revised her investment-related law and Foreign Business Act in such a way that facilitated more foreign operations particularly, in the export sectors. It must be noted that this strategy is different from that of, for example, Japan, South Korea and Taiwan, where their governments worked closely with domestic firms, rather than TNCs, in creating export and strategic industries. Confirmed by Phongpaichit and Baker (2003), Kohpaiboon (2009), Thai local firms and TNCs appear to specialise in different sectors. While large Thai conglomerates tended to be successful in domestically confined and low technological-intensive sectors, such as, media, real estate, communication, and toys production, TNCs are more

4

competitive in high technological-intensive export sectors, such as, machinery, automobile parts, and the chemical industry.

The second time that Thailand had to embrace the more extended neo-liberal policies was after being hit by the Asian financial crisis in 1997. Despite the fact that this crisis was caused by the pre-mature liberalisation of the capital account, Thailand still did not reduce the extent of neo-liberal policies that were implemented. In contrast, she continued to adopt more neo-liberal policies, particularly in the area of FDI. This time, privatisation and more deregulations in the FDI-related area were carried out. These include, for example, the abolition of local content requirements, and permissions for 100% foreign ownership in the manufacturing sector.

After the crisis, Thai academics started to question seriously the effectiveness of the neo-liberal development regime (Hewison, 1999, 2001, 2005; Phongpaichit, 2005a, 2005b, 2006a; Pongpaichit and Baker, 2003, and Winichakul, 2008). This is because the crisis had induced deep structural changes in the economy such as the transfer of ownership from domestic entrepreneurs to TNCs in several lucrative sectors, namely, banking and automobile and parts production. TNCs also became dominant in export sectors. The country became increasingly dependent on external factors. Most importantly, the crisis did highlight one structural deficiency of the Thai economy, namely the lack of productive capability, embodied in Thai domestic firms. As the national productive capability is responsible for the sustainable development, it is interesting to investigate whether or not the FDI-led growth policies and the neo-liberal development model can partly explain such deficiency.

Possibly, the limited productive capability, normally embodied in domestic firms was lost due to the extreme implementation of FDI-led growth policies. For example, an introduction of TNCs could out-compete domestic firms or restrict the enhancement of domestic firms' capabilities. Besides, there was no effective competition law to restrict the aggressive activities of TNCs. This could be partly explained by the decision of the governments in the past in taking a limited role in directing the path of the country's economic development and leaving this task to a market mechanism which does not necessarily serve the national interest. Indeed, Doner and Hawes (1995) observed that Thailand had a weak state. Its past

5

governments were more likely to leave the fate of the country's economic development to the forces of the markets rather than a strategic organisation and coordination among domestic agents.

In fairness, the liberalisation of FDI seems to be more beneficial than harmful to development as FDI is perceived as long-term capital that is less volatile compared to portfolio investment (PI). Besides, FDI has a good reputation of carrying additional capital and advanced technology to host countries. Thus, the presumption that FDI would generate a positive effect on the economic development of host developing countries has become contemporary conventional wisdom. However, it must be noted that, during the 1960s and the 1970s, the impact of FDI on economic development was seriously questioned and criticised, particularly by dependency theorists.

FDI and development generated much controversy and debate in the late 1970s, both in policymaking and academic circles, particularly among social scientists whose interest lay in development (Biersteker, 1978). Dependency theorists argued that FDI might also distort the institutional structure of the host economy so much so that a full capitalist development may never be achieved. Distortions may be found in the forms of outflows of resources, displacing domestic entrepreneurs, and inequality. The empirical studies, assessing the impact of FDI on growth, give inconclusive results. In fact, it can be said that the impact of FDI on economic development is not unique and universal. Moreover, in the cases where the likely benefits of inward FDI are observed, they are conditional on several conditions such as, a significant absorptive capacity and a liberal trade regime. Clearly, the benefits of FDI are not automatic. The nature of the impact is largely specific to the context. Thus, Biersteker (1978) and Dunning (1995) suggested that a thorough insight into the impact of FDI in host countries can be gained with an analysis of the institutional configuration embedded in the host country.

The loss of vitality of the academic debate on FDI and development topic may be explained by several reasons. Firstly, neo-classical economics and its descendants have gained the hegemonic power over the matters of explaining and examining economic problems. This line of theories suggests that FDI are a bundle of technology and additional capital which would be beneficial for development in developing countries. However, these mainstream

theories do not fully take into account the motivations of TNCs and the role of the state in the host countries.

Secondly, specialisation influences the curriculum in universities. The uni-disciplinary style in academia appears to play its part. While the proponents of the positive impact of FDI draw their argument from the static framework, where only quantifiable economic forces are incorporated, those who argue for the negative impact of FDI mostly involve qualitatively socio-political factors and the use of a dynamic framework in their analysis. As a result, the former falls into the economic arena and the latter goes to political and social studies. Each of them publishes their own journals, have their own discussion circles and differing ways of looking at the world. Unless research into the impact of FDI and economic growth takes a multi-disciplinary approach, the results may not be fully fruitful.

Thirdly, it is also due to the dominance of neo-liberal ideology, whose main proponents are the key international agencies that look after the policy-making processes in most of the developing world. This ideology advocates a free market economy in which government interventions and restrictions on the mobility of resources should be kept minimal. The neo-liberal exponents also argue for FDI-related positive spillovers which stem from the liberal framework. At the same time, the strength of the opponents has been weakened by the collapse of the planned economies in the USSR and difficulties that most import-substitution regimes faced. As the intellectual root of those who are critical of FDI and its impact on development lie mainly in Marxist analysis, their credibility has been criticised by mainstream economics. As mainstream economics prioritises knowledge gained trough a scientific approach, they accused the critics of FDI as being politically motivated.

1.2 Aims and Objectives of the Research

The economic situations that Thailand is now experiencing can be described as follows. Firstly, as mentioned earlier, even though all East Asian nations adopted an export promotion strategy, the management of FDI during the early stage of development in Japan and the NIEs was different from that of Thailand. It was then observed that, while exports from Japan, Taiwan and South Korea were largely produced by their domestic firms, transnational corporations (TNCs) account for the majority share of Thai exports

7

(Kohpaiboon, 2003; Tambunlertchai, 2009; and Thanadsillapakul, 2010). Secondly, the country is experiencing the situation where domestic capital started to give way to foreign investment in several major industries such as banking and the automobile industry, particularly after the crisis (Phongpaichit, 2006). Thirdly, as a result of an attempt to promote more inward FDI, it appears that instrumental policies that were created to increase technological spillovers between TNCs and domestic firms, such as, local content requirements and limited foreign ownership have been gradually lifted since the financial crisis in 1997. Lastly, fiscal privileges for promoted investment projects have increasingly been given to TNCs more than to domestic firms.

Inward FDI is still largely perceived as a key stimulus for growth and that an inducement of FDI is high on the country's agenda. Against the backdrop of the above-mentioned Thai economic features, it is necessary to examine the impact of FDI on the economic development of Thailand and justify its liberalisation. More specifically, this research seeks to identify how inflow of FDI empirically impacts economic growth when the government limits its intervention and largely liberalises the rules on transfer of resources by TNCs. In so doing, this study also expects to shed some light on how FDI affects the formation of domestic productive capability, which, in turn, is responsible for upgrading the competitive advantages of a nation along its developmental path. Without such ability, economic growth may not translate into a complete and independent development. Development, without productive capabilities, could become a dependent development, similar to what dependency theorists have been arguing for a long time.

1.2.1 Aims of the Study

The aim of this study is to examine the effect of the liberalisation of FDI on the economic development of Thailand, using political economy and empirical approaches. The aim of the study is actually the research question which can be re-formulated as follows:

"***How has the liberalisation of FDI affected the economic development of Thailand?***"

On the political economy aspect, this study approaches the research question using the conceptual frameworks developed from two major disciplines, namely, international

business and political economy. With regard to the empirical approach, it borrows analytical tools from growth economics to examine the impact of inward FDI on the Thai economic development, measured by GNI. In order to achieve this aim, the following objectives have been set.

1.2.2 Objectives of the Study

1) To address the research question with a multi-disciplinary framework. The study will first identify major disciplines that focus on FDI and economic development and produce a comprehensive literature review accordingly.

2) To identify the contradictions in the theoretical level and contradictions between theories and practices.

3) To identify the appropriate conceptual frameworks to assess the impact of FDI on economic growth. These conceptual frameworks should take into account the dynamic nature of economic development, the country's productive capability, and the distinction of the contributions of domestic capital *vis-à-vis* that of international capital to the developmental process

4) To analyse the institutional configurations of the Thai economy and its FDI-related policies by looking at various economic aspects indicated by the related theories. In addition, the study seeks to examine how political forces could partly explain the choices of the adopted policies.

5) To assess empirically the impact of inward FDI on the Thai economic development with an appropriate econometric procedure.

1.3 Research Design

This research, firstly, starts from identifying elements of the research question, namely, FDI conducted by the TNCs, and development administered by the state. A theoretical understanding of these elements is gained through the review of literature. Indeed, the research question is multi-disciplinary. This is because the theoretical explanation of TNCs can be found in international business and industrial organisation disciplines. The role of the state and development are discussed in political economy literature. The impact of FDI and economic growth is largely discussed and analysed both in growth economics and political economy. The multi-disciplinary literature review is conducted to serve two purposes. One is to reveal conceptual or theoretical similarities and contradictions in relation to the impact of FDI on development. The other is to shed light on what type of data and economic features this study needs to collect and analyse in order to comprehend fully the impact of FDI on economic development. Most importantly, the review of literature from several related disciplines would reveal conceptual similarities and differences towards FDI.

It will be seen that there are two contending arguments regarding the impact of FDI on economic development. The prevailing current thought advocates that FDI is beneficial to development. The critics of FDI argue that it is detrimental. The literature review shows that each argument appears to have different assumptions on the institutional context. Differences in these institutional contexts may be a key to an understanding of the impact of FDI on economic development. Indeed, Dunning (1981, 1999, and 2005), the prominent scholar of the international business discipline repeatedly emphasised that the study of FDI and development is specific to context and history.

Secondly, integrative analytical frameworks, where both positive and negative impacts of FDI are explained, will be constructed. According to mainstream perspectives, FDI are sources of additional capital and advance technology. Based on growth theories, these factors contribute to economic growth. The presumption that FDI would lead to growth is then derived. The critics of FDI, mostly confined to dependency theory, argue that FDI is likely to be detrimental to economic development, particularly in the long term. This is because FDI is perceived as an entry of superior foreign firms into the domestic market where indigenous firms are relatively weaker. Due to a competitive incompatibility, the

domestic firms are likely to be driven out. Also, because of their foreign nationality, FDI tends to instigate the outflow of resources. Growth can still take place under the negative scenario. Nevertheless, the nature of growth that FDI induces is dependent and does not allow for complete industrialisation.

To assess which scenario, positive or negative impact, is taking place requires both institutional and empirical analysis. For institutional and historical analysis, this study adopts and modifies a conceptual framework from the international business discipline. It is the Investment Development Path, developed by Dunning (1981). For empirical analysis, this study develops an exogenous growth model that would explain the change of the nation's income in relation to an international investment. This model will be used as a theoretical platform for the empirical analysis.

Thirdly, the nature of the research question governs the scope of the study in terms of time and geography. Clearly, it points out this research is a particular case study of Thailand. As the country had adopted the FDI and export-led growth strategy since the beginning of the 1970s, this historical fact suggests that, ideally, the historical and empirical studies should draw data from the 1970s onwards. Taking into account that the study is interested in development in relation to inward FDI at the macro-economic level, naturally, it follows that the relevant empirical test should take the form of a time-series analysis using macro-economic data.

Fourthly, the modern history of the Thai political economy will be chronologically analysed. In this step, the study relies heavily on the analysis of documents and historical data of related economic indicators which were initially suggested by the literature review in the second step. Institutional configurations in Thailand will be studied. Indeed, the study attempts to analyse the Thai political and economic backgrounds in relation to FDI with the use of the conceptual framework developed in the previous stage. The information gained at this stage can help to determine which path of economic development Thailand is likely to experience. Then, this will help to define a hypothesis on the effect of FDI on economic development in Thailand. The arguments, at this stage, are mainly derived by deduction and may contain a degree of subjectivity. For this reason, the following step, the empirical analysis, is necessarily important because it will provide relatively more objective evidence.

Fifthly, this step focuses on testing the hypothesis on FDI empirically. However, since theories and stylised facts indicate that FDI affects the economic development of a host country either positively or negatively, one needs to examine other observable phenomena that are likely to occur specifically within each scenario. For example, in a capital-dependent state, not only the impact of FDI in the long run is negative, the country's gain from trade openness is ambiguous or likely to be negative due to the deterioration of the terms of trade. Therefore, the empirical model, developed in this stage, has to incorporate other variables that are discussed at the theoretical level. Indeed, in this stage, it is expected that the empirical results would support the hypothesis that the study has established from the analysis of the Thai political economy.

Lastly, the study should be able to assert with a high degree of confidence whether, or not, Thailand has benefited from inward FDI, particularly under the actual liberal regime. Based on the conceptual frameworks that it has initially developed, the study should be able to give some prediction, *ceteris paribus*, as to what type of developments, either a complete capitalist development or a dependent development, Thailand will achieve.

1.4 Research Methods

Descriptive Methods

The study of the Thai political economy history will be using the 'analytic narrative method'. It is worth noting that Thai economic and political history will be analysed through the theoretical perspectives guided by the literature review. These theories do mostly assume the concept of rationality. This method is normally used in in-depth case studies (Bates, *et al*., 2000, p.696).

History is documented through the reflection and interpretation of historians. Historical documents used in the study are written both by Thai and foreign economic historians. They are collected from journal articles, books and periodicals. The languages used are Thai and English. In so doing, it is hoped to provide balanced perspectives towards Thai politics and economics through the eyes of both the insiders and outsiders. In parallel, political and economic history will be studied alongside the historical data of relevant economic indicators in order to maintain consistency between the story and observations. The entire

research relies only on secondary data. It should be noted that statistics analysed in this political economy analysis will only be descriptive in nature. Inferential statistics will be discussed in the empirical analyses chapter.

Empirical Methods

The objective of empirical analyses, in this study, is to identify the empirical impact of inward FDI on the Thai economic development as well as revealing the causal relationship between them. Theoretical framework and estimation methods are taken from growth economics. Detailed discussion on justifications of the methods used can be found in Chapter 6. In this section, sources of data, econometric methodology, and selected estimation techniques are briefly highlighted. As mentioned earlier, this study deals with macro-economic time series analyses. By definition, it works with secondary data that can be drawn from international and national institutions such as the IMF, the World Bank, the Bank of Thailand and the National Economic and Social Development Board in Thailand.

The empirical analyses depart from transforming the theoretical exogenous model, developed in Chapter 4, into an empirical model. However, the empirical model derived directly from the theoretical model, taking the Cobb-Douglas form, may suffer from the problem of selection bias, to be precise, the problem of omitted variables. Therefore, as much as possible, the study will add more theoretical variables suggested by the literature in growth economics and dependency theory. As a result, now, the empirical model must be large, possibly over-parameterised, and the concept of parsimony may no longer hold. So, to derive a final restricted model, the study will use the General to Specific approach, developed by Hendry and Richard (1982), to simplify the model. The General to Specific approach is effective identification strategy. It must be noted that the General to Specific approach will be used for the first time to derive the growth regression assessing the impact of FDI in Thailand. Then, the validity of the final model will be assessed by relevant diagnostic tests.

The choice of estimation techniques and functional form of model are governed by the objectives of the study, theories, and the empirical properties of data. As the study is working with time series data, prior to empirical tests, empirical properties of each time

series data need to be analysed, particularly on the aspect of stationarity. Ordinary Least Square (OLS) regression for time series analysis is a natural point of departure. Nevertheless, it is acknowledge that the OLS regression is biased when there is a problem of endogeneity. This is particularly important when the growth regression contains investments and trade openness among its independent variables. To assess whether or not an endogeneity exists in the model, two tests, namely, the Durbin-Wu-Hausman test and the Hausman specification test, will be conducted. It will be seen in Chapter 6 that the endogeneity appears not to be an issue in the model. Therefore, an Instrumental Variable (IV) regression is not necessary.

This does not mean that one can be satisfied with the OLS. At theoretical level, FDI and growth are examined in a dynamic fashion. That is, theories do distinguish the impact of FDI on economic development between the short-run and the long-run effects. Hence, it is necessary to empirically assess the impact of FDI accordingly. To do this, the study resorts to the two-step error correction model (ECM), developed by Engle and Granger (1987). At this stage, the short-term and long-term impacts of FDI on the Thai economic development should be revealed. However, regression analysis represents only correlations between independent variables and a dependent variable as well as the magnitude of estimated parameters. It does not say anything about directions of causation (Fine, 2006). To gain a deeper insight, it is necessary to identify the directions of causal relationships between FDI and economic development.

This study then conducts the Vector Autoregressive Granger Causality test in which four key variables are included in the system, namely, FDI, GNI, trade openness and domestic investment. This is because these four variables are central to the analysis of FDI and development. With the use of all these estimation techniques, the empirical impacts of FDI on economic development in Thailand and their causal relationship should be fully assessed.

1.5 Distinctive Contributions

This study makes three original contributions to knowledge, namely, analytical contributions, practical contributions and empirical evidence.

1.5.1 Analytical Contributions

1) *Multi-disciplinary approach to FDI and economic development*

One of the contributions of this thesis to knowledge is its multi-disciplinary analytical approach in explaining the impact and the role of FDI in economic growth of a country. By drawing on different disciplines, the thesis highlights the shortcomings of FDI theories in different disciplines and the need to have a more thorough understanding of the role of all parties involved in any assessment.

2) *Integrative conceptual framework*

This study has used a conceptual framework, Investment Development Path (IDP), developed by Dunning (1981), to capture both a successful developmental path and a dependent development, in relation to an international investment. It will be seen that the IDP, when modestly modified, can represent a capital-dependent state, a developmental case argued by dependency theorists. This research argues further that this conceptual framework is dynamic and can be used for a historical analysis of the political economy of a particular country. To make full use of this framework, the ratio of GNI to GDP, the terms of trade and the balance of payments have been taken into account. This can be taken as being modestly original since the literature review suggests that no other in the past has analysed the case of Thailand in relation to FDI by applying these frameworks.

3) *Neo-classical growth models with multiple types of investments*

Unlike contemporary endogenous FDI-growth models, this study develops a simple exogenous FDI-growth model in which capital has been classified into several types, namely, domestic, inward FDI, and outward FDI. This model, though leaving the role of policies and technological productivity to be determined outside the model, is very friendly for empirical analysis. The originalities of this model are located in the following aspects. Firstly, there is the specific addition of the extra forms of capital related to inward and outward FDI in the Cobb-Douglas production function. The addition of these two variables makes the model relevant to the concept of the IDP. Secondly, it no longer assumes a constant return and allows for both increasing and decreasing returns, depending on the output elasticities of international investment. In fact, this model is developed to offer the empirical platform

assessing the impact of FDI on the process of wealth accumulation which is absent in the IDP framework.

1.5.2 Empirical Evidence

As far as this study is concerned, there are only two past empirical studies that analysed the impact of FDI on the Thai economic growth at the aggregate level. Both Kohpaiboon (2003) and Ang (2009) assessed the impact of inward FDI on GDP, using annual time-series data from 1970-1999 and from 1990-2004, respectively.

There are three aspects of originality embodied in the empirical evidence, proposed by this study. Firstly, it presents more up-to-date empirical evidence of the impact of inward FDI on the Thai economic development, measured by GNI. Secondly, as the Thai economic development has been relying, to a large extent, on inward FDI, the more proper measurement of its economic growth should be GNI rather than GDP. This is because the latter does not take into account the net income transfer, incurred by an international investment. Thirdly, the previous two studies might suffer from a small-sample bias. This study, however, benefits from the longer span of time-series data at a higher frequency, on a quarterly basis, which is only recently available from the World Bank and the IMF. Thus, the times-series analyses in this study are analysed with the data from 120 observations, covering Q1:1970 – Q4:2009.

1.5.3 Practical Contributions

The multi-disciplinary approach to the research problem reveals that there are contradictions between theories and practices in relation to the regulation of FDI and economic development. An obvious example is that the literature both at theoretical and empirical levels, emphasises that the positive impact of FDI is conditional and that TNCs, the product of market imperfections, are unlikely to allow for technological leakages. This suggests that, in order to extricate the positive spillovers from FDI, the state in the host countries needs to

regulate foreign operations and ensure that all policy instruments that are necessary to induce spillovers are being implemented. However, the neo-liberal development model appears to underplay the role of the state and encourage the deregulation of FDI.

This is exactly the case of Thailand. Thus, the empirical evidence shows that when practices are carried out without embracing an insight that can be gained through theoretical studies, the impact of FDI is likely to be unsatisfactory. Details of policy implication will be further elaborated in the concluding chapter.

1.6 Structure of the Thesis

The organisation of this thesis is as follows. Chapter 1 lays the foundations of this research and then Chapter 2 and Chapter 3 provide Literature Reviews. In Chapter 2, this study reviews the literature relating to the nature of the firm. It first examines the model that explains the underlying reasons for TNCs, their motivations and capabilities an institutions vis-à-vis the market. Thus, Chapter 2 approaches FDI at a micro-level by trying to understand reasons behind the institution that produces it. At the end of this chapter, FDI will be defined and the method of its measurement will be critically discussed. In so doing, the study aims to present some missing aspects of FDI, particularly, their rent-seeking behaviour which is generally underplayed in a growth-analysis context.

Chapter 3 focuses on a review of literature on the FDI-related growth models and tries to show how the presumption of the positive impact of FDI on economic growth is derived. Here, the key channels through which the positive spillovers from FDI take place will be identified. The discussion will then move on to assess the empirical works that find the positive spillover from FDI with the empirical tools taken from growth economics. The literature review reveals that most empirical studies find that the impact of FDI on economic development to be ambiguous and specific to the context. In cases where positive spillovers were reported, the outcome was found to be conditional on other factors such as the absorptive capacity of the host country. In other words, these results were revealing the important role that the institutional configurations may play in assessment of the impact of FDI on the economy. It is important to note that the market is largely shaped by policies and regulations.

Then, the role of the state will be introduced as it is the institution that has an absolute legitimacy of setting policies and regulations. The review of the literature will present the roles that the state can take to promote the prosperity of its economy. The discussion will shift to the contemporary policy environment. Indeed, the study will discuss the neo-liberal ideas on the FDI-related development policies and how they might have impeded the state in performing its role as a growth promoter, particularly, in the area of industrial policy. The study will highlight that when the state interventions in the market are minimised and domestic firms are weaker than TNCs, the impact of FDI on economic development may be similar to what has been explained by the dependency theorists so avidly in the 1970s. This is because TNCs can exercise their superior power to a great extent. Thus, the review of literature will introduce dependency theories. More specifically, it will employ the capital-dependency theory to explain the other macro-economic problems that host economies might experience when exposed to excessive inflow of FDI.

Chapter 4 uses the concept of the Investment Development Path (IDP) to analyse the role of FDI in economic growth in a dynamic fashion. The IDP is a concept that is developed within the international business discipline and which, later on, the author has extended to the field of political economy, see Dunning and Narula (1996). This framework can be used to assess what type of development a country tends to follow, that is, a complete capitalist development or a dependent development, based on the Net Outward Investment. This indicator represents the productive ability that is embodied in domestic firms in relation to that of TNCs. The IDP also suggests the ideal timing of when inward FDI and outward FDI should be promoted along the path of development. Most importantly, the IDP sheds some light on the dynamic nature of FDI-related policies.

Clearly, the IDP incorporates the role of the state, the market environment in the host country, and the productive capability of the domestic firms compared to that of TNCs. As mentioned earlier, the IDP framework, when modestly modified, can also represent a capital dependent state. Indeed, analysing a country's developmental path in relation to FDI as well as examining its balance of payments, its ratio of GNI to GDP, and its history of political economy should shed some light upon the type of development on which the country is embarking. However, according to neo-classical economics, this may not be sufficient,

unless some statistical evidence has been produced to support the argument. For this reason, this study resorts to growth economics and adapts the neo-classical growth model to serve empirical purposes as the IDP framework does not offer an analytical tool as to how the impact of FDI can be empirically assessed.

Chapter 5 is a chronological study of the Thai political economy from 1970s until the present time. It provides qualitative analysis of FDI in Thailand and presents a comprehensive background of the structure of the economy. Most importantly, FDI-related policies will be discussed and the configurations of the Thai market, where TNCs operate, will be examined. This chapter will also encompass the review of the empirical studies, using micro-level data, in order to gain an insight into the impact of foreign operations at the industrial level. It will also examine the intensity of FDI by sector in relation to Total Factor Productivity (TFP) growth by sector in Thailand and consider if the sector that exhibited the highest TFP was the one where FDI was mostly clustered.

Chapter 5 will also examine Thailand's economic position in the global economy. In so doing, the study goes through the analysis of the indicators such as Net Outward Investment which could reflect the productive capability of the country. Furthermore, it will report the pattern of changes in several other macro-economic indicators, namely, the terms of trade, balance of payments, and the ratio of GNI to GDP, that have been influenced by inward FDI. The last section of this chapter gives a brief account of growth record of Thailand since the 1970s. It is expected that these analyses should demonstrate the development path that Thailand is likely to be following and clarify the hypothesis that should be used to assess the impact of FDI on the economy. Indeed, the analysis in this chapter is made in support of the empirical analyses that are conducted in Chapter 6.

Chapter 6 presents empirical analyses. This chapter statistically assesses the validity of the arguments discussed in the previous chapter. This chapter, firstly, discusses the econometric methodology. More specifically, it explains how the empirical model is derived and specifies the choice of estimation techniques. Next, it explains how the data are collected and their description. The empirical tests are carried out by running regressions, using the Ordinary Least Squares and the Error Correction Model. In addition, the Vector Auto-regressions Granger Causality test are conducted to assess the direction of causality between

inward FDI and GNI, whilst taking into account the influence of domestic investment and international trade. The results provide empirical evidence on the type of impact inward FDI has on the Thai economic development and identifies the direction of causality.

Conclusions are presented in Chapter 7, where the findings of both descriptive and empirical are revisited and their consistency will be discussed. Lastly, this study will address its limitations and suggest recommendations for future work.

Chapter 2: Literature Review

Part 1: The Theory of the Firm and the Emergence of the Transnational Corporation and Foreign Direct Investment (FDI)

2.1 Introduction

The literature review in this chapter provides a review of the evolution of the theory of Transnational Corporations (TNCs), even though the research question focuses on the impact of FDI on the economic development in host developing countries. It is necessary to understand the motives and nature of a TNC because it is the maker of Foreign Direct Investment (FDI). It is worth noting that this study will not take a critical position towards the literature reviewed in this chapter because it is not the main area in which the research question is situated. Thus, the style of the literature review in this chapter will be informative and concise. The main objective of this chapter is to point out that TNCs exist because of market imperfections and that TNCs make FDI to pursue, if not to secure, their position in an imperfect competition. In addition to this, this chapter will also show that a firm, as a form of economic institution, has a great capacity to realise economic efficiency which, in turn, translates into a power in accumulating capital. This fundamental aspect of a firm is very important but rarely reflected in the definition of FDI when its impact is

21

assessed in the context of development. However, this theoretical shortfall at macro-level analysis will be fully addressed in the following chapter.

The plan of this chapter is structured as follows. Section 2.2 presents the theory of the growth of the firms. This section will identify what drives the firm's growth and how its organisational structure and its productive capability evolve when the firm grows. These characteristics imply the power of the firm over the market and hence the deviation of the assumptions of perfect competition. Next, in section 2.3, the study will discuss several concepts made to explain the emergence of TNCs and FDI. Once the nature and motives of TNCs have been adequately discussed, then in section 2.4, this study will show how FDI which is the TNC's action to commit in a long-term international investment is perceived in macro-economic literature. A summary is found in section 2.5.

2.2 Theory of the Growth of the Firm

The full understanding of the motivations of TNCs could not be gained without an insight into the firm's growth process as a result of its quest for ever larger profit. It is also notable that a firm's growth process will unusually bring about its by-product, which is an increase in size. Penrose (1995, p.9)[3] and Hymer (1970, p.441) mentioned that the size of firms affects, and is affected by, changes in their organisational structure, which in turn is induced by the strategy for further growth. The more advanced these elements become, the more powerful the firm become in relation to the market. Thus, an increasing size of the firm and a pursuit for profit could render firms, particularly TNCs, anti-competitive in their very nature.

This section draws heavily from the contributions made by Penrose (1995). Pitelis (2000, 2007), Rugman and Verbeke (2001), and Volpe and Biferali (2008) agree that Penrose was the main pioneer who tried to disclose the inside of a firm. Penrose (1995) questioned the factors that naturally induce and impede the growth of a firm. In answering this question, she first defines what a firm is. Influenced by Coase (1937), she posits that a firm is a basic

---

[3]The theory of the growth of firm was first published in 1956. This study uses the third edition which was published in 1995.

unit for the organisation of production which constitutes a bundle of human and non-human resources, tactically manoeuvred by the administrative and authoritative coordination of a group of individuals. The firm can be regarded as a specialised collection of productive resources which is idiosyncratic. It can also be seen as a (productive) problem solving institution (Demsets, 1988, p.141). According to Penrose (1995), each firm reacts to the market opportunities differently, depending on the availability of resources and more importantly, on its managerial and entrepreneurial capabilities. Hymer (1976, p.50) shares the same insight. He observes that businessmen may receive signals from the market but then act differently even though their goals are identical.

As to what are the drivers of the growth of the firm, Penrose (1995) pointed to the management's ability to mobilise and manoeuvre the firms' own resources in order to capitalise on the opportunities arising in the market. More specifically, in Penrosean perspectives, the key determinant of firms' growth is the managerial ability

i.   to receive the signals from the market;
ii. to manipulate the firm's available resources to capitalise such opportunities; and
iii. to set off the rate of growth of the firm or, at least, to secure the firm's position in the market

The last point can be achieved by keeping generating an intra-firm knowledge, or developing impregnable bases, which are the unrivalled, income-generating assets. To add more detail, the generation of intra-firm knowledge is the way by which a firm uses its own resources, resulting from the interaction of human resources and the interaction between human and non-human resources. It takes the form of specialisation that refers to the division of labour. This results in a better organisation, which in turn, leads to the proficient deployment of unused and excess resources. The specialisation brings more efficiency and the deployment of unused resources brings additional profits at zero marginal cost. In this growth process, the initiative to grow is propelled initially by the management's vision and later on by the management ability to create and maintain the firm's competitive advantages that are difficult to be imitated, or rendered obsolete, by the rivals.

Despite the fact that the internal interactions between human resources and non-human resources are identified as the key drivers for growth, Penrose (1995) does not overlook the role of external factors such as demand for products, customers' preferences, technological discoveries in other institutions, legislation and the role of the state. She suggests that when external factors are to be included into the analysis of the growth of the firm, one needs to depart from the firm's internal nature. This is because changes in external factors are channelled into the firm through the experience of its personnel and the knowledge that is embodied in the firm's machinery. These external factors, carried by the firm's human and non-human assets, are then put into the process of interactions and generate growth when it is possible. Some forms of external factors such as regulations and threats by competitors, are responsible for shaping the directions of the growth of the firm. When taking external forces into account, it can be said that the growth of firms are precisely induced by the interaction between internal and external conditions. It is also true for the same reason that firms are also constrained by the interaction of internal and external factors. To summarise, the growth of a firm has to be approached by focusing, firstly, on the firm's internal resources and how they are manoeuvred and, secondly, by the study of its external environment or the market in which it operates, and lastly, by the interaction between these two forces. None of these can be neglected.

As firms grow, regardless of how they are measured, in the long term, they will tend to gain more competitive advantages over their smaller competitors. Hymer (1970, p.441) shared the same view and pointed out that, since the beginning of the industrial revolution, there has been a steady increase in the size of manufacturing firms particularly in the US. He stresses that an increase in size essentially contributes to the reinforcement of the firm's strength and ability. As to how the size and the ability are related, it can be said that as firms grow they inevitably need to develop their administrative framework appropriate to the increasing size and scope of their activities. This natural evolution brings an ever greater efficiency into a firms' productive and organisational operation.

Thus, it may be seen that the productive capacity that could be restored in a firm is essentially significant, so much so that, a firm can be said as a true engine of capital accumulation in the capitalist system that characterises the contemporary global economy

(Hart, 1989, p.1757). Besides, it should be noted that the efficiency gained at the firm level makes them large. This comes with the loss of competitive forces in the market since an increase in a firm's size would normally increase the degree of market concentration. These two points will prove crucial when this study analyses the impact of TNCs' operation in developing economies in the next chapter.

2.3 Transnational Corporations (TNCs) and their International Operations

The materials presented above portray a concept of the firm, its role in relation to the market and its source of growth. This section will review the literature explaining the rationale behind the firm's choice to expand across borders in pursuit of further growth. It is vital to note that a firm's decision to internalise or to pursue growth across national markets does not alter its essence as a firm. However, as its activities are now involving an international exchange and causing the flows of resources across nations, the effect of the operations of TNCs on the global economy is far more significant and complicated than that of large, national firms. This has instigated some key theorists in the field such as Stephen H. Hymer, Raymond Vernon and John H. Dunning to comment on the issue of the political economy aspect of TNCs, particularly their investment, FDI. However, before this study introduces the discussion on such topics and how these relate to the development in the developing countries, it is useful to give a theoretical overview on the emergence to the TNCs. This will shed light on the rationale for FDI.

Generally speaking, TNCs are simply large firms whose economic activities cover more than a single economy. Hymer (1970, p.441) defines a TNC as the substitute for the market as a method of organising international exchanges. Pitelis (2000, p.72) defines TNCs as firms that control productive assets in other countries, in addition to its country of origin. The act of acquiring or creating such productive assets abroad is called Foreign Direct Investment (FDI). Buckley and Casson (2009, p.1564) define a TNC as a firm that owns and controls productive activities in two or more different countries and a firm that internalises market imperfections across national boundaries. In fact, even though TNC can be regarded as an international producer, Dunning (1990, p.16) suggested that TNCs can also be viewed as an international transactor if one looks at it as 'an institution that coordinates the use of immediate products produced in one country with subsequent added value activities in

another country'. All explanations appear to be influenced by Coase (1937)'s concept of internalisation in that they all see TNCs internalise international transactions. In the absence of TNCs, international flow of resources would have been taken place be two independent firms situated in different countries. In other words, the international exchanges would simply be an international trade.

Hymer, (1976, p.27), Penrose (1995, p.xv), Rugman (1981, 1999, p.55) share the view that TNCs can be studied within the framework of the general theory of the firm. Hymer (1976, p.28) suggests that international operations of TNCs can be studied by using the same methodology as the one used in studying national operations of firms. He argues, however, that what needs to be noted is that while the operations are carried out internationally, the firms or the owners of such operations remain national. Pitelis (2000) also notices that the theory of TNCs has been largely built upon the theory of the firm and since the 1990s onwards the theory of TNCs has been given great attention by scholars, because of their dramatic increase in scope and activities.

2.3.1 Nationality of the Firm

It is important to emphasis the reference to the concept of national boundary or the nation-state in an analysis of TNCs and in the study of the impact of their activities in a foreign market. As mentioned earlier, the economic activities, controlled by a firm across nations, do not only have a geographical dimension. The flow of resources, generated by the production and controlled by a management team, also has a political implication and possibly creates tensions among countries. The political implications attached to the TNCs have been underplayed over the last few decades. This is largely because, as Professor Kenen suggests in his forward for Ozawa (1979), as firms expand globally, their management and also scholars tend to overlook the significance of national sovereignty. Hence, in most case, they attempt to explain and assess international trade and investment in cosmopolitan terms. This means that they tend to analyse cost and benefit of FDI mainly on the global scale. Vernon (1967) once emphasised that even though TNC may appear to be ambiguous about its identity, this ambiguity may only change the quality of the tensions among countries but not reduce it.

Leaving the notion of nationality of the firm aside could be dangerous and misleading when analysing TNCs and their international operations. In fact, as some authors, such as, Pitelis (2000) and Ietto-Gillies (2007), point out most of the theoretical explanations of TNCs do not adequately incorporate the concept of the nation-state into the analysis. Paradoxically, in the first two seminal works on TNCs and FDI by Dunning (1958) and Hymer (1976), the concept of nation-state occupied a significant role. While the concept is implicit in the work of Dunning (1958) when he focuses on the impact of the US-inbound FDI on British manufacturing industry, it is explicitly incorporated in the work of Hymer (1976) who refers to the concept of the nation state in his theoretical explanation of TNCs, observed mainly from the behaviour of American firms. The firm, he posits, even though it extends its productive activities internationally, remains, to a great extent, a national firm. This point should be noted because it is likely that the behaviours of a national firm, operating globally, may not be only determined by an economic force, but also by a political influence as the decisions taken by the firm are directed by the management and the shareholders who have a particular nationality and bear some sort of loyalty to their nation.

Buckley (2006) summarises Hymer's (1976) view of the firm's nationality as follows. Firstly, as a firm operates in a given economic system, it therefore has a legal nationality which in turn shapes the behaviours of that firm through legal constraints and incentives provided by government. This point is self-evident and manifested through an array of domestic industrial policies, FDI inducement packages, and bilateral and multilateral attempts among nations to produce Free Trade and Investment Agreement. Secondly, as in most cases, the majority of shareholders appear to be homogenous in social background and nationality. Also, the TNC is obliged to pay dividends in a certain currency depending on where its stocks are traded. This second point introduces the problem of where the profits are to be consumed and where the wealth is to be stored. Thirdly, as previously mentioned, the decisions of the TNCs' managers might have been influenced by their nationality.

Hymer's concern on the nationality of the firm and its impact on the firm's behaviour have been extended in his later works (Hymer, 1979). He notes that the higher the managerial hierarchy, the more homogenous the nationality of the managers become. Therefore, the managers' nationality may affect their commitment and behaviour as well as their decisions.

This raises the sensitive issue of how the redistribution of the profits made from international production will take place. It is true that TNCs generate greater efficiency at global level but one should not overlook the distribution of such efficiency across nations, especially when the efficiency is translated into income. On the last point, this may suggest the nationalist sentiments of the firms' executives, which could ultimately lead to the adoption of a certain strategic policy regarding the redistribution of income. All of these would cause a problem for resource transfer which will be discussed in more detail in the following chapter.

2.3.2 Emergence of the TNCs and FDI

In the years prior to the World War II, the discipline of international economics focused mainly on explaining international trade and international capital movement. It paid relatively little attention to foreign direct investment (FDI). Since the post war period, particularly after the 1960s, the composition of international business has dramatically changed due to several factors such as the advancement of transport and information technology and the superior competitiveness of American firms in knowledge intensive industries over their counterparts from the rest of the world. It was mostly after the World War II when the trend of global production fully emerged. A surge of FDI and a rise in number of TNCs were observed. This phenomenon is so significant that the United Nations Economic and Social Council, in their unanimously adopted resolution 1721, requested the Secretary-General to appoint a group of eminent persons to study the role of TNCs in the global economy, their impact on the process of development and that on the international relations (UNCTAD, 2008). Since then, the United Nation Conference on Trade and Development (UNCTAD) also puts special emphasis on monitoring the impact of FDI on global development. The elements of international business have changed in their composition; international investment has gradually taken the place of international trade. Dunning (1994) notes that in the past international exchange was driven by trade, today the international trade itself has been largely driven by FDI. From the 1960s onwards, FDI has been an integral part of the Golden Age of the global economic growth. FDI grew at twice the rate of GDP, and 40 percent faster than international trade over the past thirty years (Dicken, 2003). In academia, this phenomenon has been reflected in the rise of the theory of

international operations which was initially built on the framework of industrial organisation and international trade theory since the 1960s.

FDI is the manifestation of the firm's decision to expand across borders through international internalisation. FDI is a complex economic activity which can be analysed by various theoretical frameworks. For example, based on the theory of the firm and the theory of the growth of the firm, FDI can be regarded as an international growth strategy that a firm adopts in order to capitalise its competitive advantages beyond the national market, or to enhance its competitiveness in the international market. Under this particular framework, the firm and its efficiency are usually the units of analysis. If FDI is examined under the light of the theory of international economics, one could explain FDI in terms of the cross-border mobility of capital and, to a larger extent, the factors of production that include human capital and technology. Under a macro-economic framework, the national welfare or economic growth and the aggregate economy are the units of analysis. Furthermore, FDI in social studies can be examined under the theme of globalisation and its impact on cultural and social institutions. This line of study is abundant in the political economy discipline and other social science disciplines, such as media studies. As the scope and the nature of the research of this study are focused mainly on the economic impact of FDI and its political implication on development, a review of the following literature will be made exclusively around the core issue.

FDI was first depicted by the scholars as the flow of private capital across borders. Hosseini (2005) and Buckley and Casson (2009) say that the initial attempt to explain capital flow is carried out on the basis of modifications of classical trade theory. For example, Mundell (1957) and the neoclassical arbitrage theory of portfolio investment, proposed by Iverson (1936). Mundell (1957) takes the initiative to relax the assumption of factor immobility in the standard Hecksher-Ohlin model of international trade. He builds the model in which not only commodity movements, but also some degree of productive factor mobility, are allowed. He posits that the restriction on trade would result in encouraging the factor mobility across borders. The *quid pro quo,* foreign, direct investment, which a decade later has been studied by Bhagwati *et al*. (1987), Bhagwati, Dinopoulos and Wong (1992) and Blonigen and Figlio (1998), falls perfectly into this category. Although Mundell (1957) did

not explicitly explain foreign investment, with his intention to allow for factor mobility specifically capital, he implicitly offered an interpretation applicable for FDI. Mundell's model, however, could not capture all the complexity of foreign direct investment as he did not explain why one needs to invest aboard where the cost of not knowing the foreign environment well enough is high.

The portfolio investment theory, in which there is no distinction between physical and financial capitals, points out that investors look to invest where their capital generate the highest returns according to the interest rate. Thus, if the interest rate abroad is higher than that which is available at home, and if the capital mobility is allowed, it is predicted that investors would pour their capital abroad until the interest rate between the home countries and elsewhere converts to a similar rate. It appears that the portfolio investment theory, though taking into account the risk premium, fails to explain the motive of investors taking risks in managing productive activities in unknown foreign markets. Should they wish, they could have simply purchased and sold bonds and equity in the international capital markets.

2.3.2.1 Monopolistic Advantage and the Need to Control

The seminal work on the theoretical explanation of FDI is believed to be that of Hymer (1976). He sharply depicts the inadequacy of portfolio theory in explaining FDI and makes a fundamental distinction between two major types of private capital flows; FDI and portfolio investment (PI). Buckley (2006, p.141) summarises the following stylised facts pointed out by Hymer (1976) in support of his propositions.

1) There was little, or no, correlation between high interest rates and inflows of FDI.
2) There was an intra-industry FDI which refers to the event where countries A and B both conduct cross direct investment in the same industry within each other's country.
3) Most of the FDI was carried out by firms in a small number of countries notably by the United States. This suggests that the motivation of FDI should be other than the differential in the interest rates.
4) Based on the empirical observations made by Dunning (1958), Hymer (1976) notices that FDI mostly took place in highly concentrated industries.

From these empirical observations, Hymer (1976, p.1) claims that, firstly and implicitly, what differentiates FDI from PI is the **control** over the invested assets. He asserts that PI focuses mainly on financial capital and not physical capital. He advances that PI grants the ownership over the financial capital unlike FDI which allows the investors the power to control the use of the productive assets embodied in the invested firms. It can also be said that this control allows investors to act not only as a global producer but as a global transactor who holds the command over the global chain of added value activities.

Secondly, Hymer (1970, 1979) no longer regarded an economic agent who produces FDI as a simple investor but as an authoritatively organised unit, taking the form of a large firm. By this, he urged the readers to think how powerful this economic institution can be as it is endowed with, not only knowledge, technology and advantages that come with large size but also the organisational ability which would eventually be used to serve its ultimate objective, that is to maximise profits. In Hymer's perspective, control is the heart of FDI. To understand FDI is to understand the motivations of a firm to control its foreign means of production. Indeed, according to Hymer, a TNC's international operations are controlled by a national firm.

As indicated by Hymer (1976. p.23) there are two main circumstances under which the investors seek to control. One is to ensure the safety of international investment where there is an inherent conflict of interest between investors from different countries, and also between the investing firm and the host country. The more distrust arises, the more control that is needed. The distrust can also be regarded as the transaction cost as suggested in Buckley and Casson, (1976) and Williamson (1979). In this event, particularly where the level of distrust is high, an act of internalisation of the international market, FDI, becomes the substitute for PI. By implication, given an equal rate of return on investment and similar level of risk and uncertainty, investors would be indifferent between FDI and PI. The other refers to the situation in which the investors seek control over foreign firms because of the desire to remove competition between foreign enterprise and potential, domestic and international rivals that have not yet entered into the market at the time. Because of this, Hymer (1970) stressed that TNCs have an anti-competitive nature. Furthermore, the control in this event would ensure the optimisation of return on certain skills and abilities that are

uniquely endowed in the investing firms. This unique set of skill and abilities can be equated to the Penrosian impregnable base, discussed earlier. It is notable that it is the control stemmed from a desire to reduce competition that gives rise to a number of large TNCs. Thus, this study will elaborate the FDI generated from the second type of circumstance in more detail.

Hymer (1976, p.25) calls the second type of FDI an international operation. There are two conditions which give rise to this type of FDI. One condition is the existence of market imperfections such as horizontal or vertical monopoly or oligopoly. In this event, firms could only maximise their profits either by collusion with existing firms, or by the elimination of its competitors. By adopting either choice, a firm tends to enjoy a larger proportion of profit than it would be involved in an oligopolistic competition. Another condition is that the firm should have a superior competitive advantage over its competitors in a particular product. He calls this a monopolistic advantage, which could be a result of an access to the superior assets, particularly technology, a large size, and a pool of cheap capital. This point has been appreciated by the scholars such as Porter (1980) and Dunning (1981). Porter (1980) terms Hymer's monopolistic advantage as the competitive advantage and Dunning (1981) refers to it as the ownership-specific advantage. Indeed, a firm would engage in FDI when it perceives that its ownership-specific advantages, be they, technology, managerial and organisational capability, or entrepreneurship, are greater than those owned by their competitors or potential competitors.

Also, Hymer (1976) sees that there is a cost involved in making FDI. He establishes the assumption that has been widely accepted by the theorists in the international business study. It says that, *ceteris paribus,* enterprises operating in a country tend to be national firms. In other words, all other things being equal, a foreign firm is at a disadvantage compared to their domestic counterparts. This could be due to the discrimination arising from the government, the consumers and the suppliers in the host countries. Among these, discrimination from the host government could be the most severe threat as in the extreme case this could mean the expropriation of the foreign assets. Practically, the discrimination from the government is normally removed by the use of international agreements, such as a bilateral free trade agreement and a bilateral treaty of amity. The discrimination from

consumers and suppliers can be addressed by the firm's public relation strategy. Other difficulties could arise from inefficient communication, the lack of local knowledge, particularly in the area of legislations, culture and politics. These would impede a firm from establishing a proper network and efficient business strategies. The cost of acquiring this information could be very high but Hymer (1976, p.34) notes that this cost is fixed. Once it is paid out to acquire local information and to merge with locals, such cost will not recur. This could possibly encourage firms to grow further in foreign lands as this type of cost structure would give them an increasing return on investment.

By implication, it is seen that when these two conditions interact, they could determine the mode of institutional entry to a foreign market. For example, assuming that the firm has a competitive advantage over its competitors in foreign market, the degree of market imperfection would determine the mode of entry. While the high degree of market imperfection would induce a firm to internalise such imperfections, that is, to conduct FDI, the low degree of market imperfection would allow a firm to go for an arm's length method such as licensing, or selling out its superior skill. As pointed out by Hymer (1976), based on the experience of American TNCs, in some circumstances, firms are not motivated but rather pushed to conduct FDI. Otherwise, it would risk facing the oligopolistic competition in its home market if its foreign competitors decided to make the first move. Furthermore, given that there is no threat from foreign competitors, Hymer (1976) notices that American firms could find themselves facing more fierce competition at home than abroad, because in the United States, there are a large number of competent entrepreneurs who possess equal access to general factors of production such as skilled personnel and capital. However, in a foreign country where competent entrepreneurs, skilled labour and capital are scarce, the American firms, even bearing the disadvantage of being foreign, could find themselves in the powerful market position and make a handsome profit thanks to their superior bundle of human and non-human resources, as well as better managerial and technological skills.

Apart from these two conditions motivating firms to get involved in FDI, there is also an additional, minor motivation. That is diversification. Hymer (1976) sees this as a minor reason because diversification does not necessarily suggest a control over an asset. He explains that profit in one industry could inversely correlate with the profit in another. He

gives an example of an aluminium plant and electricity plant which, within the context that is being discussed, is justifiable. However, this would rather be seen as a case of vertical integration. In fact, if the two products are direct substitutes for one another, this would convey a much clearer picture such as the example of petroleum and natural gas. In his later writing, Hymer (1979, p.60) advances this point. He claims that Engel's Law of consumption and the concept of life-cycle could also be used to explain the reason to diversify in order to maintain a firm's growth rate. Engel's Law of consumption states that people do not generally consume proportionately more of the same things as they get richer, but rather reallocate their consumption away from old goods towards new goods. This would create the non-proportional growth of demand implying that each product tends to go through a life-cycle. This latter concept means that when the product is newly introduced into the market the sale grows rapidly, provided that it is successful. This rate of growth tends to stabilise and halt eventually when the market is saturated. Thus, any firm that ties to a single product would cease to grow and become extinct if it does not diversify. In addition to this, introducing a product that is matured in the home country but is new to the host country could extend the life cycle of such product for a firm. This, in turn, would also result in an increasing return.

Penrose (1995) shares a similar, but not identical view. She sees that diversification is indeed a natural outcome of the growth process. Pitelis (2000) mentioned that what remains unclear in Hymer (1979 and Penrose (1995) is why such diversification needs to be done across borders. Furthermore, as pointed out by Buckley (2006) FDI is a poor way of diversification. It would rather be a case for an international integration. Pitelis (2000), suggests that if one wants to use diversification as a reason for FDI, it might need to be used in conjuncture with the concept of the aggregate demand deficiency and the business cycle-related considerations as the possible explanations.

To sum up on Hymer's theoretical explanation of FDI, he assumes in the first place that national cooperation does hold superior competitive advantages over its competitors and in most cases, any firm that enjoys such a position is a large corporation equipped with sophisticated organisational abilities that would allow large scale management. This corporation then sees an opportunity to capitalise its superior skills in a foreign market

where there are imperfections which give rise to opportunities to make profit. By internalising foreign markets transaction, that is, to exploit its advanced technological capability abroad, the firm grows larger and is strengthened by its newly acquired market position which, in most cases, refers to an oligopolistic or monopolistic position. Through this process, the efficiency gains are significantly accumulated at firm-level. In the bigger picture, any nation that has this type of firm can accelerate its rate of large-scale capital accumulation.

2.3.2.2 Product Life Cycle

Motivated by the lack of unified analytical tools for international trade and investment, Vernon (1966) proposed the Product Life Cycle (PLC) theory in which he explains the rationale for an outward FDI from the United States. His concept, when generalised, can be used to explain the pattern of international trade and investment based on the technological gap between the advanced economies (the North) and the developing countries (the South). The PLC theory is a successful concept despite some minor challenges. For example, Dunning (1990) notes that Vernon (1966) has not incorporated enough of the organisational structure of the firm in the PLC analysis. Remarkably, the PLC concept shares similar arguments with the Japanese 'flying geese' economic model, initially proposed by Akamatsu (1962) and later developed in Kojima (1975, 1977, and 2000). The main difference between these two models may be that while the PLC appears to be a purely economic concept, the flying geese implies the political message in which Japan is placed as the centre of the region.

Vernon (1966, pp.190-191) distinguishes the PLC from the international trade theory in that his theory takes into account the timing of the innovation, the effects of scale economies, the roles of uncertainties, and the theory of location rather than a simple comparative cost analysis governed by the differential of resource endowments in different nations. Indeed, Vernon (1966) was the first scholar to introduce the theory of location into the analysis of TNCs. That is, he stressed the interplay between a country's specific factor and the monopolistic or ownership-specific advantage that a firm accumulates. He did not, however, emphasise national boundaries in his theory (Gross and Behrman, 1992, p.114) as Hymer

(1976) did. Despite this, the PLC is still considered as a synthesis and generalised framework due to its explanatory power in many disciplines.

Before proceeding further, it is essential to state the key assumptions on which the general predictions of the PLC are made. Firstly, it is assumed that knowledge is not a universally free product. This assumption is different from those of elementary neo-classical theory which assumes knowledge is a public good. Secondly, at firm-level, it is assumed that knowledge is an inseparable part of the decision-making process and that the relative ease of access to knowledge, in order to make innovation, tends to facilitate the success of the firm. Clearly, Vernon suggests that the drive for innovation is the key to the success of the firm. This, in turn, grants the firm some types of monopolistic position in the market. Even though Vernon (1966) does not quote or cite the seminal book by Penrose (1995), his insight into the process of the growth of the firm can be said to be in line with her thinking. Thirdly, it is assumed that wages are low in the less developed countries and high in the more developed countries. Lastly, he assumes that the choice of location for production is based on least-cost considerations.

Stating from his observation that new products constantly appear in the market and that their features at the initial stage are different from those at an established stage, Vernon claims that a product has a life cycle which can be classified into an introduction, a maturity, a standardisation, and a decline. In his article, the introduction takes place where the product is freshly introduced into the market. A new product is likely to be conceived in the market where an entrepreneur is operating. This entrepreneur (or manager) depicts an unfilled need in the market. Then, as long as the possibilities of some kind of monopolistic returns are justified, an investment takes place. Hence, it can be said that to some extent, the feature of the new product is influenced by the home country. For example, Vernon says that a product developed in the US tends to be labour-minimising product due to the high income *per capita* and relatively higher labour cost. He suggests that products from Germany tend to be made of plastic because of the country's traditional concern with the lack of resources. Later on, Vernon (1979) notices that the products developed in Japan are space-saving. According to Vernon (1966), the first production facilities of a product should be close to the targeted consumers for two reasons. One is the efficiency of communication in the case where the

firm needs a prompt feed back from its first users. And, since the innovation takes place where the consumers are, the close proximity between the product development team and the targeted consumer helps reduce the cost of product development.

The maturity phrase refers to the period when the demand for the product increases and then starts to level off. It is also suggested that the features of the product and the production technology at this stage are well developed. Given such stage of specialisation, it does not mean that there is no possibility for further differentiation. However, the differentiation is considered as an incremental change in the state of the technology. It is also at this stage when a producer of the product enjoys a rise not only in domestic demand but also foreign demand. This is met by means of export from the producing country. During this stage, Vernon notes that there are two reasons encouraging a producer to consider establishing production facilities abroad. Firstly, as the product becomes mature, it is likely that the nature of the competition will be based more on price. In addition, as the production technology is standardised, it can be transferred with a significant degree of ease to another location where the factor costs are minimised. Secondly, it may be possible that the demand for a product in foreign market increases to the point where export may no longer be the financially most suitable means to serve the foreign market. Moreover, in this event, the producer could well reap the benefit of the economies of scale. In cases where a firm decides to conduct FDI, that is establishing a foreign production in the form of wholly owned subsidiary, the nature of oligopolistic competition at home market would trigger its competitors to follow suit, fearing the loss of their global market share or missing the advantage of cost minimisation. According to the original PLC model, FDI mostly goes to countries whose income *per capita* is relatively similar to that of the home market.

The standardised stage could well refer to the stage when a product can be produced cheaply and considered as a commodity. This stage, according to Vernon, is when the less developed countries may offer competitive advantage as a location for production. As the name suggests, the production of a product in this stage is fully standardised and the low wage cost plays an important part in minimising the final cost. Moreover, not all products produced in the less developed countries are deemed to be exported back to the home countries as some could serve the domestic markets. This is because, with the help of the

marketing strategies, the less developed countries tend to follow the consumption pattern of their advanced counterparts due to the demonstration effect. All of these reasons make the establishment of production facilities in the less developed countries lucrative. It is also important to note that standardisation lifts up the production possibilities. Hence, the capacity of the plants in host developing countries run by TNCs could well serve the global market, including both home and host countries. In this event, firms enjoy the economies of scale. Therefore, even though the home country is first served by the local production and exports its product abroad, its domestic demand could eventually be met with an import instead. In his seminal article, Vernon also reminds us that not all types of production would fall into the hypothetical path of the PLC theory for instance, the assembly of aeroplanes, and research-oriented production.

It is true that Vernon has proposed his PLC theory based on the observations of the American firms. Today, the main sources of outward FDI are countries mainly in the Triad; the US, Europe and Japan, and some from the Newly Industrialised Countries (NICs). However, an insight derived from the PLC theory on the behaviours of the TNCs, nevertheless, remains tenable and analytically useful (Rugman, 1999, p.56). In later works, Vernon (1979) and Cantwell (1995) posit that the power of the hypotheses suggested by the PLC theory has changed due to the evolution of an international environment. Vernon (1979) articulates the hypotheses that purport to explain international trade and investment explicitly. The first hypothesis, influenced by Hymer's (1976) idea, postulates that firms set up their foreign production facilities because they believe they possess some real or imagined monopolistic advantage that gives them superior competitiveness compared to their rivals. This monopolistic advantage, he argues, lies in the lead in innovation. The second hypothesis is that innovations are almost always developed in the home market, which is an advanced nation. This leads to the third hypothesis which points out that the international dispersion of activity is led by technology leaders. Then, it follows by the fourth hypothesis stating that the productive activity is firstly dissipated to the country whose market environment is found to be similar to the home market and later on to the more geographically diverse regions such as developing countries.

The first hypothesis is well accepted among the prominent scholars in the field of international business. Even though each has a different point of view on the importance of the monopolistic power as the driver for conducting FDI, all accept that it is traditionally a necessary condition. Cantwell (1995) has empirically tested the second and the third hypotheses and found that the evidence rejects the former and that the latter is only historically valid. The fourth hypothesis, as suggested by Vernon (1979), is ambiguous when testing with empirical observations as it depends on the nature of the product in which TNCs specialise and the organisational structure of TNCs. Seminal articles by Vernon (1966, 1979) did provide an insight into the dynamics of international trade and investment driven by the actions of TNCs. Vernon (1979) also offer some details about several hypothetical types of TNCs.

Vernon (1979) classifies the TNCs into three ideal types based on the nature of the products and the organisational structure of the firm. The first ideal type is the TNC with a high innovating capacity and the ability to capture the global opportunities. This type of TNCs is called the global scanner. Vernon explains that low or virtually zero cost of communication across the globe would give rise to this type of TNC. In this case, risk and uncertainty are very much reduced as information is more accessible, thus, the global scanner tends to react equally to the opportunities arising from all the markets where they have their bases as long as the prospect of a return is justified by cost analysis and the advantage of economies of scale is achievable. It is noted that the first production facilities no longer needs to be established in the market where the innovation is conceived since, the product can be produced, for the first time, in a set of the locations where the cost of production is minimised.

Once the innovation is developed and produced, thanks to the TNC's network, it can serve any market in which it is aware that a demand exists. The global scanner is in a very powerful and advantageous position compared to the firm whose operation is limited to the national market, especially the national firms established down the ladder of the world income pecking order. The disadvantage could occur to the firms whose ability is inferior to the global scanners and have to compete in the same market with them. Since the profit made by firms will be used to improve the firms' competitiveness, it follows that when

facing the competition with this type of TNCs, the inferior national firms in the relatively low income countries tend to enter a vicious cycle.

Vernon (1979, p.262) postulates that the PLC theory explains to a limited extent the behaviour of the first ideal type of TNCs. In the late 1980s, when the revolution of information technology had just taken off, Vernon sees that the global scanners do not exist. However, at present where information technology has been fully established, communication across the world can be virtually cost free and thus most of the current powerful TNCs could well share some aspects of the global scanner. In effect, Buckley and Casson (2009, p.1573) note that in the 1980s, some TNCs have successfully expanded globally. This means that they not only serve several overseas markets but also penetrate into all markets where foreign investments are permitted by their governments.

The second ideal type refers to the TNCs which develop and produce a line of standardised products, thinking that the demand for their products is homogenous in nature, for example, oil, pharmaceutical, computers and automobiles. In reality, firms may strategically choose to organise their production in this way due to the cheaper cost of production and/or the inefficiency of communication from a far distance, given that the cost of communication is high. There are two distinctive benefits from standardising a firm's products. One is that there is no cost involving in the adaptation to particular preferences of consumers in different markets. Another is that it allows for economies of scale to be achieved more easily.

Despite these advantages, the innovation made by the second ideal type of TNCs is somehow at more risk compared to the one made by the first type. This could be due to negligence in some specific local preference. However, it is in relation to this type of TNCs that Vernon finds his PLC theory to be most relevant. That is, an initiative to innovate is expected to take place in the home market or at the headquarters such that the face-to-face consultation among engineers, scientists, managers and a group of explorative consumers can be easily carried out. In this respect, it is additionally reasonable to expect that this type of TNCs would behave according to the behaviour predicted by the PLC theory.

Once the innovation is standardised, its production can move to a set of locations where the cost of production is minimised. It is noted, however, that the organisational structure in this type of TNCs needs not only cope with the scattered production processes but also serve the centralised decision making process. Vernon reminds us that there is no reason not to expect the global scanners to adopt the strategy implemented by the second ideal type.

The third type of TNCs refers to the firms whose headquarters have no interest in the nature of the demand in the foreign market at all. Thus, an innovation would take place solely in the home market. To another extreme, it is also possible that an innovation for the home market needs to be decided only by the subsidiaries themselves. Vernon explains that in the first case, firms may face difficulties in designing the organisational structure that efficiently gives the feedback from the subsidiaries. In the second case, firms might find the cost of centralised policies in production to be greater than the expected benefits. The hypothesised behaviour of firms in the PLC theory may remain relevant given the pattern of production of the third type of TNCs. Nevertheless, the phase when the home market serves foreign demand by means of export could be shortened and the monopolistic advantage of the firm could be weakened, by an increase in the number of international rivals.

By implication, it can be deduced that TNCs may not need to follow an identical production strategy but that their common goals are pretty much the same. These goals would include the pursuit of powerful market position, the search for the least-cost production, the economies of scale and the longest possible life for their products. Most importantly, Vernon (1966, 1979) suggested that TNCs are responsible in transferring technology across countries. The particular emphasis is given to the direction from the advanced to the developing countries. Thus, the PLC offers the theoretical pattern of global technological transfer which is studied and further developed heavily in the endogenous growth theories particularly the models that explain the North-South international technology spillovers. Among this line of study, the pioneers are Krugman (1979), Rivera-Batiz and Romer (1991), Grossman and Helpman (1991, 1995), Aghion and Howitt (1992) and Glass and Saggi (2002). However, it is important to point out here that the channel in which technology is transmitted to the developing countries is not limited to only FDI but also licensing,

subcontracting and other sorts of arm's length arrangements (Antras, 2005, p.1054) and the efficiency of each mode is different depending on the socio-institutional structure.

2.3.2.3 Internalisation and the Theory of Location

While Hymer (1976) used the concept of control, market imperfections and monopolistic advantage and Vernon (1966) used the idea of product life cycle and the theory of location to explain the emergence of TNCs and their FDI, Buckley and Casson, (1976, 1991, 1998 and 2009), Hennart (1982, 1991 and 1999), Rugman (1981, 1985, and 1996) adopted the concept based on Coase's (1937) idea of internalisation to explain the existence of TNCs and the rationale for FDI.

Among the above authors, Buckley and Casson (1976) are the prominent pioneers. They use this concept of internalisation in conjecture with the theory of location and the endogenous growth of the firm that is based on innovations. The former refers to the orthodox theory of location which has also been assumed in the PLC theory. More specifically, the theory of location assumes (i) constant returns to scale, (ii) free and standardised technology and (iii) firms being price takers in the market.

The latter has already been discussed in section 2.2 and has been found in Vernon's PLC. This concept asserts that the firm's profitability and the dynamics of its growth are the results of the continuous process of innovations stemming from R&D. The second concept could be viewed as being in line with the endogenous growth strategies advocated by Penrose (1995). It also shares the spirit of Schumpeterian creative destruction. Based on these two principles, the internalisation framework can explain the location and growth strategies, the division of a given market between domestic producers and local subsidiaries of TNC, the export from the subsidiaries to a parent firm, and also the import from the parent firm. Moreover, it is closely related to the concept of a capitalist knowledge-based economy that characterises the global economic system from the post war period.

In their classic book, Buckley and Casson (1976) distinguish between two types of internalisation in the context of international business. One involves the intermediate products flowing in the multi-stages of production that are an upward and a downward integration. This is alternatively called a globally vertical integration which contributed to an

increase in a globally economic interdependence. Vernon (1967) anticipated this trend long before and asserted that this type of internalisation would make different nations more interlocked by supply lines which implement a common strategy of production, market, and control. The other is the internalisation of knowledge generating from the firm's research and development. The latter can be thought of as Hymer's explanation that firms choose to internalise to maximise the potential profits. Henisz (2003) explains the rationale of these two types of internalisation as follows. In the former case, an internalisation is deployed as a way to coordinate and plan down-stream markets. In the latter case, internalisation takes place to address the missing market, a type of market failure, or to cope with the oligopolistic nature of the high-technological market.

Both types of internalisation have a significant explanatory power over the expansion of the international boundary of the firms. Hymer (1976) and Vernon (1966), suggest that the monopolistic or the firm-specific advantage is a prerequisite of FDI while Buckley and Casson (1976) suggests that the internalisation of the firms' managerial and technological capabilities in foreign market could grant firms with a substantial economic rent, that is the monopolistic return, *ex post*, as a result of the combination of locational and the firm-specific advantages (Rugman, 1981, Henisz, 2003). For example, firms that are successful in their R&D investment can choose to capitalise on their patented innovation that offers them monopolistic returns and go for international internalisation. This can be either in the form of a vertical integration, to reduce production costs, or a horizontal expansion to foreign markets via FDI. By so doing, firms expand and may gain a favourable position in the market, both at national and international level. This, in turn, reinforces the firm's specific advantages.

It is important to note that internalisation in this context implies the expansion of managerial control over the foreign assets, as opposed to selling the knowledge, or the right to produce, to an independent foreign firm. The internalisation is adopted in order to minimise some potential opportunistic behaviours such as imitating, improving the technology, out-competing the initial seller, and reselling the knowledge to a third party. In brief, even an international internalisation may imply to some extent, the transfer of resources such as, financial capital, managerial and organisational capabilities and technology from parent

firms to their subsidiaries. The objective of an internalisation, in this context, is to retain the unrivalled income generating asset within the firm or the firm's network.

Insofar as it can be seen, the arguments, made by Hymer (1976), Vernon (1966, 1979) Buckley and Casson (1976, 1981, 1985, 2009), suggest that there are impurities in the market and the differential in firm-specific advantage that encourage firms to internalise and conduct FDI. It is argued that the monopolistic advantage and the internalisation are closely related subjects. Therefore, it can be seen that the framework developed by Buckley and Casson, can be used as a complementary concept to those of Hymer (1976) and Vernon (1966), since they not only share many overlapping ideas but their different concepts appears to be complementary.

2.3.2.4 The Eclectic Theory

An eclectic theory is an integrative framework, used to study the international production and the behaviour of TNCs. It has been formally proposed by Dunning (1977) and iterated many times. See Dunning (1981, 1988, 1995, 2000 and 2001). Dunning is a prominent scholar in international business studies. He is as distinctive as Hymer and Vernon. Most of his works go beyond the mainstream economic tradition to cover the political and historical aspects of TNCs. Dunning has constructed a framework, called an OLI paradigm that explicitly explains the working of TNCs at micro-economic level and shows how it could affect and be affected by the development of the economy at the macro-economic level. His work on this aspect will be reviewed in Chapter 4.

An OLI paradigm explains the positions and operations of TNCs on the basis of three interdependent variables namely, ownership-specific advantage (O), locational attractions (L), and internalisation (I). In some literature, an OLI paradigm is known as the eclectic theory (Dunning, 2000). Pitelis (2000) explains that the OLI paradigm is basically made of three main concepts that earlier scholars adopted to explain the *raison d'être* of TNCs and FDI. These would include the monopolistic advantage by Hymer (1976), the concept of internalisation by Buckley and Casson (1976) and the theory of locations by Vernon (1966) and Buckley and Casson, (1976). However, Rugman, (1999) and Dunning (2000) noted that the idea of the ownership and the location advantages had already been conceived earlier in

Dunning (1958). At the time, his focus was on the impact of American investment on British industries. Hence, these concepts were not spelled out explicitly. There is an evolution of Dunning's thought about his eclectic theory. This study will explain this theory based heavily on his more recent works (Dunning, 2000 and 2001), on the OLI paradigm.

There are three set of forces embraced in the OLI paradigm. Firstly, the net ownership advantage, also known as monopolistic, firm-specific, competitive advantage. This force may arise from various factors, such as, the firm's human and non-human resources, the managerial capability to depict an opportunity and react to it accordingly, the way the firms use their resources, the size, the privileged access to special assets such as low cost capital, exclusive natural resources, and highly able human capital. The above force is mobile and empowers firms that possess them to have current and potential advantages over their competitors. Secondly, the locational advantage refers to the immobile resources which are geographically specific to a country, such as, labour cost, nature of demand, tariff barriers, the presence of competitors, and non-tradable products. This force determines the extent to which firms choose to locate their multi-stage production stages outside their national boundaries. Also, from Vernon (1966 and 1979), it is seen that the locational specific advantage may help shape the firm's specific advantage as well. Lastly, the internalisation refers to the extent to which firms attempt to maximise their potential profits by internalising the market transactions and exploiting the firm-specific advantage. Internalisation helps significantly to explain the mode of entry of a firm to a foreign market, that is, FDI over other modes of entry.

Dunning (2001) affirms that the significance of each of these advantages and their configuration depends on the context of countries in questions, the political features, regions, industries and the market structure. The paradigm itself is more useful for analyzing the determinations of FDI than for predicting the behaviour of TNCs. Being criticised as having too many variables in a theory, Dunning (2001, p.176) defends by stating that no single theory nor concept can give a satisfactory explanation of TNCs and FDI. This is not only because FDI has multi-aspects and can be approached by various frameworks, but also because FDI involves so many parties, such as, the firm, the state, labour, consumer and suppliers. Each is driven by different motivations and expectations. Thus, he urges that to

appreciate fully this framework, the context in which the OLI forces are operating must be clearly specified. He concludes that these three concepts are complimentary and interdependent. Even though they cannot give a full explanation of FDI, they can, at least, deliver a satisfactory one.

While Vernon uses his PLC theory and observation of American firms, Dunning provides the ideal types of FDI from his eclectic paradigm and the observation of the pattern of FDI in the past. According to Dunning (2000), there are four main types of FDI. Firstly, it is a market seeking FDI. This type of international operation is designed to satisfy a particular market in which firms perceive to have a competitive advantage over their rivals. Clearly, this type of FDI is demand-oriented. Secondly, it is the resource-seeking FDI. It can be said that this type of FDI is the most traditional one and can be traced back to the Mercantile era. It is designed to gain access to natural resources for instance, cheap unskilled labour, minerals, forestry and agricultural products. It is worth mentioning that the first and second types of FDI are the traditional ones. The third type of FDI refers to a rationalised or efficiency-seeking FDI. This type of FDI is designed to promote a more efficient use of an international division of labour or a specialisation of the deployment of an existing portfolio of foreign and domestic productive assets. This type of FDI is related to the first and second kinds and sequential to them. It is also the case supporting the concept of internalisation. The fourth type of FDI is one of strategic-asset seeking. This type of FDI is designed to protect or increase the existing firm's ownership-specific advantage by, for example, to acquire complementary assets which would improve the firm's market position. In effect, a direct investment project can have more than one kind of these categories. As Dunning keeps mentioning, one needs to look at the context of the case in question.

2.4 Definitions of Foreign Direct Investment (FDI)

The previous section has discussed the evolution of the literature explaining TNCs and the rationale for FDI. It is important to note that, when FDI is analysed in the context of economic growth, the nature of the TNCs as well as their rationale tends to be understated. More specifically, macroeconomists tend to see FDI as a bundle of plain factors of production rather than the action of an economic institution which is driven by a group of individuals. The next chapter will show that underplaying these aspects could produce a

misleading result when assessing the impact of FDI on the economic growth in host developing countries.

This section will provide the definition of FDI from both the accounting perspectives and macroeconomic perspectives. It is noted that while the former reflect FDI more in line with the microeconomic analysis, the latter does not. It will also point out a few key aspects of FDI that are explicit under microeconomic analysis but tend to be understated under macroeconomic analysis.

According to the concept of direct investment defined in the user manual for the 5th edition of Balance of Payments, published by the International Monetary Fund (IMF), FDI is a type of international investment that reflects the objective of a resident entity in one economy obtaining a lasting interest in an enterprise resident in another economy. It also notes that a direct investment relationship, not only generates the first capital outlay, it also generates the subsequent transactions between the investing and invested firms. A direct investment enterprise must have its ordinary shares or voting power held by foreign investors, be they an individual or an investing corporate, at more than ten percent. Indeed, these voting shares reflect the control element advocated by Hymer (1976). With regards to the concept of control, Hymer (1976) asserts that it is not easy to define, particularly when one wants to distinguish between 'some' control and 'no' control.

For this reason, it is worth clarifying the quantitative definition of control which draws a line between FDI and PI. Normally, to identify whether or not an investor, or a firm, has an interest to control over the foreign firm, empirical researchers resort to the legal aspect of an investment. They look at the percentage of equity of a corporation held by foreign investors. It will tell roughly how much management in one firm could influence and control the decision of another. The criteria can be varied but this study adopts the one advised by the International Monetary Fund (IMF). The threshold where PI and FDI are distinguished is 10 percent. Thus, foreign controlled enterprises can take the form of subsidiaries, branches (100% foreign equity or majority foreign owned firm), joint-ventures (foreign equity 50% and domestic equity 50%), and partly foreign owned firm (foreign equity of less than 50% but greater than 10%).

The focus now turns to the purest sense from macroeconomic perspectives. FDI is viewed as a flow of long term capital. It involves two countries. The home country refers to the country where the investors of FDI reside. Outward FDI refers to the outflow of capital from the home country. The host country refers to the destination of the FDI. Inward FDI refers to the incoming flow of capital in the host country. In a broader sense, FDI does not only represent the flow of capital, attached to these capitals, there are marketing strategies, technology, and managerial knowledge (Borensztein, *et al*., 1998; De Mello, 1999; Ramirez, 2000; Saggi, 2002 and Kohpaiboon, 2006).

It must, however, be noted that FDI is not necessarily equal to the demand for financial capital to finance the foreign project because a foreign investment can always be financed from the saving pool of the host country. Zhan (2006) observes that a significant portion of FDI does not always involve cross-border capital flow. This is because, according to UNCTAD (2006b), FDI statistics are complied from three main components, namely, equity capital, reinvested earnings, and intra company loans. The first component constitutes voting shares of an investing firm in invested companies as described earlier. However, it is noted that equity can also be provided in the form of machinery and other investments in kind. The second component refers to an investment using a firm's domestic profit, generated from past investment. This component does not involve fresh, new, foreign capital at all. The last component points to the financial transactions between a parent company and its affiliates. Again, it is also possible that an intra-company funding can be raised domestically. Taking all theses points into account, FDI statistics does not fully represent additional capital to the home countries. Rather, they reflect foreign operations in their economies.

On the aspect of technological transfer, the review of the theory of TNCs points out that, *ceteris paribus*, TNCs tends to limit the technological spillovers and it is also one of the main reasons why a foreign firm decide to enter to a national market with FDI and not licensing or export as a mode of entry. In fairness, Technological spillovers would then be more appropriated to be viewed as a residual or an intended outcome from the decision of a foreign firm to internalise an international market transaction. Hence, to assume straight away that FDI is accompanied by knowledge and technological spillovers may be too naïve

and could cause the misleading analysis when FDI is analysed in the macroeconomic context.

2.5 Summary

The literature review in this chapter adopts a microeconomic approach to comprehend the nature of TNCs and present the rationale for their FDI. This is done by reviewing the theory of TNCs. The literature shows that firms exist in the first place because of market imperfections. As long as firms are more efficient than the market in carrying out a given transaction, they will continue to internalise. As long as the firms internalise, they not only secure their survival but are also able to grow. The theory points out that technological, managerial and organisational skills embodied in both human and non-human assets of firms, are sources of the capabilities of firms to conduct further internalisation. When firms decide to internalise transactions across national borders, the firms become TNCs.

The capability to achieve further growth is known as ownership-specific advantages. In many cases, firms internalise in order to exploit and protect their ownership-specific advantages. It is also possible that the act of internalisation could reinforce the firms' ownership advantages by increasing the firms' market shares and preventing the firm's competitors from expanding or even halting an entry by their potential competitors. All of these would provide the firms with increasing returns. This could be translated into a large scale of capital accumulation. Equally important, it is seen that ownership-specific advantages, internalisation and their interplay, affect and are affected by the market environments, known as locational specific advantages. Once the internalisation takes place beyond national market, these three factors can be used to comprehend fully the emergence of TNCs and the rationale for their FDI.

In summary, the literature shows that TNCs are large firms that are strongly efficient. Indeed, they have to be more efficient than the market in their area of specialisation otherwise they would have not existed in the first place. From this, it can be said that TNCs, as well as their operations, need to be studied and approached in an oligopolistic framework where market failure prevails. Also, under these circumstances, the Adam Smith's invisible hand may face some kind of constraint to deliver the collective welfare of the market economy as, at least,

several assumptions of perfect competition do no longer hold, for instance, monopoly or oligopoly, and imperfect information. This suggests the role of the state in interfering in the market to ensure that TNCs will not abuse their superior power. By the same token, the great efficiency, stored in a firm, and derived by an efficient organisation and control, is important to the economy as an economic institution, shows how important role it takes as a wealth generating institution.

The last section shows that when foreign operations of TNCs are perceived as FDI, the rationale of TNCs and their rent-seeking motivation have been underplayed. Their financial capital and advance technology tends to be over-emphasised. This may have a significant implication on the analysis of the impact of FDI on economic development. In the following chapter, this study will review the literature that considers FDI with a macroeconomic approach. It is a conventional discipline adopted to analyse the impact of FDI on economic growth in the developing countries. It will be seen that the nature and rationale of TNCs presented in this chapter are the missing pieces in the analysis of an impact of FDI on economic growth at the macroeconomic level. Taking these missing pieces into account could help to explain partly the discrepancy between the theoretical predictions of the positive impact of FDI on growth in host developing countries and the empirical observations.

Chapter 3: Literature Review

Part 2: The Impact of Foreign Direct Investment on Development and Political Economy of Transnational Corporations

3.1 Introduction

This chapter presents how Foreign Direct Investment (FDI), in theory, affects economic growth and development in host countries, particularly the developing ones. FDI will be approached from macro-economic perspectives. The study initially presents the literature review from the growth economics discipline, whose theories and methods are now commonly used in the analysis of impact of FDI. At the theoretical level, growth economics tends to suggest that FDI is beneficial to host countries. However, the evidence in support of this claim is inconclusive and conditional. The evidence suggests that the impact varies in relation to the specificity of the host market and provides some key conditions where the positive spillovers prevail. As the market is a socially and politically constructed entity, the study then considers the role of the state and discusses how its intervention in the market could make a difference to economic development.

The discussion then moves to FDI-related policies and their evolution over the past fifty years. Focus is made on the recent FDI policies that most developing countries are advised to implement and that are influenced by the neo-liberal ideology. The study then shows that

neo-liberal FDI-related polices have re-directed the role of the host state in intervening in the market in such a way that might impede the host country from benefiting from inward FDI. It should also be noted that, in many cases, the adoption of such policies is driven by politics both at national and international level. Due to the political involvement in development and the institutional environment that the neo-liberal development policies, particularly in relation to an inward FDI, tend to create in developing countries, the study suggests that perhaps, a complementary, theoretical approach towards FDI may be found in the dependency theory.

This is because dependency theory explicitly embraces political aspects of development in relation to FDI, and takes into account the monopolistic power of TNCs into their analyses. Moreover, it is observed that the state in the host countries tends to be passive and that domestic entrepreneurs appear to be weak in the context that dependency theory portrays. As a result, dependency theory tends to suggest a negative impact of FDI in host countries. The objective of the literature review in this chapter, however, does not lie in taking the position of any argument but to highlight the institutional context, economic aspects, and assumptions that are specific to each argument. It will then point out that the neo-liberal policies tend to create the institutional configurations which are similar to what the dependency theory depicts. Hence, the positive impact of FDI on economic development under neo-liberal policy environment remains much in doubt if not negative as asserted by the theory.

This chapter is organised as follows. Section 3.2 presents the conventional perspective towards FDI and economic growth. This section gives a review of theoretical works and portrays the channel through which FDI conveys benefits to the host country's economic growth. The study will then give a review of the empirical evidence and its implications on the role of the state and policies. Section 3.3 introduces the critical perspective towards FDI, dependency theory. More specifically, the study will focus on capital dependency theory which is an extraction of dependency theory. Capital dependency theory focuses mainly on the role of FDI and economic development in the host countries. In this section, the study will outline counter-arguments of the benefits of FDI which were discussed in the previous section. A summary for the chapter is found in section 3.4

3.2 Economic Growth and Development

Economic growth and development literature will be used as the context for the analysis of FDI. Economic growth and development can be thought of as a single subject or two related subjects, depending on the theoretical point of view. More specifically, growth economics represents the mainstream view on how growth is produced. The other schools of economics such as institutional and Marxist economics do draw lines between the two. This study will discuss briefly the conceptual difference between growth and development in order to justify the position taken in this thesis.

Mainstream economics, confined to its analytical techniques, captures growth with static and tractable analysis. Thus, economic growth is measured mainly by quantitative variables such as firm's output or sales at the micro-level and Gross National Income (GNI) or Gross Domestic Product (GDP) at the macro-level. In contrast, institutional and Marxist economics see economic development as a flux, a continuous process, and an evolution. Moreover, the definition of economic development appears to cover greater aspects than a simple growth of inputs. It also includes humanistic dimensions such as an access to education and healthcare, the degree of social mobility and equality. In addition to this, recently, Chang (2010) encourages to bring back the production side of development which refers to the ability to command the sphere of productive forces. Indeed, this productive capability can be regarded as a sum of national firms' specific advantages. It is also the focused characteristic of growth which perpetually pushes economic development to the ever higher stage. It will be argued further that an increased of this capability can largely be reflected by an increased in GNI.

In this study, the distinction between growth and development, even though being insightful, is not given a central emphasis. This is because, firstly, it is always observed that a country with a low level of GNI or GDP has never been regarded as developed country and that these indexes *per capita* have never misrepresented the country's level of development (Krugman, 1995, pp.719-720). Secondly, the creation of social institutions and other qualitative aspects of development require financial resources or wealth. Without the sustainable growth rate of national wealth, measurable by the GNI or GDP, a government could face financial constraints in carrying out these developmental projects. Thirdly, this

study adopts its empirical framework from the neo-classical growth economics. Therefore, to reserve the compatibility with the methods being used, the measurement of growth and development needs to be quantitative in nature. Lastly, even though the measurement of development and growth in this study is reduced to only a single index, the GNI, the qualitative aspects of development, particularly the production side of development, will not be ignored as they will be discussed in the descriptive analysis.

3.2.1 Growth Economics

This section presents the theoretical explanation of how growth is produced from the mainstream perspective. Once the theoretical growth mechanism is adequately depicted, the study will introduce FDI into the context in order to show how FDI can potentially be beneficial to growth and development. Growth economics is a branch of economics where the investigation into the source of economic prosperity is the key interest. It can be dated back to the time of classical economics in which Adam Smith (1776), David Ricardo (1817), Thomas Multhus (1789) and John Stuart Mill (1967) were key pioneers. Classical growth economics has weathered both theoretical and practical challenges through time and left the great legacy found in every branch of contemporary economic studies. Contemporary enquiries into the growth process mostly have their theoretical root from, for example, Ramsey (1928), Young (1928), Schumpeter (1934), Denison (1956) and Solow (1957). These neo-classical economists provided the modern building blocks for endogenous growth theories that currently prevail in growth economics.

The evolution of growth theories from the neo-classical theory to the endogenous growth theory can be briefly explained as follows. Inherited from the classical theory, the neo-classical growth theory includes the concepts of competitive behaviour, general equilibrium, the role of diminishing returns and its relationship to the accumulation of physical and human capital, the relationship between the income *per capita* and the growth rate of a population, and a slight degree of positive elasticity of substitution between labour and capital (Barro and Sala-i-Martin, 2004, p.16). These aspects are common in the neo-classical form of production function. The productive inputs, usually incorporated into these models, are technology, capital and labour, with technology being treated as a constant and capital and labour as variables.

The neo-classical production function shows that economic growth is the result of an increase in factors of production such as capital and labour, and/or an increase in the level of technological advancement. However, growth caused by an increase in factors of production is usually seen as less desirable than the growth generated from technological advancement. This is because growth will cease in the long run if an increase in capital and labour reaches a certain threshold due to the assumption of diminishing return of rival inputs. Technology, on the other hand, has a non-rival nature and can be used simultaneously in more than one area without interfering with another. It is also assumed to be repetitively used with no additional cost. By its specification in the model, an increase in the level of technology would shift the entire production upward. Therefore, it is the only variable in the neo-classical model that is responsible for raising the long-term growth rate.

Hypothetically, based on the assumption of diminishing returns to capital, the neo-classical production function makes two general predictions. First, the lower the starting level of *per capita* GDP, relative to the long-run growth rate, the faster the country would grow. This implies the convergence of the growth rate across nations. This convergence is conditional on the saving rate, the growth rate of population, and the heterogeneity of production functions across-countries (Barro and Sala-i-martin, 2004, p.17). This prediction is largely confirmed by a number of empirical studies, for example, see Barro and Sala-i-Martin (1991, 1992 and 2004). The convergence is also conditional on the homogeneity of economies. In other words, it tends to take place among the countries with a similar level of development. Very rich and very poor countries can hardly be converged.

The second prediction is that *per capita* output will cease growing in the absence of technological progress. That is because an increase in capital accumulation alone would soon be subject to the law of diminishing returns. This proposition has been established in order to reconcile with the fact that a number of traditional rich countries, for example, the U.S. and the Western European countries still enjoy a continuous growth rate of income *per capita*. Even though the neo-classical model could explain meticulously the mechanism of a short-term or transitional change of growth, the main problem of the model, however, is that it cannot explain anything about the long-term growth rate, which is determined by technology.

This deficiency was eventually addressed in the latest vintage of growth theory; the endogenous growth theories in which emphasis is heavily placed on the role of technological change in economic growth. Endogenous growth models attempt to discard the assumption of diminishing returns of rival inputs, perfect competition, and the constant return of the function. Beside, the endogenous growth theories seek to define explicitly the mechanism of technological change, such that, in the endogenous growth theories, perpetual growth is formally formulated. They also introduce additional variables to explain technological change. For example, Romer (1986, 1990) and Audretsch, Keilbach and Lehman (2006) included the role of entrepreneurial decisions, Becker, Murphy and Tamura (1990) and Funke and Strulik (2000) proposed human capital, Barro (1990) and Xie, Zou, and Davoodi (1999) incorporated government policies in their models.

It should be noted that some concepts attached to the newly introduced variables are not necessarily new concepts but the way they are expressed in a mathematical formulation, is original. Another innovation of endogenous growth models originates from the attempt to insert the micro-mechanism. An example of this is the collective decisions of an individual or institution to maximise profit is incorporated into a macro-mechanism by aggregating the production function. This attempt provides a clearer and more instructive picture of how an individual decision and the distribution of knowledge and technology contribute to the economic growth process. As pointed out by Durlauf (2001), growth economics is an open-ended study, and growth theorists may introduce any variable that they believe contributes to growth. As a result, the width and the depth of growth economics are significant. This review, however, will focus mainly on the models that concern growth that is induced by FDI.

3.2.1.1 Growth Models with FDI

FDI brings not only additional capital to host countries, but also superior managerial and technological knowledge. Scholars in growth economics have paid great attention to these aspects of FDI, especially on its potential to transfer technology across nations. De Mello (1999) explains that FDI affects growth in recipient economies through two channels. One is by increasing the capital stock, and the other is by increasing the rate of technological change. The evolution of this thought gives rise to a sensible hypothesis, stating that FDI

eventually contributes to economic growth. This is particularly the case in developing countries where financial capital and technology are scarce.

It can be said that due to the importance of technology over capital, the potential of transferring technology across borders by TNCs has been given a central role and theorised in growth studies. See for example, MacDougall (1960), Findlay (1978), Das (1987), Rivera-Batiz and Rivera-Batiz (1990), Wang and Blomstrom (1992), Huizinga (1995), Rodriguez Clare (1996), De Gregorio and Lee (1998), Glass and Saggi (2002), and Kohpaiboon (2005). Scholars in international business discipline also agree with the above point. For instance, Dunning (1994), Lall and Narula (2004), and Buckley and Casson (2009) suggest that FDI would not only enhance the competitiveness of the host countries but also facilitate their process of industrialisation. This would ultimately contribute to their long-term growth. However, it must be noted that scholars from the international business discipline all maintain that the benefit of FDI on development is extremely specific to context and policies being implemented in the host countries and that FDI could affect the nature of competition in the host country in such a way that the positive outcome of FDI on economic development may not necessarily be guaranteed. This suggests that the study of the impact of FDI on growth requires a historical and institutional analysis and a study of government policies.

The rest of this section focused mainly on the study of the role of FDI on economic growth. It highlights several classic growth models where FDI is present. As FDI-related growth models are numerous, this literature review will classify them into four groups. The first three categories deal with the channels through which the technological spillover from FDI is likely to take place. The fourth group refers to the models in which the focus is on the conditions enhancing the occurrence of the spillovers. The empirical evidence supporting these models will be discussed afterwards. Prior to the discussion of these models, this study will briefly give the definition of the spillover from FDI and outline two fundamental assumptions, found in most FDI-related growth models.

Technological spillover is an economic externality. It is an unintended product which, once having taken place, is not transmitted through the price mechanism. In the context of FDI, spillover suggests the positive externality which allows local firms to benefit from the

superior knowledge of the TNCs with a relatively lower, or even zero cost. Saggi (2002, p. 208) gives a clear concept of spillover. He distinguishes two types of spillover; pecuniary externality and pure externality. The former concerns the impact of FDI on the market structure and the latter concerns the impact of FDI on the adoption of the technology. In a strict sense, only the latter counts as externality because the pecuniary externality can be reflected through the price mechanism.

It should be noted that externality can take both positive and negative forms. Most of FDI-related growth studies, both theoretical and empirical, focus mainly on the pure and positive externality which, 'if it exists', appears to be favourable to economic growth. The pecuniary impact of FDI, nonetheless, appears to be neglected even though it affects directly the aggregate welfare by altering the nature of market competition in the host countries. For example, from the previous chapter, it is seen that TNCs are mostly large and highly efficient firms. Thus, for host countries, if FDI induces more competition in the domestic market and, if domestic firms could withstand that competition, the aggregate welfare would then increase. On the other hand, it is normally observed that firms in developing countries, particularly those at the early stage of capitalist development, are relatively small and unlikely to be efficient. Under these circumstances, FDI could crowd out domestic firms and reduce competition by their superior efficiency and size. In this event, FDI would undermine the aggregate welfare as well as the development of domestic firms, known to be an engine of capital accumulation, where productive capabilities are mostly embodied.

There are two fundamental assumptions that are normally found in most FDI-related growth models. One refers to the contagion effects and the other to the technological gap. These assumptions were initially identified in Findlay (1978). The first assumption, influenced by Arrow (1962), Lancaster (1966) and Nelson and Phelps (1966), asserts that technical innovations are most effectively disseminated when there are personal contacts between the providers and the receivers of the knowledge. This is known as the contagion effect. It refers to the idea that once the local firms enter into contact with the TNCs, whose competitiveness is superior, they will not only improve their efficiency through imitation but they will also get inspired to perform even better. The second assumption, influenced by Veblen (1915) and Gerschenkron (1965), refers to the notion that the greater the relative disparity in

technological capability between the host and the home nation, the faster the rate at which the relatively backward nation can catch up. This notion is also known as the advantage of backwardness. It should be noted, however, that for this assumption to hold, the technological disparity must not be too wide. Otherwise, technological convergence would not happen.

These two assumptions give rise to a number of theoretical works, attempting to identify the channel through which the spillover takes place. Saggi (2002) suggests that the channels through which FDI spillover takes place can be categorised into three categories, namely, the demonstration effects, labour turnover, and vertical linkages.

Demonstration Effects

The first category of the FDI-related growth models focuses on the studies that explain the mechanism of FDI spillover through demonstration effects. The demonstration effects refer to the notion that local firms consider adopting the superior technology only when it is introduced in the local market. This is because it is assumed that adoption of technology that is readily available at home is always cheaper for local firms.

Among the above line of models, Findlay (1978) is considered the pioneer. Building his work mainly from Mansfield (1961) and Nelson (1968), he presented the model in which TNCs own and transfer technology to local firms in relatively backward countries. The innovation in Findlay's model lies in the distinction between foreign capital and domestic capital, each with its own separate rate of return and with no necessity of factor price equalisation. In this model, host countries are not capable of producing technology.

Some implications can be drawn from Findlay's model. Firstly, the increase in domestic efficiency will decrease the inflow of FDI and that the rate of technological change in developing countries would eventually cease. Clearly, this is not supported by the historical evidence as it is observed that most of FDI still takes place among developed countries (WIR, 2008b). Secondly, if the innovation takes place continuously and rapidly in the advanced nations, this tends to make developing countries more dependent on foreign capital for further growth. Lastly, an increase in education of the labour force may help to reduce the dependency on foreign capital. Findlay's model, however, does not explain the

force that determines the transfer of technology to the backward region (Fan, 2002, p.5). This force is explicitly examined in the international business literature and already discussed in Chapter 2.

Das (1987) proposes the oligopoly model in which local firms may learn or imitate the technology from the subsidiaries of TNCs by conducting a reverse engineering. In other words, learning and imitating increases domestic firms' efficiency with virtually zero development cost. Thus, in her model, the rate of increase in a domestic firm's efficiency is an increasing function of foreign activities. It follows that the larger the scale of the TNCs' productions, the greater opportunities for the domestic firms. Das (1978) is aware of TNCs' incentive to protect their technology but despite this, she shows that, along the optimal path, TNCs still benefit from transferring technology to their subsidies in a foreign land. Clearly, Das's model represents the win-win scenario for TNCs and the developing host countries. The shortfall of this model, however, is that it does not acknowledge the cost of assimilating technology and that it does not take into account the incentives and the restriction of local firms in acquiring new technology.

Wang and Blomstrom (1992) develop a related duopoly model in which TNCs transfer technology endogenously by means of interactions between local firms and TNCs' subsidiaries. Their assumptions are explicitly taken from Findlay (1978) in that they assume positive relationship between the technological gap and the rate of spillover. Wang and Blomstrom's model is distinctive from Das (1987) in that they recognise the cost of transferring and assimilating technology. Hence, the rate of technological change in the host country induced by FDI spillovers depends on the strategic action between TNCs and local firms in their investment in transferring and acquiring technology. Compared to the first two models, this model is more powerful in that it takes into account the actions of the firms in determining the aggregate economic performance. The key implication that can be drawn from Wang and Blomstrom's model is that the technology transfer from FDI is positively related to the local firms' investment in learning. Also, it can be deduced, from this model, that strategic actions involve some degree of planning both at firm and national levels.

Huizinga (1995) incorporates political aspects into FDI-led growth model. He proposes a model in which TNCs are willing to transfer technology only when the host countries are

politically stable. In his model, even though the cost of transferring and acquiring technology is nil, if TNCs are facing the hostile government or the risk of expropriation, they will choose to transfer low quality technology. Wang and Blomstrom (1992) and Huizinga (1995) agree that, in the light of operational risk, such as, political instability, and low potential of economic growth, TNCs would be reluctant to transfer technology irrespective of the cost of technological transfer.

The above reviewed models suggest that demonstration effects may be mostly observed at the industrial level. Accordingly, these models can be empirically assessed by looking at the industrial variation in R&D expenditure made by local firms in an effort to acquire technology induced by FDI. What should be noted is that empirical studies of this kind should allow for the impact of FDI on the structure of the market, that is, the nature of competition, if they seek unbiased results (Saggi, 2002, p.211).

Labour Turnover

The second category of FDI-related growth models refers to the theoretical models explaining the mechanism of FDI spillover through the physical movement of workers between TNCs and local firms. On this aspect, so far, there are only a few theoretical models. For example, Fosfuri, Motta, and Rønde (2001) developed a model in which technological spillovers through FDI occur due to worker's mobility. Their model has a comparatively static nature and shows that TNCs can transfer superior technology to their foreign subsidiaries by training local workers. The spillover occurs when these trained workers are later hired by local firms. Even in the absence of labour turnover, their model still suggests that the host country could benefit from the wage premium paid by the TNCs.

Glass and Saggi (2002) see it differently. They construct the oligopoly model in which TNCs have a superior technology to local firms, allowing them to compete successfully in the local market. Thus, TNCs tends to limit technological diffusion by offering higher wages to their workers relative to local firms. In this event, the premium, enjoyed by the TNCs' local workers, may surpass or fall behind the aggregate welfare from which an economy would benefit if the labour turnover would take place. It is noted that, however, such premium does not necessary reflect the social value of the knowledge embodied in the

workers. Thus, in their model, the premium wages offered by TNCs would make the benefits from FDI ambiguous. More specifically, the welfare effect in host countries remains conditional. For example, TNCs' wage premium could distortedly raise labour cost of the few middle class while leaving wages of the majority unskilled labour unchanged. In this case, aggregate wage premium may fall behind the aggregate welfare, distortions would then arise. The technological diffusion, if ever it had taken place, may not be optimal for the local economy. Thus, the government of the host country may be interested in intervening and regulating FDI, for example, by increasing minimum wages, improving the quality of unskilled labour in the long run, and subsidising local firms so they can offer the same wage rate as TNCs, this would increase the labour turnover at least in the short run.

Franco and Filson (2006) advance the concept that the workers in TNCs may later become entrepreneurs after a certain level of knowledge has been acquired. They develop a model in which the mechanism of imitation is specified and there is a high rate of improvement of production technologies. In these circumstances, employees may learn their employer's technological know-how and use it to start their own firm. This creates the spin-outs of new firms that can normally be observed in the automobile parts, construction, and electronics industries (Franco and Filson, 2006, p.841).

It should be noted that studies of spillover through labour turnovers need to take into account the local competition policy and industrial differences (Saggi, 2002). Citing Hoekman and Djankov, (1997), Saggi (2002) noted that labour turnover is affected by the local competition policy. As in some countries, such as, Bulgaria, individuals are not permitted to join the management of competing firms for the first three years after leaving a company. In this event, the labour turnover and FDI-related spillovers may be legally restricted.

Apart from competition law, trade secrecy law and intellectual property rights also have the same effects in protecting TNCs from losing their important information or their technological knowledge. Industrial variations are also essential because a high labour turnover rate is only associated with the industries where there is a fast pace of technological change. As it is observed that this type of industry is located mostly in the developed nations,

it is unlikely that the host developing countries will receive FDI, whose nature involves a high rate of labour turnover.

So far, it can be implied that FDI, through demonstration effects and labour turnover, may increase the choices of technology available to local firms. However, an increase in the number of choices may not necessarily imply an increase in the rate of technological adoption and ultimately an increase in the rate of technological change. This is because technological change depends in part on the nature of competition, the strategic behaviour of domestic firms, and the size of the technological gap. In addition, as noted in the literature review in Chapter 2, TNCs' decision to internalise, and hence conduct FDI, is made partly in order to protect their technology, which is their income generating asset, from their competitors. Thus, the fundamental challenge to the hypothesis that FDI leads to growth does not lie in the question of technology contributing to growth but in the question of whether, or not, FDI will generate technological spillover. Nonetheless, there appears to be a consensus on the circumstances where TNCs are most likely to transfer the technological know-how to local firms. This refers to the vertical linkages spillovers.

Vertical Linkages

The third category of FDI-related growth models focuses on FDI spillovers through vertical linkages. This channel of spillover has been studied in both international business and growth studies. It is observed that when firms expand their productive operations to foreign markets, in most cases, they will generate backward and forward linkages with local agents. Through these linkages, contacts take place and, thus, the spillover is believed to occur. Lall (1980) was the first to propose the concept of backward linkage that takes place from the creation of a supplier network. Lall (1980) explains that as TNCs want to ensure the quality of inputs, they will need to provide the local suppliers with technical assistance and training. In so doing, the local firms would benefit from the knowledge provided by TNCs. In this event, the government of the host countries can secure the backward linkage FDI spillover by imposing a local content requirement on TNCs. These practices would also make a TNC's subsidiary less dependent on only one or two suppliers. Blalock and Gertler (2008, p.404) argue that, even when TNCs seek to minimise technology leakage, they have an

incentive to improve the productivities of their suppliers through training, quality control and inventory management.

The forward linkage points to the supply of high quality outputs, the creation of the distribution network and the development of a client base. In this case, the domestic end-producers and end-consumers could benefit from superior products produced by TNCs. Citing Crespo and Fontoura (2006), Javorcik (2004), however, notes that the upgrade of production may be attached to an increase in price. If the domestic firms cannot afford an increase in cost, they may instead suffer a negative effect from FDI.

Growth models capturing vertical linkages are quite numerous. This study will review only a few notable papers. Rivera-Batiz and Rivera-Batiz (1991) developed a simple, general, equilibrium model with external, increasing returns due to specialisation. Their model shows that foreign capital increases the degree of specialisation in a service industry. Consequently, this drives the cost of services down and when services are used as inputs in manufacturing firms, they eventually increase the productive efficiency of the manufacturing sectors. When both service and manufacturing are enjoying an increase in efficiency, it is likely that the aggregate welfare would also be increased.

Rodriguez Clare (1996) develops a formal model in which there exist backward and forward linkages. He shows that whether the spillover from the vertical linkages takes place or not is conditional on the nature of the product that TNCs produce, the cost of communication and the technological gap between the host and the home countries. Specifically, the product that is being produced must require intensive use of locally produced intermediate goods. Next, the cost of communication between headquarters and subsidiaries must be high. Then, the home and the host countries should be producing a relatively similar set of intermediate goods, suggesting a relatively small technological gap. There are at least two implications from this model. Firstly, it suggests the implementation of local content requirements in host countries. Secondly, the government of the host country must implement additional policies to ensure that the technological gap is to be reduced and that there must be a good domestic technological system. Otherwise, FDI could render the host developing countries into the enclave economy which refers to the situation where the benefits from FDI are confined to only a few, foreign, capital-intensive sectors. Even though technological spillover exists

within these sectors, it does not diffuse to the rest of an economy. In this event, FDI would create an inequality which would hinder further development.

Markusen and Venables (1999) construct a model in which they address two issues. One is the pecuniary externality generated by FDI, that is, its impact on competition. The other is a backward linkage spillover in the intermediate-goods market which could benefit domestic final-goods producers. This model represents the case where FDI could act as a catalyst for growth in developing countries. For example, there are circumstances where the entry of a TNC would create new industries and push up the production possibility frontiers. Hence, the welfare of the host country is improved. It should be noted that on this aspect, Amsden (2007) argued that from historical evidence, it is observed that FDI normally takes place in the sectors where domestic entrepreneurs are pioneers. In other circumstances, with regard to the pecuniary externality, Markusen and Venables (1999) are also optimistic. They argue that local firms could be so strengthened by vertical spillover that the TNCs could be driven out of the market at later stage.

Pack and Saggi (2001) also develop the model that addresses both the vertical spillover and the pecuniary externality. This model is, in fact, not developed in the context of FDI but it is highly relevant. They show that technological diffusion in a downstream market can increase the level of competition among suppliers and eventually drive down prices. Not only producers of downstream products in developing countries would benefit from an increase in productivity, but also the buyers in industrial countries would benefit as prices fall. This model suggests that, theoretically, as long as the barriers to entry in the downstream markets are regulated, the industrial profit will rise. Under these circumstances, they argue that both developing and developed countries gain from the international technological transfer. Blalock and Gertler (2008) adapt Pack and Saggi's (2001) work into the context of FDI and empirically confirm that it is relevant.

Conditions for the Presence of Spillover

While the above mentioned models focus on the channels through which spillovers take place, there is also another line of FDI-led growth models that highlight the conditions that

facilitate the occurrence of FDI-generated spillover for instance, Wang (1990) Borensztein, De Gregorio and Lee (1998), Hermes and Lensink, (2003), and Kohpaiboon (2005).

Wang (1990) develops a growth model in which an international capital movement brings about the technological transfer. This model is similar to Findlay (1978) and assumes that the technological diffusion in developing countries is an increasing function of foreign production activities. Thus, the more the developing country relaxes its capital control, the higher is the long-term growth rate of the country. In particular, he points out that when international capital mobility is implemented in parallel with an increase in the level of human capital, or with an increase in the rate of domestic technological diffusion in recipient countries, it will reduce the income gap between the rich and the poor countries.

Borensztein, De Gregorio, and Lee (1998) developed a model highlighting the interaction between FDI and human capital as a key determinant of economic growth. Influenced by Barro and Sala-i-Martin (1995), their model specifies that an economy's technological progress is the result of capital deepening and takes place in the form of an increase in the varieties of capital goods. Technological progress occurs only when local firms adopt foreign technology. In this context, FDI would act as the main channel for technological transfer. The adaptation of foreign technology, however, incurs a fixed cost that is inversely related to the ratio of foreign firms to the total firms in the market. Therefore, the more foreign firms are present in the market the lower will be the cost of producing the new type of products for local firms. The implications derived from this model, even though being sensible and rational, but from the history of late industrialised countries, such as, South Korea, it is also observed that the establishment of South Korean Heavy-Chemical industries did not rely on the presence of foreign firms at the early stage of its development (Il Sakong, 1993; Kim 2000). Most importantly, foreign technology does not necessarily come under the single form of foreign investment. It must be emphasised that the rate of technological change in Borensztein, De Gregorio and Lee (1998)'s model is not only a function of FDI but also the level of human capital in host countries. This points out that the positive spillover from FDI is conditional and dependent on policy environment in the host country.

Hermes and Lensink (2003) designed their model along the same line as Borensztein, De Gregorio and Lee (1998). But, instead of focusing on the level of human capital as the condition for the presence of the FDI-generated spillover, they highlighted the importance of the development of the financial system in host countries. They suggest that an increase in FDI leads to an increase in the growth rate of output, but the final, positive effect of FDI depends on the extent of development of the financial sector.

Kohpaiboon (2005) depicts another condition governing the occurrence of FDI-generated spillover. His model owes much to Wang and Blomstrom (1992), with a special emphasis drawn from the concept developed by Bhagwati (1968, 1985, and 1994). In this, he constructs a model where the spillover from FDI is conditional on the nature of the trade regime which is believed to affect the cost effectiveness in the learning activities of the local firms. Specifically, his model shows that the cost of acquiring foreign technology from FDI is higher in a restrictive trade regime than in a more relaxed environment. This is because most industries with high trade restrictions are mostly highly capital- and technology-intensive. In this case, the local firms may find it difficult to reproduce and imitate the TNCs' subsidiaries due to their limited capabilities and resources. Moreover, in some circumstances, the local firms may not have an incentive to improve the *status quo* of their production as they may be satisfied with the current economic rents, protected by the government. This line of argument appears to be perfect in arguing against infant industry protection. However, this model overlooks the competitive force and the control aspect of FDI. It also cannot explain the experience of Japanese and South Korean development which relied heavily on the protection of their strategic industries at the early stage of economic development.

Recently, there is increasing evidence pointing to the correlations between FDI and inequality, for example, Basu and Guariglia (2007). Their model represents a dynamic dual economy with two sectors. The traditional sector employs the diminishing return technology while the modern sector benefits from the flow of new technology from FDI. There are two types of altruistic agents in this economy; the poor with a low level of human capital and the rich with a high level of human capital. In their model, FDI benefits only the rich, who have sufficient human capital. Unless the poor gain sufficient level of human capital, they cannot

benefit from FDI. The only way for the poor to break away from this rule is to increase their productivity in the traditional sector, in order to fund their accumulation of human capital. Once the level of human capital embodied in the poor is large enough, they can then benefit from FDI and the income gap would then be reduced. In contrast, this model shows that in the case where the poor are unable to acquire enough human capital, FDI will only increase the extent of income inequality in the country.

There are also other conditions that contribute to the presence of spillover, such as, the technological gap between the home and the host countries, alternatively known as an absorptive capacity, the characteristics of domestic firms and the types of FDI, see Xu (2000), Narula and Marin (2003), Alfaro (2003) and Takii, (2005). However, as these papers do not explicitly formalise the models and their nature are mainly confined to the empirical level, this study will discuss their findings in the following section, where the empirical evidence on spillover from FDI and growth is discussed.

It can be seen that most of the theoretical FDI-related growth models that have been presented so far, focus mainly on the potential of technological transfer brought about by an entry of TNCs. The most appropriate measurement of spillover would be the productivity of the local firms. However, as mentioned earlier, an increase in productivity in some local firms may not necessarily mean an increase in the overall national wealth, despite their close relationship. This is because an increase in efficiency may cluster mainly in a few economic sectors and does not diffuse to the entire economy effectively. This is partly due to imperfections inherited in the market that prevent efficient resource allocations and partly due to other policies such as inefficient income redistribution and poor domestic innovation systems.

Apart from studies, such as, Rodriguez Clare (1996), Pack and Saggi (2001), Saggi (2002), and Glass and Saggi (2002), there are very few studies that discuss the role of pecuniary externality in the FDI-led growth analysis literature. These scholars take into account the nature of TNCs. The above studies refer to the pursuit of monopolistic or oligopolistic returns by TNCs that are made possible by their superior size and technological and managerial capability. It is vitally important to note that the incentive of achieving monopolistic or oligopolistic returns tend to outstrip that of transferring technology to local

firms. Furthermore, the spillover, if examined in the context of the theory of transaction cost and internalisation, is simply a residual outcome of internalisation by the TNCs. Thus, it is reasonable to expect TNCs to minimise the residuals from their internalisation of international transactions cost, that is, to limit the spillover of technology.

Another important point to be noted is that, given that TNCs have an incentive to transfer technology to local suppliers, such technology should somehow be inferior to that possessed by the TNCs. Otherwise, these suppliers could, at later stage, become TNCs' competitors. As an example, consider an automobile industry in which there exists a technological hierarchy such as technology used in producing automobile parts and that used in assembling a whole car. In cases where there are low barriers to entry at the lower tier and few buyers in the upstream market, it can be expected that TNCs would be better off if they allow for technology diffusion in lower tiers of an industry. This would create many local suppliers and increase the price competition in the downstream market. Eventually, the profits of the suppliers will be driven down while the buyers which are likely to be TNCs can enjoy the monopsony power. In addition, TNCs could enjoy oligopolistic returns in the final product markets. This is the case of the Thai automobile industry in which the majority of local firms participate only in lower tiers of the industry whereas the industry's higher tier productions is dominated by TNCs (Ministry of Industry, Thailand, 2006).

Many models have correctly pointed out that the positive impact of FDI on growth is not automatic but conditional on several conditions which are mainly shaped by domestic policies. Therefore a fuller analysis of the impact of FDI on growth may need to take into account policies that are implemented in many developing countries, as well as the nature and the role of the host countries' government. In brief, the theoretical works, despite being rational and vigorous tend to play down the possibility of multiple equilibria. This means that, while the impact of FDI on growth might be either positive or negative, most of the FDI-led growth models emphasise mainly the positive scenario. As a result, it will be seen that the empirical studies in this subject produce an unclear pattern, and it is difficult to draw a conclusion from them.

3.2.1.2 Empirical Evidence of FDI Spillovers

Most of the empirical investigations into the impact of FDI on growth borrow analytical tools from growth empirics. There are two empirical methods used mostly in growth empirics. One is growth regression which is commonly used in empirical studies to analyse the impact of FDI on growth. The other method is growth accounting that mostly used in the calculations for Total Factor Productivity (TFP). Due to the dominance of regression analysis which involves many regression techniques and that growth regression will be adopted in the empirical study of this thesis, the review of empirical literature will focus both on the results and the estimation techniques used in deriving the empirical evidence. The summary of the estimation techniques adopted in the reviewed empirical studies can be found in Appendix A.

Generally, the empirical evidence of FDI spillovers on growth can be classified into two broad categories. The first category refers to case studies which focus mainly on a single country. This category can also be sub-divided into the studies at micro-level, seeking to identify the spillovers at the firm or industrial level and the studies at macro-level, seeking to identify the direct positive impact of FDI on the economic growth. The second category refers to the cross-country analysis. In this category, due to the limitations of data and the complications of analyses, most of the work focuses mainly at the macro-level.

Empirical Evidences from Case Studies

The following quote, made by Rodrik (1999, p.37), reflects perfectly the situation of the theoretical works and the empirical evidences on the issue of FDI and economic growth.

> *"Today's policy literature is filled with extravagant claims*
>
> *about positive spillovers from FDI but the evidence is sobering"*

The empirical evidence of the FDI spillover focusing mainly on a single country can also be categorised into groups of micro- and macro- analyses. The empirical works at firm and industrial level will be the first to be introduced. It is noted that this line of empirical evidence, drawn heavily from the panel regressions, is the earliest generation of empirical study on FDI and growth. This type of empirical analysis is useful in providing the evidence

of spillover in different country. Firm-level analyses offer a better confidence in terms of accuracy and reliability as they are based on analyses of large number of observations. The limitation of panel estimations, however, is that unless such analysis takes into account the heterogeneity of industries' and firms' production functions, the results may not be robust (Herzer, Klasen and Nowak-Lehman, 2008). Other problems that are not limited to panel studies, as pointed out by Carkovic and Levine (2002), are omitted variables and endogeneity. Their presence may produce bias in parameter estimates. Fortunately, over the last decade, these problems have been much alleviated and addressed thanks to the development of statistical tools such as the use of Instrumental Variable which are capable of addressing these drawbacks. Aitken and Harrison (1999) pointed to another problem, that is, a reverse causality between FDI and efficiency. They argued that it might be possible that FDI may not lead to an increase in efficiency, but itself is attracted to the most efficient sectors in the economy. Correlation does not imply causation.

Despite these limitations in empirical studies, one has to admit that perfect econometric or statistical study could hardly exist. Applied economists are commonly facing many difficulties such as the limitations of data and the complexities of statistical analysis. Solow (1985) and Pagan (1990) suggest economists be pragmatic, that is, they make the most of the available information and analytical tools at a given time.

Micro-level panel case studies on FDI spillover produce an inconclusive result. Caves (1974), Globerman (1979), Blomstrom (1986), Jarvocik (2004), Haskel, Pereira and Slaughter (2007), and Keller and Yeaple (2009) found that FDI helps to increase the productivity of domestic firms. It should be noted that, with the exception of Blomstrom (1986) and Jarvocik (2004) who used Mexican and Lithuanian data respectively, all the empirical evidence draws its conclusions from data gathered from developed countries such as Canada, Australia, the U.K., and the U.S.

In contrast to most of the studies that used data drawn from developing countries, their empirical results show either a negative impact of FDI or a midget positive correlation between FDI and growth. For example, Haddad and Harrison (1993), Aitken and Harrison (1999), Djankov and Hoekman (2000), Konings (2001), Kohpaiboon (2006), and Ran, Voon and Li (2007) found that FDI alone has a negative impact on the productivity of domestic

firms. More specifically, Aitken and Harrison (1999) used Venezuelan, plant-level data from 1976 to 1989. They found that the net impact of FDI on local firms' productivity in Venezuela is weakly positive and questionable. They suggested that a joint venture is the best mode of entry that promotes technological spillovers in the host country.

Kohpaiboon (2006) used plant-level data from the Thai industrial consensus in 1996. He reported that FDI alone has a negative impact. However, the interaction variable between FDI and trade openness suggests that FDI under the open trade regime appears to increase productivity in Thai local firms. Therefore, he asserted that Bhagwati hypothesis is accepted in the case of Thailand. This is in contrast to Mah (2010). He uses Korean annual time-series data from 1970-2006 and find no evidence supporting Bhagwati hypothesis in the case of Korea.

Alternative to micro-level empirical studies, a holistic investigation into the direct impact of FDI on growth could be carried out by looking at the macro-level. The empirical studies of FDI and growth at macro-level are also distinctive from those at micro-level studies in that some of them seek to uncover the direction of causality. In other words, they try to identify whether FDI leads to economic growth or economic growth attracts FDI. Nearly all of them follow the norms of growth empirics, using GDP as the measurement of economic growth. Case studies at macro-level normally adopt time-series analysis to assess the impact of FDI on economic growth. It should be noted that case studies using time-series analysis remain limited in number due to the short span of the availability of time-series data which gives a small number of observations. However, recently, as time-series data have become more available, several studies have adopted this type of analysis to examine the impact of FDI on growth on an individual country basis.

Similar to panel studies, case studies using time-series analysis do not provide a clear picture on the positive impact of FDI. In some cases, the contradiction can be found even within a single country. For example, in the case of Thailand when directions of causation are examined, Zhang (2001) used annual time-series data from 1957 to 1997. He found no evidence of a long-run relationship between FDI and growth of GDP. However, Chowdhury and Mavrotas (2005) used annual time-series data from 1969 to 2000. They found that there is a bi-directional causality between FDI and growth in Thailand. In fact, it can be

preliminary argued that econometric results can be attributed to the differences in the model specification and the set of data.

There are two empirical studies that assessed the impact of FDI on the Thai economic growth at the aggregate level using growth regression. There are Kohpaiboon (2003) and Ang (2009). Kohpaiboon (2003) tests the impact of FDI on the Thai economic growth while taking into account the role of the trade regime. He found that FDI alone has a negative impact on the Thai GDP. However, the multiplicative variable between FDI and the index of trade liberalisation give a significant and positive coefficient, indicating that Thailand could benefit from FDI if the country adopted the liberalised trade regime. Ang (2009) tests the impact of FDI on the Thai economic growth while taking into account the role of the development of financial market. Based on annual time series-data from 1970 to 2004, he found that the long-run relationship between FDI and growth of the Thai GDP exists but negative in nature. However, the multiplicative variable between FDI and the index of financial market development gives a significant positive coefficient, meaning that Thailand would benefit from FDI through the development of financial market.

Empirical Evidence from Cross-Country Studies

The second category of empirical studies corresponds to those that used the cross-country data. From the theoretical point of view, the cross-country analysis is useful in increasing the power of generalisation. Cross-country studies generate similar result as far as the impact of FDI on growth is concerned. Most of them find a positive correlation between FDI and growth. It is crucially important, however, to note that these studies suggest that the presence of positive impact from FDI is specific to each country and conditional on several domestic policies. The positive impact from FDI is not automatic. Even though there is abundant empirical evidence of spillovers from cross-country analysis, none of them supports a hasty presumption of the positive impact FDI have on economic growth in host countries.

A number of researchers conducted cross-country panel regressions and found a positive relationship between FDI and economic growth. See for example, Balasubramanyam, Salisu, and Sapsford (1996), Borensztien, De Gregorio, and Lee (1998), De Mello (1999), Alfaro

(2003), Bengoa and Sanchez-Robles (2003), Alfaro, *et al*. (2004), Li and Liu (2004), Busse and Groizard (2008) and Basu and Guariglia (2007). More specifically, Balasubramanyam, Salisu, and Sapsford (1996) employed panel data during 1970-1985 from 46 developing countries. These countries are divided into two groups, based on their trade regimes, namely, export promotion and import substitution. They found that the positive impact of FDI tends to be conditional on the liberalised trade regime, a significant level of human capital endowment, an economic freedom, the types of industries, and the technological gap. Based on data from 69 developing countries during 1970-1989, Borensztien, De Gregorio, and Lee (1998) found that the positive impact of FDI tends to be an increasing function of the level of human capital in the host countries. In their empirical model, human capital is approximated by the number of years of schooling.

Alfaro, *et al*. (2004), studied differently. They tested the model developed by Hermes and Lensink (2003) focusing on the effect of FDI in relation to the level of development of the financial market. Based on cross-countries data that incorporates both developed and developing countries from 1980 to 1995, they found that the effect of FDI alone tended to be ambiguous but FDI appears to be beneficial only when the host country has a well-developed financial market. Next, Basu and Guariglia (2007) investigated the role of FDI in relation to an income inequality. They showed that even though FDI seems to be correlated with growth, it tends to increase income inequality in the recipient countries.

Although some cross-country panel studies produce supporting results on the positive impact of FDI, some suggest differently. See for example, Xu (2000), Xu and Wang (2000), Carkovic and Levine (2002), and Yang (2008) who showed that their empirical evidence does not support the FDI-led growth hypothesis. More specifically, Xu (2000) found that the U.S. TNCs contributed to productivity growth only in advanced and not in developing countries. Xu and Wang (2000) used data from 21 OECD countries during 1970-1990. They examined the impact of international trade and FDI on TFP and found that technological spillover and outward FDI are positively correlated with TFP growth. However, they found no evidence of spillover from inward FDI. Based on panel data from 72 countries during 1960-1995, Carkovic and Levine (2002) also found no evidence of technological diffusion from an inward FDI.

Zhang (2001) uses cross-country data differently in that he analyses them with time-series analyses for each country. He found that FDI-led growth hypothesis is strongly specific to a country and that six out of eleven countries from East Asia and Latin America showed no long-term relationship between FDI and growth. Yang (2008) investigated the relationship between inward FDI and economic growth using a panel data of 110 countries over the period 1973 to 2002. He found that the impact of FDI on growth varies across countries and with time. Strikingly, his evidence suggested that the 'economic miracle' in most of East Asian nations cannot be explained by FDI. This is in line with Ozawa (1979), Dunning (1990), Il Sakong (1993), Kim (2000), Chang and Evans (2000) who examined the cases of Japan and South Korea and found that neither of these countries implemented a friendly policy towards an inward FDI at the early stage of their development and that FDI has never been their main source of economic prosperity.

It is clearly seen that there are repetitive themes arising from reviewing empirical studies in all categories. Firstly, evidence supporting the FDI-led growth hypothesis is always conditional on

     i)   the technological gap between the host and the home countries

     ii)   trade policies

     iii)   countries' specificities for example, an institutional infrastructure, domestic politics and social value.

     iv)   the propensity to use of local contents

     v)   the mode of entry of TNCs in the host country for example, joint venture is preferred to wholly owned subsidiaries.

     vi)   the nature of industry.

Secondly, from the abovementioned point, it follows that the positive impact of technological diffusion on growth is not automatic. Thus, this implies that the state would need to intervene by making and implementing the correct policies that facilitate the realisation of FDI-generated spillovers. Thirdly, none of the measurements of spillovers used in empirical studies can reflect the full picture of what type of development or growth that inward FDI brings to country. Lastly, as most empirical investigations focus mainly on a few positive aspects of FDI such as its role in transferring technology, and increasing

efficiency, other adverse impacts attached to FDI have been underplayed, for example, rent-seeking behaviour, and problems of resources transfer *ex post*. Some applied economists, such as, Crespo and Fontoura (2007) and Contessi and Weinberger (2009), when faced with negative or inconclusive results of empirical studies, try to explain them by blaming the unreliability of data or the wrong empirical approaches rather than the inadequacy of the mainstream theoretical frameworks and the incomplete way of looking at the subject matter.

3.2.2 The Role of the State and Market Interventions

So far, the theoretical explanation of the process of economic growth in relations to FDI is made mainly by the basis of economic forces. However, in reality, economic forces, if not always, have largely been shaped by political influences. One of the most evident manifestations of political forces is policy. Obviously, the institution which has an absolute power over making and implementing policy is the state. Thus, a more complete analysis of economic growth in relation to FDI could not be done without taking into account the role of the state and its policies. This proposition is also confirmed by the empirical evidence, reviewed in the previous section, which implies that market intervention is necessary in order to help realise the positive impact from FDI. It is fair to argue that the government of host countries have the responsibility of implementing the 'right' policies in order to make an inward FDI beneficial for all citizens. This section will discuss the role of the state as the promoter of economic growth and state interventions since this could shed some light into the different economic performance across nations particularly in the area of FDI and development policies.

Biersteker (1978, p.220; 1990, p.480) defined the state as an entity consisting of the institutions of governance – including but not limited to the bureaucracy, the police, the military, the judiciary, and the legislative assemblies. These institutions, he wrote, according to Miliband (1969, pp.49-54) and Giddens (1985, p.17), act as both the state's instruments and the constituents of the system of order. The latter aspect shows that the state is actually an organisation. Several developmental theories such as dependency and world system suggest that the state should not be examined as a sole and independent entity. This is because each nation state is connected to the global system where there is a hierarchy determined by political and economic power. The concept of the world as a system has long

been established in social science since the 1970s, for example, see Wallerstein (1974, 1976). This notion is absolutely compatible with the analysis of international investment in the globalisation era. Scholars in International Business field such as Dunning (2007) and Buckley and Casson (2009, p. 1573) also suggest that FDI should be examined on the background of the world as a system.

All nations that take part in the global system do not share an equal political power leads to the inevitable possibility that domestic activities could be influenced by external forces. Nonetheless, for simplicity, at the moment, the external forces are not considered in order to focus on the state as an autonomous institution. The autonomous state is believed to act effectively as a moderator for the different interest groups and classes in an economy in order to maintain political stability and to create the institutional infrastructure that enables the country to develop sustainably. The state also has the absolute legitimacy to tax its citizen and to use the military force. Thus, the Hegelian philosophy which sees the state as the main agent of historical change (Tosh, 1991, p.74) is true, for the most part. It also implies that the state is largely responsible, for better or ill, for the nation. The economy is usually managed by the state through its institutional apparatus and the interference of the activities carried out by the economic entities embedded in the nation state.

Reinert (1999, p.279) considers three main roles for the state in the promotion of economic growth. Firstly, as the provider of institutions, the state is responsible for setting the rules of law and creating the necessary institutional infrastructure that helps maintain the efficacy of such rules. These institutions include for instance, property rights, the judiciary, the education system, and other social provisions. Secondly, as the distributor of income, the state is responsible for maintaining fairness in sharing the income generated in the economy and preventing any opportunistic behaviour of the stronger in acting to the disadvantage of the weaker. Thirdly, as the promoter of economic growth, the state is responsible for increasing the size of the income. These roles are not mutually exclusive and can be sequential. For example, the first is a prerequisite for the third. The third role needs special emphasis in order to maintain the stability of the first and the second role. These roles can be accomplished through various means of state intervention.

Even though there is no formal definition of state intervention Biersteker (1990) attempts to distinguish state interventions in six forms, namely, influence, regulation, mediation, distribution, production, and planning.

1) The state can influence or encourage certain behaviour of economic entities in the national markets through the implementation of fiscal, monetary, and industrial policies. The synchronised implementation of these policies could channel or direct investment to the sectors which are strategically important in promoting economic growth at a given point of time.

2) Through regulation, the state can constrain or limit some unfavourable behaviour of its economic entities and direct their activities into the domain that is more favourable to the general public interest. These regulations could be, for instance, minimum wage legislation, environmental policies, and anti-trust law.

3) As a key moderator, the state can mediate the conflict of interest among social classes such as capitalist class *vis-à-vis* working class and people living in rural *vis-à-vis* urban areas. The social conflict of interest needs to be resolved in order to maintain social and political stability which in turn is necessary for achieving sustainable economic development.

4) The state can attempt to distribute or redistribute economic resources and economic surplus accrued from domestic production. There are various means to do this, for example, the use of taxations and subsidies, the provision of basic human needs such as health care and education, and industrial location policies.

5) The state can assume the role of producer, particularly with regard to intangible public goods such as human capital, defence, property rights, private contract enforcement, and tangible public goods such as parks, lighthouses, seaports, airports, rail, and road. These projects can be carried out by the state enterprises or in the form of public-private partnership.

6) The state intervenes in the market as the planner. That is, the state assumes the responsibility to rationalise the entire process of development and sets out the desired outcome in order to intervene appropriately.

Similar to the role of the state, these forms of state intervention are not mutually exclusive. Therefore, to bring out the most effective use of these interventions, they should be carried out in a complementary way to each other. It is observed that every state intervenes in its economy as a means of undertaking its roles. In the context of development literature, it is largely accepted that the role of the state and its corresponding interventions play a crucial role in development of the country. See, for example, (Ozawa, 1979; Amsden, 1979; Fine and Stoneman, 1996; Krugman 1996; Rodrik, 1999; Reinert, 1999; and Chang, 2003). Kuznets (1981, p.59) stated that the spread of modern economic growth placed a greater emphasis on the importance and the need for organisation in national sovereign units. Fine and Stoneman (1996) also points to the role of the state when making a distinction between the successful cases of East Asian NICs and the failing cases of Latin America. It is therefore reasonable to assume that successful economic development is largely determined by the actions of the state.

Among the extensive list of tasks that the state should undertake in order to promote economic growth and development, this study focuses mainly on the task of creating the formation of domestic entrepreneurs and how the liberalisation of FDI might impede this. It is argued that the mismanagement of inward FDI by the state would hinder the creation of domestic entrepreneurs which in turn would impede further development. The importance of entrepreneurial class has been greatly emphasised by Gerschenkron (1965), Lewis (1980) Amsden (1994) and Fine and Stoneman (1996). As mentioned in Chapter 2, firms are the key engines of capital accumulation in a capitalist economy and the economic performance of a country depends largely on its firms' performance. However, the creation of the entrepreneurial class in the less developed countries can be successful only with the support and intervention of the state. This would include visionary economic planning such as identifying the right strategic industries or even potential national large firms and helping them to create competitive advantage. Accordingly, the state is responsible for supplying skilled labour and infrastructure for the firms, and protecting domestic firms from, or when necessary pushing them into, competition.

In practice, the state may not find it easy to act in accordance with the above principles due to both internal and external constraints. The internal constraints are, for example, domestic political environment, the formation of social classes, and the institutional infrastructure. The external constraints are, for example, the global and regional economic and political environment, the legal obligations incurred by the participation in several international institutions and the consent to bilateral and multilateral agreements. The interaction of these factors forms the degree and the scope to which the state interventions may be carried out and this in turn shapes the developmental path of an economy.

The following section will give an overview of the prevailing ideology during the second half of the twentieth century. It will be clearly seen how this ideology has affected the role of the states in developing countries and their ability to decide on the choices of domestic policies in general and the FDI-related policies, in particular.

3.2.3 FDI-related Development Policies

In modern economic theory, openness and liberalisation are seen as means of achieving economic growth and development. This notion is reflected in many development policies advised to developing countries mainly by the World Bank (WB) and the International Monetary Fund (IMF). FDI-related policies are no exception. An increasing pressure on developing countries to liberalise FDI, as a result of the liberalisation of capital control, started in the 1970s (Harvey, 2007, p.90). Hanson (2001) noticed that since the 1980s, many developing countries at any level of development have dramatically reduced barriers to FDI. This trend accelerated in the 1990s. In addition, fuelled by the presumption of positive spillover and potential benefits of FDI on economic growth, developing countries took one step further, that is, not only creating a set of policies to promote FDI, but also offering various forms of incentives to attract FDI. An alternative explanation given by Harrison (1994) was that, following the disappearance of commercial bank lending in the 1980s, FDI has increasingly become an external source of finance for developing countries. During this time, many developing counties issued several policies and offered a range of incentives in order to attract an inward FDI. These policies would include tax holidays, exemptions for

import duties, and free remittance of profits. Thus, governments in developing countries were pushed into vicious competition for capital in the hope of technological spillovers. Hanson (2001) also notes that these tax privileges are mostly enjoyed by TNCs, but not by local firms in the same line of activity. This section will first examine the intellectual root behind the forces to liberalise. Then, the following section will examine whether or not the assumptions of theories that advocate the benefits of FDI hold under the liberalised regime. It will also seek to justify an attempt to prioritise foreign capital over domestic capital through various forms of incentives.

The ideology that drives liberal policies is known as neo-liberalism. It is worth examining this ideology, which has influenced every corner of economic and political aspects of life, at all levels, individual, national and global levels. In so doing, an insight into the political, philosophical, and economic foundations of neo-liberalism could be gained. Generally, it is observed that the rapid globalisation during the past half decade is driven and influenced by the dominance of neo-liberalism. Specifically, this ideology has accelerated the globalisation through influencing policies on international trade and investment. Many scholars in the international business discipline also notice that the ascendency of TNCs is highly related to the development of globalisation (Rugman, 1981, 2005; Dunning, 1993, 2001; and Rugman and Oh, 2008). Buckley and Casson (2009, p.1573) point out that the direction of causality has not yet been decided. However, it is obvious that the economic dominance of TNCs and the globalisation are interrelated and facilitated by neo-liberal ideology.

3.2.3.1 Neo-liberalism and its Impact on FDI Policies

'Neo-liberalism' was firstly coined by Alexander Rüstow in 1938 (Hartwich, 2009, p.6). The term refers to the liberal ideology that values individual freedom, free market economy and a limited role of the state. The word 'liberal' points to the origin of this idea which comes from classical liberalism, advocated by Adam Smith and David Hume in the eighteenth century. Its prefix 'neo' is meant to show that the idea is a variant from the original in that instead of advocating unrestricted liberty, the original neo-liberalism, advocated mainly by Alexander Rüstow, Ludwig Von Mises and Friedrich Von Hayek, argues for a market economy under the limited guidance of the state. As pointed out by Cassidy (2009) and Hartwich (2009), the meaning of neo-liberalism today has greatly

transformed from its original meaning particularly on the extent to which and in what direction the state should intervene in economic affairs. Recent neo-liberalism, influenced largely by financial economists from the Chicago school of economics, overemphasises the efficiency of market mechanism, so much so, that it argues for virtually no intervention from government. This largely results in liberalisation and deregulation. The distinction between the original and the recent neo-liberalism lies in the extent to which the role of the state is necessary. Even though both agree that the state should have a limited role, the original neo-liberals, however, do accept that the market does inherit some forms of imperfection. Therefore, they argue for a strong role for the state in addressing these imperfections. However, Hayek (1944) maintained that one should bear in mind that the state's interventions incur the limits and that the state could become corrupted if it becomes too strong. As for the recent neo-liberalism, they can be regarded as reactionary. They favour unfettered market economy and suggest a minimalist role for the state.

The force of recent neo-liberalism directly asserts power over the formation of FDI-related development policies. This is reflected in a set of policies widely known as the Washington Consensus which constitutes standard reform packages for developing countries. According to Williamson (2004) who coined this term in 1989, in the late 1990s, the Washington Consensus was seen as containing the more promising development policies in the light of fading importance of the Latin American economic development policies, such as, import substitutions and regulations for FDI. Not only were these policies pushed forward by a group of powerful global leaders, leading neo-liberal economists, who support these policies, also claim that their suggestions are based on the more rigorous theories that are in line with scientific approaches (Bourdieu, 1998).

At the height of neo-liberal era in the 1990s, Williamson (1990) listed ten policies that he believed everyone in Washington, more or less, saw as necessary for development in Latin America. The policies in that reform are:

1) Fiscal discipline – large deficits are not advised as they could lead to balance of payment crises and high inflation;

2) Reordering public expenditure priorities – only pro-growth and pro-poor expenditures are encouraged such as expenditure for education and health care. This also means that industrial subsidies aimed at a few national large firms should be abolished;

3) Tax reform – this suggests a tax system that would combine a broad tax base with moderate marginal tax rates;

4) Liberalising interest rates – this implies the liberalisation of financial sectors. That is both short-term and long-term international financial flow should not be restricted;

5) A competitive exchange rate – the exchange rate should either be undervalued or correctly valued. This policy ensures that no overvaluation would take place;

6) Trade liberalisation – integration into the global economy or trade openness is believed to be the right direction towards development;

7) Liberalisation of inward FDI – as inward FDI is presumed to be beneficial for growth, it should not be controlled;

8) Privatisation – this policy is taken from Thatcher's UK government. It is believed that private enterprise is more efficient than public ones. However, Williamson (2004) notes that successful privatisation depends on how privatisation is undertaken and regulated *ex post*;

9) Deregulation – This focuses specifically on the reductions of barriers to entry and exits whereas the regulations on safety and environmental concerns are to be maintained; and

10) Property right – this is a key institution of the capitalist system. In order to ensure that the development will evolve in a capitalist way, this institution needs to be maintained.

Consideration is now given to the standard development policies that most developing countries have adopted since the 1970s. The direction of the recent progress of these policies or the degree of liberalisation, particularly with regard to FDI, can be seen in Harvey (2007). He lists the policies that the IMF suggested to Iraq in 2003. At that time, many developing countries under the supervision of the IMF and the WB, including Thailand, had already adopted these policies, each to a different degree but all subject to the same direction. Firstly, these policies demand the full privatisation of public enterprises in developing countries. Secondly, they require the full ownership right by foreign firms and full repatriation of foreign profit. Thirdly, foreign enterprises should be entitled for national treatment. Lastly, it is maintained that there must be no trade barriers. As these policies are adopted by many developing countries, they have significantly shaped these countries' economic environment.

It is reasonable to anticipate that these policies have limited and redirected the role of the state in many aspects, particularly, in the area of competition between foreign and national firms which directly affects the formation of domestic entrepreneurs. Baumol (2002) asserted that independent entrepreneurs are far more important to growth than economists have traditionally thought. This study will add that these entrepreneurs must be local in the first place otherwise the path of economic growth may derail from the sustainable route. However, domestic entrepreneurs should be promoted in parallel with the promotion of Schumpeterian innovation. Unless these two institutions are nurtured by the state, economic development under a free-enterprise economy would not be possible (Baumol, 2002).

The following section will provide an alternative analytical framework assessing the impact of FDI on growth under the circumstances where the state is weak and the power of foreign capital is strong. This study argues that the impact of FDI on host developing countries whose market is shaped by neo-liberal policies is likely to be similar to that advocated by dependency theory. The analytical framework, proposed by the critics of FDI also stresses more the nature of the TNCs and their impact on market competition in the host developing countries. It will further show that this alternative framework could prove more compatible with the recent economic environment in most developing countries, particularly in Thailand, under neo-liberal dominance.

3.3 Critical Perspectives on FDI and Economic Growth

The previous section pointed to what aspects neo-liberalism is related to the liberalisation of trade and FDI, the deregulation and re-prioritising of public expenditure which imply the discouragement to protect an infant industry and the use of industrial planning. Protectionist policies are instruments that the state could use to incubate and nurture its entrepreneurial class and domestic firms. As mentioned earlier, firms particularly, a large firm is a key engine of capital accumulation which is also capable of producing knowledge and technology (Schumpeter, 1942). This section presents the theory that can be used to explain the impact of FDI on development under the circumstances where the state of the host developing countries can, to a limit extent, intervene in the market and where TNCs are left unregulated. This analytical framework explicitly takes into account the monopolistic power of TNCs over the weak domestic firms under the environment where the state in host economies appears not to address the competitive incompatibility between the foreign and domestic enterprises. This type of conceptual frameworks can be drawn from dependency theory and several works by Hymer (1970, 1971, 1972, and 1979).

This line of thought tends to suggest the negative impact of FDI on economic growth in less developed nations. Among various propositions, the central tenet of the argument is that an entry of TNCs would reduce competition in the market of developing countries, impede the growth of the local firms and induce the net capital outflow *ex post*. It advocates that relying on the injection of foreign capital and technology for economic development could possibly render them more dependent on the advanced nations for further growth. Even if the development does take place, it is likely to be clustered on the foreign capital-intensive sectors and unlikely to be fairly largely redistributed to the rest of the economy. This, in turn, would trigger an uneven economic development and inequality. This, in the long run, can induce political instability even a civil war. Clearly, this type of growth is not promising for a sustainable development.

These critical perspectives had been lively advocated in the 1970s. Dunning (1994) stated that during this decade, the attitude towards inward FDI was highly critical, if not downright hostile. However, in the 1980s, there was the transitional period where neo-liberalism set up its dominance and became fully settled by the end of the decade. It is an increasing

dominance of neo-liberalism that induced the change of heart towards FDI attitudes and regulations in host developing countries. The rise of neo-liberalism, in turn, is said to be promoted by two historical events. Firstly, the international debt crisis of the early 1980s which sparked from Mexico and rapidly spread among Latin American countries, showed that over-reliance on the state doing everything can be disastrous (Res and Motamen-Samadian, 1987). Secondly, it is due to the breakdown of the Soviet Union and its satellite communist countries (Chang, 2003). These events were interpreted as the failure of the state in promoting efficiency and growth. The recent friendly attitudes towards inward FDI then fully took place in the 1990s. Harrison (1994) assigns the change in attitude to the need for an alternative source of new capital and technology when the public borrowing was no longer available. She added that it was also due to an increasing number of countries whose development failed because of strict regulation on international trade and investment.

From Dunning (1994)'s perspectives, he ascribed this change of heart to several reasons. Firstly, it is due to the renewed faith in most countries in the workings of the market economy. Secondly, since the 1980s, there are increasing numbers of countries, including the Eastern European countries, which started to adopt the capitalist economic system. These countries need to integrate with the global economy and drawn on external resources for development. Thirdly, he notes that in the 1990s, TNCs are the main producers and organisers of the knowledge-based assets which are essential to business success and to economic growth. This makes TNCs the principal, cross-border, disseminators of technology. For this reason, TNCs' investment, FDI, is welcomed by all countries especially developing nations where not only capital but knowledge-based assets are scarce. Lastly, the globalisation which emphasises a regional integration and the realignment of economic systems and policies urges most governments to reappraise the costs and benefits of FDI so that they can tailor their policies towards FDI in such a way that serves their national development plan.

Recently, Chandra and Kolavalli (2006) asserted that the inducement of FDI has become an important strategy in technological adaptation for most countries (Harrison and Rodríguez-Clare, 2009). The attitude towards inward FDI has fully swung to the opposite of that of the 1970s. As a consequence, the development of the theoretical frameworks used for the

critical assessment of the inward FDI on growth has been barely advanced and hardly discussed in recent literature. This study will revisit these works and show that they are still relevant when used to assess the impact of inward FDI under the contemporary global economy. Specifically, this study will show that under the dominance of neo-liberalism, the propositions and predictions, made by the critical perspectives may be more in line with empirical and historical observations, particularly in the case of Thailand than, those derived by the mainstream perspectives.

3.3.1 Dependency Theory and Political Economy of TNCs

Dependency theory, like all other ideas, is the product of a particular place, Latin America and of a particular time, post-colonial. The distinctive intellectual root of dependency theory lies in Marxist economics and the experience of the, so-called, Third world economists such as Raul Prebisch (1982), Ferdinan Henrique Cardoso (1977), and Theotonio Dos Santos (1970). Seers (1983) explained that dependency theory is the result of political suppression and economic distortions that these foreign intellects have witnessed in their developing countries. These economic and political upheavals are induced by the necessity to become involved with the global economy. Their points of view and propositions are worth being regarded as 'complementary ways of looking at the world' to the mainstream economic theory, postulated by European and North American intellectuals. Nevertheless, dependency theory suffers from some shortfalls inherited from its style, which usually lacks the rigours of the neo-classical standard. Moreover, the dependency theorists have been claimed to be somewhat too ideologically inclined to Marxism. Lastly, there is no unity in the propositions made in dependency theory.

Despite these shortfalls, dependency theory is worthy of considerations as an additional analytical framework in this study. Firstly, it possesses a distinct approach to development. That is, while the neo-classical and modern growth theories limit their analysis to economic forces and the availability of factors of production, the dependency approach also embraces the internal and external political and economic forces that cover a wide range of socio-economic and political factors. Neo-classical and dependency theory, although critical of one another, are by no means a substitute for one another. Thus, if both theories and their predictions are equally incorporated into a unified framework, one could expect a fuller

analysis than by using only a single approach. Secondly, dependency theory is found to be a relevant analytical framework because it is analysed in the context where the nature and the capacity of TNCs in relation to that of domestic firms in developing countries are fully acknowledged. Lastly, even though there are various propositions made on the prospect of development in developing countries by the dependency theorists, they all appear to agree on the possibly negative impact of FDI in developing countries. The dependency theory also suggested more indicators, compared to the neo-classical, that can be used to depict indications of the negative impact of FDI on the host countries. These are, for example, an income inequality, an unhealthy balance of payments (BOP) and the displacement of indigenous firms.

Dependency theory argues that the dependence on foreign capital is possibly one of the key factors that deters developing countries from a sustainable growth path. This theory explains that the world consists of 'core' and 'periphery' nations. The former refers to the advanced and technologically-leading economies, such as some powerful European states, Japan, and the United States. The latter signifies the developing countries, whose political and economic powers are limited. The periphery and the core are economically interdependent. Stallings (1995) observed that it is true. Especially after the 1980s, the world economy has become even more interdependent. That is the periphery provides the core with their national resources and the economic surplus generated from their domestic activities. In exchange, the peripheries rely on the core economy for capital and technology as means for their development. The transfer of resources is carried out not by military force but by legal obligations and commercial activities, such as, international agreements and international trade and investment. The repatriation of profits and natural resources back to the advanced countries is legitimised by the enforcement of property right and the civil contract, promoted under the free market economy. It can be said that an increase in activities of TNCs contribute significantly to an increase in a global economic interdependence. Vernon (1967) and Hymer (1979) have predicted this phenomenon long time ago and the political forces and the role of the state are central in their analyses. The striving of the periphery to develop and the need of the core to maintain its rate of growth in the advanced nations reinforce the interdependence of these two types of nations and characterise the contemporary world. However, it is important to note that the economic interdependence between the core and

periphery has also reinforced uneven development. Uneven development is a Marxist concept which refers to the situation that even though capitalism does generate growth in some areas, it also restricts growth in other areas.

Palma (1981, pp.21-64) observes that there are three, principal, evolutionary phases from the pure Marxist analysis of capitalist development in the less developed countries to the development of dependency theory. The first and foremost one is postulated by Marx and Engels' analysis of capitalism. They argue that the high stage of capitalism can be realised in developing countries through colonialism and free trade. The industrialisation in backward countries is triggered by historical progressiveness.

The main proponent of the second phase is Vladimir Lenin in his seminal work 'Imperialism, the Highest Stage of Capitalism', published in 1916. He maintains that the development of capitalism in backward countries will be eventually possible but subject to many difficulties, due to late industrialisation. His work contributes to the core of the dependency analysis of capitalist development in less developed countries. Lenin's idea is a product of the Russian experience at the beginning of the twentieth century. He sees that, at the highest stage of capitalism, monopolistic power surmounts competitive power as a result of the need to maintain the high rate of capital accumulation by the monopoly capitalists in advanced nations. Thus, they seek to export their capital to less developed countries where the return on investment is greater than that in their home countries. Moreover, these advanced nations still need natural resources, often found in less developed countries, to further their home development. As this foreign capital comes along with the knowledge of new modes of production and organisation, it also triggers socio-economic changes in less developed nations.

The difficulty of the late development advocated by Lenin (1916) is in contrast to the argument of Gerschenkron (1965) who saw the advantage of backwardness. From the Russian experience, Lenin pointed out that the slowness and difficulties of capitalist development can be attributed to three factors. Firstly, it is due to the weakness of the *bourgeoisie*. In neo-classical terminology, the *bourgeoisie* may be regarded as the domestic entrepreneurial class which is necessary for advancing the capitalist development. Secondly, he assigns the effect of competition from Western Europe as a cause of deterring the growth

of modern industry in Russia. Lastly, he points to the great survival capacity of the pre-capitalist structure. One of the peculiarities of his analysis is that the weakness of the *bourgeoisie* can be partly explained by the monopolistic competition induced by the Western foreign capital. This point is relevant to the central argument of this thesis which argues that unregulated FDI can hinder the process of development in the developing countries by impeding the development of domestic entrepreneurs.

Despite this, Lenin still acknowledged that foreign capital did accelerate the process of industrialisation but, in parallel, it also created the dependent nature of development. On the monopolistic power induced by foreign capital, Lenin elaborated that this was caused by the far greater efficiency of foreign capital with which the domestic capital is unlikely to compete. In fact, the problems that Lenin identified are common to all nations that take up 'late' industrialisation. It should be noted, however, that as much as the mainstream perspectives downplay rent-seeking behaviours of TNCs, Lenin downplayed the possibility that foreign capital could induce a greater degree of competition as well in industries where domestic firms are relatively strong vis-à-vis foreign firms. With regard to the role of the traditional structure, which also refers to the indigenous ruling class, Lenin sees that its resistance and its adaptability to the capitalist changes play an important role in the process of industrialisation. From Lenin's perspectives, despite the difficulties of the late development, the capitalist transformation could still be achieved in the less developed countries once imperialism is demolished.

The third phase where the formal dependency theory developed has its root in the seminal work of Paul A. Baran, an American political economist, *'the Political Economy of Growth'*, published in 1957. Baran's work was developed at the same time when there was an intellectual movement in Latin America, led by Raul Prebisch. This movement attempted to respond to the monetarism of neo-classical economics which started to manifest itself in the reforming policies that most of the Latin American countries had been forced to implement in exchange for the financial help from the IMF. Unlike the traditional Marxism and Leninism that emphasise the international economic exploitation induced by the process of the late development, the feasibility of the successful capitalist development is the main attention of dependency theorists.

There are two general assertions made on this issue. While some argue that successful industrialisation is feasible only with the intervention of the state, others argue that it is not possible. The latter takes into account the role of the traditional, dominant, ruling class in the less developed countries and the possibility that they would cooperate with imperialist power or TNCs. The capitalist transformation would inevitably shift economic surplus from this class to the new class that is about to be created by capitalist development, that is, the entrepreneurial class or the *bourgeoisie*. Hence, the traditional ruling class would look to preserve their economic and political privileges by avoiding or deterring full capitalist development. This creates the condition for alliances between the traditional ruling class and imperialism. Under these circumstances, the completely capitalist transformation can hardly be achieved and less developed economies may risk remaining underdeveloped forever.

Based on historical events, the imperialist concept, argued by dependency theorists, were observed at least in two countries, for example, Harvey (2007, p.7) points out that Pinochet's Chilean *coup d'état* in 1973 was backed by the U.S. Later, Chile was the first developing country that experimented with neo-liberal development reform. In the case of Thailand, Baker and Pongpaichit (2005) note that soon after his visit to the U.S., General Sarit led the *coup d'état* in 1959. He, then, became very powerful in Thai political history. His junta government declared that Thailand was the American ally against Communism in the Indo-China region. During his time, the relationship between Thailand and the U.S. flourished. The economic legacies that General Sarit left the country are the American free market development model and a close relationship between the Thai technocrats and the World Bank and the IMF. Since then, national economic development in Thailand has been supervised by the WB and the IMF. Several policies were implemented in exchange for a great amount of financial aids on several development projects. This set Thailand to later embrace neo-liberal reforms particularly after the outbreak of the Asian financial crisis in 1997.

3.3.2 Capital Dependency Theory

Capital-dependency theory is an extract of propositions, made by dependency theorists, which is related to foreign investment in less developed countries. The essence of their research question is similar to the economic studies reviewed in section 3.2. Nevertheless,

capital dependency theory is mostly discussed in sociology and tends to give an opposite point of view on the impact of FDI on economic development. This theory advocates that FDI is a device for transferring wealth from poorer to richer nations under the control of TNCs. Their proponents argue that FDI can produce economic growth only in the short run (Kentor, 1998) because while FDI may generate growth in the short run it also creates the dependence on further foreign capital investment for further growth. This is detrimental for economic development in the long run. This is particularly true in the case where TNCs control a disproportionately large share of economic activities in the host economy and where the foreign and domestic sectors are separated with poor linkages between them.

Under these circumstances, the state policies are often held hostage to foreign interest (Kentor and Boswell, 2003, p.301) and the prospect of the long-term growth of such countries is questionable as the host governments have limited capability to act in their own interest. Dixon and Boswell (1996) found that there were an increasing number of cases where FDI appear to have caused a negative effect on development. Similar arguments and empirical findings are also found in Bornschier and Chase-Dunn (1985), Dixon and Boswell (1996), Kentor (1998), Arrighi, Silver and Brewer (2003) and Kentor and Boswell (2003). These authors generally advocate that culminating effects of an inward FDI would render developing economies disarticulated. Besides, FDI would cause the slower growth rate in the long term and induce greater income inequality. Among the scattered propositions made by dependency theorist on the impact of FDI on development, Biersteker (1978) and Milberg (1999) have succinctly pointed out a number of channels through which FDI could possibly distort the economic growth in developing countries. These channels are (i) transfer of resources, (ii) displacement of indigenous entrepreneurs, (iii) inappropriate technology and improper pattern of consumption, and (iv) inequality and stratification induced by FDI via changes in income distribution. Each of these channels will be discussed below.

Transfer of Resources

Critics of FDI assert that it is misleading to perceive FDI always as a net inflow of resources. This point has been raised when the definition of FDI and its measurement has been discussed in Chapter 2. However, for an illustration, capital will be taken as an example. Penrose (1956) noted that when the earnings generated by investments are greater than the

initial capital outlay, there will be a stream of profits to be repatriated from the host countries. Under this context, the inflow of capital will be surpassed by the outflow of income payable to foreign investors and the host countries would experience capital leakages. The outflow of resources could also be disguised by the transfer pricing (Hymer, 1979). Besides, Marin and Schnitzer (2006) showed that FDI is frequently financed in the host countries without an international capital movement. Thus, in many cases, FDI does not induce fresh new dollar investment as widely perceived and most likely to generate the capital leakages in the form of income transfer.

The outflow of capital can also be in the form of imports of services and intermediate goods triggered by an inward FDI. This can be observed from the balance of payments (BOP). Milberg (1999, p.109) asserts that when FDI triggers so much import and causes the outflow of capital remittance, an inward FDI is likely to depress the equilibrium of the BOP in recipient, developing countries. Consider the case where TNCs from advanced countries set up their operations in developing countries that do not produce technology, but where cheap natural resources and low-cost labour are abundant. Under a free market economy, it can be expected TNCs will import all technological-intensive capital goods produced elsewhere more efficiently and use them in combination with the cheap labour and natural resources specific to the host countries. Moreover, some foreign technical services are required in order to operate the imported capital goods. Thus, imports of services are also expected to rise.

Moreover, even though FDI does induce new capital to the economy, it should not be taken for granted. In accounting perspectives, the new capital is a liability that the residents in the recipient countries are liable to foreign investors. The compensation paid for this liability takes several forms such as dividends, management fees, royalties, interest, and profits. These are transferred through an income entry in the current account. Thus, the only entry in which FDI could contribute a positive effect on the BOP is an export of goods, given that FDI is export-driven in nature. This type of FDI generally exports finished products either to a third market or to the home countries of the TNCs. It should be noted that if these export transactions are conducted intra-firms, that is, between the wholly own subsidiaries and the headquarters, it is likely that these transactions are subject to transfer pricing. This would

underestimate the export values of the host countries and, thus, deteriorate their terms of trade. For a thought experiment, Figure 3.1 illustrates the hypothetical BOP that reflects the above scenario where FDI triggers more outward transfer of resources, assuming that the exchange rate is constant.

FIGURE 3.1: A HYPOTHETHICAL BOP DEPICTING THE SCENARIO WHERE INWARD FDI CAUSES LEAKAGES IN CURRENT ACCOUNT

Current account	
Export of goods	(+)
Import of goods	(-)
Import of services	(-)
Income transfer	(-)
Capital account	
Inflow of FDI	(+)
Outflow of FDI	(-)

Source: Adapted from Milberg (1999, p.109)

Figure 3.1 shows that an inward FDI in technological and capital dependent, developing countries tends to cause leakages more than surplus in the balance of payment. It can be seen that, under these circumstances, an inward FDI could affect positively only one out of the three main entries in the current account which is the trade balance. Thus, *ceteris paribus*, the net current account is likely, though not necessary, to be pushed into deficits.

In developing countries, deficits in the current account are mostly addressed by the surplus in capital account which means an increase in liabilities of the residents to TNCs. Clearly, for capital-dependent developing countries, they do not only rely on the TNCs' investment for further growth but they also need inward FDI to maintain their BOP equilibrium. This scenario also implies that exports generated from domestic firms are more desirable than those from TNCs. This is because the exports from domestic firms incur less capital outflow, at least no outflow of income, and represent the real competitiveness of that developing country.

An outflow of natural or physical resources may well be disguised in FDI induced exports. Hymer (1979) and Dunning (1994) noted that foreign investment in primary sectors, such as, mining and forestry, would also create an outflow of natural resources. This is in line with the empirical evidence given by Alfaro (2003) who found that FDI in primary sectors has a negative impact on economic growth.

Displacement of Indigenous Entrepreneurs

The economic distortion induced by an inward FDI takes place through the displacement of the indigenous entrepreneurs. This point challenges directly the FDI-led growth hypothesis which argues that FDI induces more competition. While the FDI-led growth hypothesis states that FDI-induced competition would break the local monopoly, dependency theorists argues that FDI is likely to impede the formation and the growth of domestic firms, if not drive them out of the market due to the superior competitiveness of TNCs. Chapter 2 shows that TNCs are large in size and usually have competitive advantages due to their economies of scale, global network, technology and access to a pool of different resources of different qualities. Whereas, domestic firms in developing countries, at their best, can only take the form of a large family or national firms, by their limited resources and organisational power, without the protection of the state, are likely to be put at a disadvantage.

On empirical evidence, the crowding-out effect of FDI in host country is inconclusive. While De Backer and Sleuwaegen (2003) and Agosin and Machado (2005) found that FDI displaces domestic investment, Misun and Tomsik (2002) do not find any support. More specifically, De Backer and Sleuwaegen (2003) notice that the crowing-out effect could be reversed in the long run. However, it must be noted that their evidence is drawn from the Belgian chocolate industry where domestic firms are known to have a great expertise in this line of business. Thus, the entry of foreign firms may discourage domestic investment, only initially. Once domestic firms have calculated how to react, retaliation will definitely take place. The competition can then be preserved. By way of contrast, domestic firms in developing countries are known to be mostly small, inefficient, scattered and technological incompetitive. The entry of large and strongly efficient firms would leave no room for small firms to grow without the protective and supporting policies from the host, developing countries' government.

In the case of Agosin and Machado (2005) who drew data from Latin American countries, they reported a crowding-out effect. Similarly, Udomkerdmongkol and Morrissey (2008) conduct a cross-country study, using data from 36 low and middle-income countries covering the period 1995-2001. They found that FDI tends to displace domestic private investment. Misun and Tomsik (2002), working with data from three Eastern European countries, found a crowding-in effect in Hungary and Czech Republic but a crowding-out effect in Poland.

In the case of missing industries, that is, the production of goods which have never been produced domestically prior to an entry of TNCs, FDI tends to position domestic firms as their satellite companies. Consider the case of the automobile industry in a country where there is no national car policy. An entry of TNCs will only create the suppliers of the automobile parts for the TNCs. The suppliers are satellite domestic firms to TNCs and operate mainly at the lower tiers of industry involving a relatively low level of technological sophistication. It must be noted that the higher the industrial tier, the higher the rate of return on investment. This, in turn, will determine the rate of capital accumulation of the countries whose firms participate in different tiers of the industrial hierarchy.

From the experience of the NICs, domestic firms can grow large enough to reap and enjoy the super profits generated at the higher tier of the industry only with the assistance of the state, through various supports in the form of industrial policies such as, subsidies and requirements for joint-venture as a mode of entry especially in the highest tier of an industry. If domestic firms are left to be a satellite forever, this would affect the process of accumulation of wealth, not only at the firm level but also the national level. This is because the size of profit in the lower tier of the industrial hierarchy is far less than that in the higher tier, assumed from the number of incumbents in each tier.

In the case of the countries where neo-liberal development policies prevail such as, Thailand and Mexico, based on their automobile industries, it is observed that local firms, to their best, serve only as suppliers to TNCs and never become TNCs' direct competitors. As mentioned earlier, in the absent of TNCs, it is likely that these satellites domestic firms would need some form of cooperation and possibly government subsidies to serve the local market as car producers. However, as to why the sub-optimal policies are adopted in stead of the

96

optimal ones, it can be explained as follows. Once TNCs is chosen or prioritised over local firms, domestic entrepreneurs could still benefit from FDI through an establishment of vertical linkages and act as periphery firms. This scenario is well studied under FDI-led growth studies and has been reviewed earlier. However, in this case, even though growth is generated in some sectors, it is sub-optimal because domestic firms are not forced to produce technology and knowledge since they develop a common vested interest with them. Domestic firms may even be complacent with their situation and do not consider challenge the market position of TNCs. It is true that these satellite domestic firms might retain a handsome part of the surplus created by foreign operations in domestic economy. On this, dependency theorists argue further that this part of wealth will only be held and shared among few domestic elites. It would probably be used for their extravagant consumption. In the case where it is reinvested, the reinvestment is not meant for innovation but for maintaining their political network which would be served as means for securing and gaining further static economic rents. This topic will be discussed in more details later.

Furthermore, Biersteker (1978) advanced that the driving-out effect does not only occur by the disparity in competitive advantage and greater efficiency attached to foreign capital, it sometimes takes place by buying-out practices. Merger and acquisition (M&A) plays an important role. These practices take place when TNCs use their domestically generated profits to buy out domestic firms that can be found in related industries or even their domestic rivals. The buying-out practices are also facilitated because developing countries may not have good competition law in place to regulate market competition and regulate the anti-competitive conducts of firms. It is essential to note that investments stemming from these practices, according to the accounting standard of the IMF, are also counted as FDI. This emphasises the fact that not all dollars registered as FDI generate fresh foreign capital nor do they add new productive capacity to the local economy. Moreover, this data registration principle could cause misleading results when the FDI is used to assess empirically the impact of FDI on the host country.

It should be noted that the displacement of indigenous entrepreneurs reinforces the market positions of TNCs in the local market which, in turn, increases the propensity of the outflow of capital and resources. Without independent domestic entrepreneurs, the process of

industrial decision making and the implementations will be taken by TNCs. This reduces not only the power of the host government on industrial planning but also raises the degree of dependency on foreign capital. On the autonomy of the state and development, Hirschman (1969) advocates that the achievement of industrialisation depends on domestically institutional reforms and the ability of the state to negotiate with social power groups whom might be a treat to the country's development, even those with military power. However, he emphasises that this is unlikely to be the case when the new and more dynamic industries are controlled by foreigners.

When it was first stated, Hirschman's argument used to be a counterfactual argument. Now, the experience of economic development from Japan, NICs and China, with the exceptions of Hong Kong, the Gulf states, and India whose share of foreign activities to that of domestic are relatively high, has proved that it is the case. The history of successful development in these countries shows that their governments have played a significant role in directing FDI into the strategic industries where the state highly regulated (Chang, 2003). It also shows that, in some cases such as Japan, Taiwan and South Korea, their governments worked in corporation with domestic entrepreneurs to build up national competitiveness (Ozawa, 1979; Amsden, 1991; Il Sakong, 1993; Chang, 1993; Kim, 2000; Amsden and Chu, 2003).

The displacement of indigenous entrepreneurs would drive domestic employment to be clustered mainly in TNCs dominated sector, which can be in manufacturing and service sectors, and the public sector. Thus, under the neo-liberal regime in which the private sector is larger than public sector, it can be anticipated that domestic labour relations are mainly managed by foreign entrepreneurs. All of these would contribute to the reductions of development capability, even with growth in some sectors continues. The internally uneven development can even trigger social conflicts possibly between those who benefit from FDI and those who do not. More extensively, the conflict can take place between TNCs and the host government. In the case where the host government is allied with TNCs then the conflict would run between them and the non-governmental organisations that represent local people or the mass who do not benefit from FDI-led growth strategy. Similarly, the limited role of the state, constrained by neo-liberal reforms and their induced-economic

forces, could weaken the political capability of developing countries. When considering this in the light of liberalisation of foreign operations, the prediction and the arguments stemming from dependency theory appear to be more relevant.

Inappropriate Technology and Improper Pattern of Consumption

While the above topic addresses the pecuniary externality of FDI, that is, its impact on competition, the counter argument to technology transfer conveyed by an inward FDI, can be divided into three points (Biersteker, 1978, pp.9-17). Firstly, as discussed in section 3.2.1.2, when the empirical evidence of FDI-generated spillovers was reported to be inconclusive, critics of FDI argue that it is because little technology is transferred. This is mainly because TNCs have virtually no incentive to tolerate technological leakages, in particular, to their potential local rivals. Moreover, without the local content requirements imposed by the host government, TNCs may prefer to import intermediate goods produced more economically elsewhere. It follows that, as market transactions are a means of technological transfer, the importation by TNCs would reduce transactions between domestic firms and TNCs. Thus, the propensity for technological transfer should reduce accordingly (Amsden, 2003). Besides, their research and development activities are mostly concentrated in home countries where highly skilled labour is abundant and their interaction with the TNCs' executives can be set up promptly, as discussed in Chapter 2. The expenditure on R&D is notoriously known to be significant and large enough to be compensated only with monopolistic returns. Thus, TNCs would pursue the monopolistic position.

Secondly, critics continue to argue that technology transfer by TNCs, if it takes place, appears to be inappropriate to the local environment, both in terms of technological production and consumption pattern. For example, while the stylised facts show that developing countries are abundant with unskilled labour, technology transferred to developing countries is mostly capital-intensive and more suitable to developed countries. The explanation for this is that technology is not only created but also largely intended to be commercialised in advanced nations (Vernon, 1979). Inappropriate technology and improper consumption patterns are accepted in developing nations partly because of international demonstration effects and the impact from heavy use of marketing strategy (Hymer, 1979).

However, exceptions can be increasingly observed in final products, such as, household products. This is because the adjustment to local demand for final products does not take a large sum of additional investment. On production technology, the alteration to suit local conditions is still limited. Without competitive forces or legal obligations, the producers of these technologies have less incentive to alter the nature of technology to suit the composition of resources in host developing countries. In this case, modern and traditional sectors in host developing countries would become even more disarticulated.

The third point raised by the critics of FDI refers to an inappropriate pattern of consumption in less developing economies as a result of the transfer of inappropriate technology. It is true that an entry of TNCs clearly induces product improvement at lower price and enlarges the existing product variety in the domestic market (Vernon, 1967). However, among other Marxist critics who see that, by way of demonstration effect, the lifestyles of the rich are emulated by the poor. Hymer (1979) argues that TNCs would distort the pattern of consumption in developing countries by altering their attitudes, values, lifestyles, and technological development. Biersteker (1978, p.14) points out that the mechanism by which TNCs distort the pattern of consumption are often tied with the growth of foreign firms in domestic market and their use of marketing strategies. As TNCs grow in a domestic market, they also take over the decision on what to produce and in what quantity. Thus, the choices of products and their price available in host developing markets are accordingly determined by TNCs. The power of TNCs over the pattern of consumption would grow even larger in the absence of domestic competition. To be fair, one has to take into account that changes in the pattern of consumption are also naturally triggered by the process of industrialisation. Hence, this case is debatable but there are still some elements of truth. Vernon (1967) suggests that the changes induced by TNCs are inevitable but the degree of distortions in patterns of consumption can be regulated by the host government policies. In case of failures to do so, it is host government that is responsible, to some extent, for what happens and is open to blame.

Inequality and Social Stratification

The domination of foreign control over domestic productive activities, the displacement of domestic entrepreneurs and the introduction of inappropriate technology and pattern of consumption all contribute to an inequality and an uneven development. Dependency theorists (Sunkel, 1973; Cardoso and Faletto, 1979; Evans, 1979 and 1995; Evans and Timberlake, 1980; Bornschier and Chase-Dunn, 1985; Dixon and Boswell, 1996, Kentor and Boswell, 2003) strongly argue that the penetration of TNCs induce changes in social stratification, that is, they trigger change in the hierarchical arrangement of individuals into disproportionate division of power and wealth in the host developing society. However, instead of changing for the better, FDI is likely to cause changes for the worse as the social stratification induced by FDI tends to increase income inequality and the division between rural and urban sectors. This results from various policies which may be the product of an alliance between traditional ruling elites less developed nations and TNCs. When FDI is promoted, it reinforces not only the formation of the centre-periphery model of the world political economy but also the centre-periphery structure within a country. Gradually and eventually, this would widen the income gap between local elites and the local mass in developing countries. Increasing income inequality in growing developing economies usually reflects the biased distribution of income towards the rich even though the size of the economy remains growing. This is because largely the benefit of development is selectively distributed to those who have political and financial power. In the long run, increasing inequality will work against development as it will induce political instability that will put the country in an unfavourable position for future foreign investment which in turn is the main impetus of growth for this type of economy. Without sufficient foreign funds, periphery economies would cease to grow and the economic downturn would even exacerbate the seriousness of domestic politics. The concept of social inequality has recently been presented in the mainstream economic model as seen in Basu and Guariglia (2007) which has been reviewed earlier.

The mechanisms through which TNCs contribute to change in social stratification are for instance, employment, and transfer of inappropriate technology. Within a bigger picture, this can be explained as a process of global division of labour brought about by the

internationalisation of the TNCs' operations. Through labour market, this study showed that TNCs usually pay their local management a premium in order to reduce technological spillovers. This makes the minority of local, medium to highly skilled employees, direct beneficiaries of FDI. These employees, because of their career development and the will to emulate lifestyles of their employers, quickly developed vested interest, and adopted the value and lifestyles in common to their employers (Hymer, 1979). In parallel, these employees also enjoy privileges and an increasingly dominant position within their local society thanks to wage premiums and benefits they earn from TNCs. Thus, they tend to preserve their social position.

Through the transfer of inappropriate technology, this study demonstrated that new products and new mode of production that TNCs introduce may only benefit a small number of domestic groups. In fairness, this problem can be alleviated using the state interventions particularly the use of industrial planning and redistribution but under the neo-liberal policies, the use of these types of interventions are significantly discouraged (Biersteker, 1990). The economic and social distortions induced by an inward FDI through the above mentioned channels will eventually increase an inequality which would destabilise domestic stability. This becomes one of common characteristics of economic growth in most of developing countries after the 1990s.

3.3.3 Dependency Theory and Neo-liberalism

Dependency theory captures the critical aspects of FDI that could impede economic development, particularly in developing countries. It must be noted that despite being a complementary analytical framework for assessing the impact of FDI, dependency theory had underplayed several important elements for the analysis of FDI and growth. Firstly, dependency theory treats the government in host countries and domestic entrepreneurs as totally passive institutions which are unable to manage the conducts of TNCs and hence unable to change the path of the country's future development. This might be true in some cases where the state is very totalitarian and led by a group of elites, or a single person who lack not only goodwill but also an economic vision. However, the economic experiences of NIEs and Japan showed that the state and the domestic industrial capitalist class do play a crucial role in development process and can make a difference if it so wishes.

Even though underplaying the role of the state and domestic entrepreneurs is considered as a shortcoming of dependency theory, it does make the dependency framework suitable for analysing FDI and development under neo-liberal regime. Neo-liberal development policies tend to create a weak state when it comes to regulating trade and investment and over-emphasises the market mechanism. As a result, neo-liberalism tends to unsuccessfully create a strong cadre of competitive domestic entrepreneurs. In the case where the domestic private sector is weak and where the state regulations on international trade and investment are limited, it tends to produce the market conditions from where dependency theorists made observations and developed their theory.

Secondly, critics of FDI play down the aspect of value creation through an entry of TNCs and their technological spillovers (Dunning and Pitelis, 2009). It is undeniable that, in many cases, with their superior knowledge in production, an entry of TNCs, widens the varieties of products in domestic markets and offer better quality goods at a lower price. In fairness, the late development might not possible without FDI but it must be noted that the sustainable development could not be achieved neither without the interventions from the state.

Thirdly, dependency theory treats FDI homogenously (Biersteker, 1978). As reviewed in Chapter 2, there are several types of FDI, such as, market-seeking, resource-seeking, efficiency-seeking and strategic asset-seeking. Each type of FDI is likely to generate a different impact on the host countries as summarised in Appendix B. Hence, FDI should also be treated specifically within its context. In addition, critical perspectives might have been far too pessimistic to believe that FDI and development is a zero-sum game, whereas the non-zero-sum situation is possible. This implies the well-crafted policies towards managing inward FDI.

Global development of capitalism is facilitated by political processes taking place at both national and international levels. Critics of FDI in the 1970s, for example, Evans (1979), argue that an alliance between elites in developed and developing countries has formed to secure the establishment of a centre-periphery structure in which only one-third of the world's population is enjoying the benefits while the other two-thirds are left behind (Hymer, 1979). This uneven development gives rise to some dependency theorists who question the

possibility of a complete capitalist development. From the experience of the NICs's development, it is observed that a successful capitalist development can be made possible only when the economic inequality is kept to the minimum. However, despite difficulties of being late in development, the states in NICs still succeeded in breaking the centre-periphery structure of the world economy and led their nations to a high income status while most of their counterparts did not. These successful states are known for their authoritarianism, their interventions in the market, and their explicit support for domestic entrepreneurs.

In contrast, those states that fail in development are mostly known to be weak and politically corrupted. The ruling elites in the unsuccessful countries such as those in Latin America and Africa tend to be frequently challenged by other domestic political rivals. The domestic political vulnerability in part forces them to make alliances with external political supporters, which are mostly the powerful countries. In return, these ruling elites need to accept the conditions, imposed by powerful nations, of which one of the main clauses is to be lax with the foreign operations in their territory. These conditions are, in fact, share similar grounds to the neo-liberal reform policies.

Thus, even in the 20th and 21st centuries, the topics that development scholars discuss are changed to, for example, globalisation and development, the technological spillovers from FDI, the failure of Washington Consensus, the effectiveness of the IMF and the World Bank as international organisations that are responsible for ensuring that capitalism would work smoothly for every country, and the eradication of global poverty, the very nature of these problems might be said to be similar to what dependency theorists were discussing fiercely back in the 1970s. However, there is one difference.

3.4 Summary

This chapter approaches FDI from the macro-economic point of view. It shows that when FDI is analysed in a growth context, it is usually perceived as a long-term capital flow which brings not only additional capital but also advanced technology to host countries. As capital and technology are among key sources of growth, FDI is then presumed to be beneficial to host economies. For these reasons, the conventional perspectives, derived mainly from growth economics, advocate that FDI is beneficial to a host country's economic growth.

This is because additional capital helps to reduce the saving-investment gap in a host country. Technology that is expected to be generated through spillovers will help to increase the productivity of the nation as well as to upgrade the host country's competitive advantage along the path of its development. Technological spillovers are theorised to take place in the following channels, namely, demonstration effects, labour turnover, vertical and horizontal linkages. The likelihood that these spillovers would take place, in turn, depends on, for example, the technological gap between the host and the home countries, the trade regime and the level of financial development and human capital in the host countries.

The evidence in support of the positive impact from FDI on economic growth, both drawn from case studies and cross-country studies, is inconclusive. In the cases where the positive impact of FDI is presented, it is conditional on the factors, such as, the level of human capital, the trade regime, and the level of financial development in the host countries. It points to the role of the state in shaping domestic markets in such a way that the positive spillovers are likely to be materialised. This is in line with the argument found in the international business discipline which asserts that the impact of FDI is specific to context and it requires the state interventions to materialise the benefits from FDI. The study then reviewed the contemporary FDI regime. It is seen that the contemporary FDI regime and economic development model that most of the developing countries are implementing is largely influenced by neo-liberal ideology where the roles of the state in regulating FDI are kept to the minimum. Neo-liberalism is in favour of free trade and free capital movement. It also believes in market efficiency gained through an increase in competition but it seems to ignore the fact that TNCs who produce FDI are anti-competitive in their very nature. In addition, as this ideology appears to prioritise a market mechanism over the state's planned direction and the state's regulation, it tends to create the market conditions in developing economies where TNCs are left to their freewill.

As a result, it follows that in host developing countries where neo-liberal FDI and development policies prevail, one is likely to observe a weak state and the competition in which relatively weak and unprotected domestic firms rival directly with stronger TNCs. It can then anticipate that such competition is likely to drive out domestic entrepreneurs and undermine the incubation of a strong domestic capitalist class which is necessary for a

complete capitalist development. Under these circumstances, FDI is unlikely to benefit host countries because the policies that host countries adopt do not seem to create the institutional configurations that facilitate the occurrence of positive impact from FDI. Moreover, it is likely that as TNCs are left to freely pursue their growth strategies, this tends to create the economic and social phenomenon where dependency theorists observed such as an uneven economic development.

The literature review then introduced a complementary analytical framework that may be useful to assess the impact of FDI under the dominance of neo-liberal policies. This analytical framework is derived mainly from dependency theory. It argues that FDI is likely to be detrimental to economic development. It must be noted that dependency theorists maintain that economic growth generated by FDI remains achievable. However, the type of economic growth that FDI generates may not support developing countries in achieving complete capitalist development. This is because FDI-induced growth may cause the problem of transfer of resources, displacement of indigenous entrepreneurs, inappropriate use of technology, and social inequality. More specifically, a passive state, inefficient domestic entrepreneurs, and over-reliance on FDI, would only make a developing country become more capital and technological dependent on advanced countries. In these circumstances, developing countries may not fully benefit from FDI.

Chapter 4: Conceptual Framework

4.1 Introduction

This chapter attempts to link together a number of theoretical concepts to explain inward FDI and economic growth from three major disciplines, namely, international business, growth economics and political economy. It seeks to join the theoretical approach to FDI from both institutional aspect and macroeconomic aspect in a single framework. Theoretical discussion about the relevant concepts has already been presented in Chapter 2 and 3. The direction of the discussion, in this chapter, will be channelled directly to the generality of the research question; how FDI affects the development of host developing countries.

This study resorts to the unified framework, developed by Dunning (1981), namely, the Investment Development Path (IDP). It is a single, dynamic framework that shows the relationship between FDI and a full path of economic development. This framework represents the evolution of the international, direct investment position of a country across its path of development, that is, from the early stage of development where an income *per capita* is low to the later stage of development where the income *per capita* is high.

The original IDP represents the case where the full capitalist development is achieved. However, an altered IDP can also depict the dependent capitalist development that is argued by dependency theorists. More specifically, the negative impact generated by an inward FDI, under the neo-liberal influenced can also be depicted by the altered IDP. In parallel

with the conceptual presentation of the two possible scenarios of development in relation to FDI, the study also develops an exogenous FDI-growth model, which is able to represent the aggregate production function of an economy that benefits or suffers from international investment.

This chapter is structured in the following order. Section 4.2 introduces the original IDP framework where the positive impact of FDI is presented. Also in this section, another possible scenario where FDI negatively affects economic growth will be elaborated using the alternative IDP framework. Section 4.3 presents the modified neo-classical production function which is designed as a theoretical platform for empirical analyses in Chapter 6. Section 4.4 presents a summary.

4.2 An Integrative Framework of FDI-Growth Concept

To conceptualise the link between FDI and economic development in a market economy, and in order to achieve fuller analysis, one needs to take into account the role of the host government and its domestic firms. This is because the state, in principle, has a direct role in promoting economic growth by shaping the market environment, thanks to its absolute power in the creation of law and order. It is the type of the market environment that the state creates that in turn determines the impact of FDI on economic development. The state is also responsible for designing and implementing growth-enhancing policies which serve not only the country's economic development but also the improvement in the welfare of most, if not all, citizens. A domestic firm represents a type of economic institution that is highly capable of allocating resources effectively and accumulating capital better than many other form of economic institution. It is also where most of the nation's productive capability is stored. As depicted by Penrose (1995), she noted that the economic success of a nation depends very much on the number of effective firms it hosts. To be more specific, Lewis (1980) and Amsden (1994) correctly point out that the effectiveness of domestic firms plays a leading role in economic development. It is an innovative and productive capability which is stored in domestic enterprises that drives the country into the even higher stage of economic development. It must be noted that the effectiveness of national firms, in turn, depends largely on its government policies that directly shape the market environment in which these firms compete.

The framework, elaborated in the following sections, seeks to capture the interplay of the formation of ownership-specific advantages of the local firms *vis-à-vis* those of TNCs, across the development path of the host countries which adopt a FDI-Growth nexus as one of their growth strategies. However, as the dynamic framework does not provide the theoretical model that can be used for an empirical analysis on the impact of FDI, a static exogenous growth model is then proposed to serve this objective. The dynamic conceptual framework to which this study resorts is the Investment Development Path (IDP), proposed by Dunning (1981), and reiterated by Dunning (1986, 1988, 1993, and 1997), Dunning and Narula (1996) and Buckley and Castro (1998). Dunning (1981) advocated that there is a systematic relationship between a country's net outward investment (NOI) and the stage and the structure of a country's economic development.

In the IDP, the Net Outward Investment is the key indicator. It is measured by the stock of outward FDI minus the stock of inward FDI. According to Dunning (1981, p.110), the NOI position can reflect the OLI advantages that a nation and its firms possess relative to those possessed by foreign countries. However, it should be noted that what the NOI reflects most evidently is the difference between the specific advantages owned by domestic firms and TNCs. It must be noted that the specific advantages owned by domestic firms reflect the country's productive capability. Thus, it can be reasoned that the NOI can reflect the difference between the productive forces of the nation to that of the rest of the world. The stage of development in this framework, approximated by income *per capita*, can be classified into five categories according to the propensity of a country in receiving inward FDI and producing outward FDI (Dunning and Narula, 1996). It is worth mentioning that, out of the stages which will be reviewed below this study focuses mainly on the second and the third stages as they are most relevant to the stage of economic development in Thailand (Duran and Ubeda, 2001 and Bende-Nabende and Slater, 2005).

4.2.1 First Scenario: the Investment Development Path

The Investment Development Path (IDP) was originally developed by Dunning (1981). He used the IDP to depict the hypothetical case of successful capitalist development of open economies that participated in late industrialisation. It can be said that the IDP framework shares the common analytical grounds with the old development economics where the

broad socio-economic processes and structural changes are taken into account. Specifically, it emphasises the role of the state as an agent of change and the nation's productive capability as an impetus of perpetual growth. In this framework, it is assumed that these developing countries were open to international investment and relied on inward FDI as one of their main sources of economic growth. Figure 4.1 depicts the original concept of IDP.

FIGURE 4.1: INVESTMENT DEVELOPMENT PATH
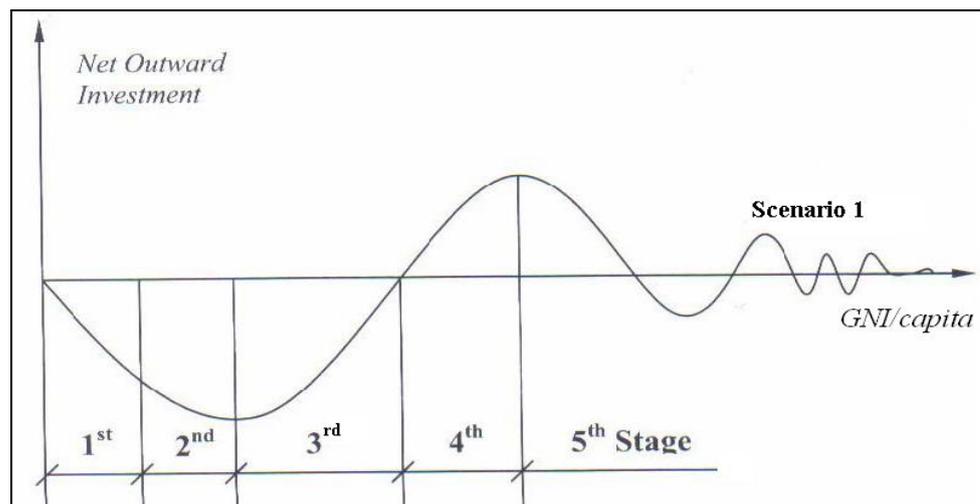
Source: Adapted from Dunning and Narula (1996)

Figure 4.1 depicts five stages of economic development in relation to the position of NOI. The y-axis depicts the NOI while the x-axis represents the GNI *per capita*. An initial point suggests that the NOI is zero but it does not necessarily mean the GNI *per capita* should be zero. Dunning (1981) pointed out from his cross-country observations during 1967-1975, that international investment would take place only after a threshold of income *per capita* is reached.

The first stage refers, particularly to the early development of poor developing countries. Developing countries that embraced the liberal market economy after the World War II can also be classified into this category. It is seen that the NOI, at this stage, takes a negative value and tends to move downward. This represents an increase in stock of inward FDI while outward FDI virtually does not exist. Indeed, it is the result of differences between OLI advantages of a host economy and those of the rest of the world. On the ownership-specific advantage, it is likely that there is little technological and capital accumulation taking place in domestic firms at this early stage. Hence, they do not produce outward FDI.

Existing domestic firms tend to be protected by the government and operate in labour-intensive manufacturing and primary industries. Regarding locational advantages, these newly open countries offer opportunities for TNCs to benefit from accesses to their resources, such as, natural resources, cheap unskilled labour, growing domestic market and participation in a bid for the concession of infrastructure projects. In response to the low ownership-specific advantage of the local firms and the locational advantages of emerging nations, TNCs tend to utilise their higher ownership-specific advantages by internalising an international market transactions which results in making an inward FDI. It follows that at this stage, the nature of inward FDI is more likely to be resource-seeking and market-seeking.

The government intervention for development, at this stage, takes several forms (Dunning and Narula, 1996). First is the role of the producer of public goods. This refers to the provisions of the basic infrastructure necessary for economic development, such as, education, health care, irrigation, and transportation. Others are the roles of the regulator and influencer. This refers to the provision of institutional infrastructure, such as FDI regulations, serving to protect relatively weaker domestic firms and subsidies, serving to compensate the weakness of domestic firms in the light of international competition. Indeed, the provisions of public goods and appropriate institutional infrastructure also imply the role of the state as a planner. The creation of public goods is meant to ensure that private enterprises in the country would have an access to basic resources for a firm's growth. The institutional infrastructures are used to mitigate imperfections in the market that might impede the accumulation of the ownership-specific advantages of domestic firms in the long run.

The second stage is the consequence of the first stage. It depicts an economy that has been integrated with the global economy for quite some time. At this stage, the NOI becomes more negative because of a continuing increase in inward FDI while domestic firms' ability to produce outward FDI remains limited. Despite the decreasing NOI, it is at this stage that an outward FDI, made by domestic firms should gradually emerge (Dunning and Narula, 1996). In parallel to this, it can be observed that income *per capita* continues to rise. It must be noted that the differential rate of growth of various countries can only be explained on a contextual basis. The types of inward FDI in the second stage can take the form of

resource- seeking, market-seeking and efficiency-seeking. The third type of inward FDI is the product of the vertical integration of the productive value chains between TNCs and domestic firms, induced by improvement of the locational advantages of the host country. This is because the provisions of infrastructure during the first stage of development are largely materialised. Market-seeking FDI remains significant because an increase in income *per capita* would mean an increase in the size of the market. This gives a signal to entrepreneurs of a potential demand to be satisfied.

Indeed, the capital imported during these stages will still be used to close the saving-investment gap in the host economy. The technology and knowledge, attached to inward FDI, can contribute to improve the country's productivity. By the same token, it is crucially important to note that the more a country receives inward FDI without any attempt to increase its stock of productive capability, the more likely it is to become passively dependent on the global economy for ever more capital and technology. A complete capitalist development cannot be achieved if the economy is totally dependent on the richer countries, but it also cannot be achieved without their support. Thus, the state has an important role in putting forward strategic and dynamic strategies to balance the economic and technological dependence and attempts to minimise if not liberate from this dependence. One possible means to liberate from such dependence is through the creation of ownership-specific advantages, embodied in its domestic firms.

The role of the government in this stage is no less, if not more, crucial than that in the first stage. It has to ensure that domestic firms could benefit from a growing market no less than their foreign counterparts, taking into account the inferior competitiveness of the local firms. It can be said that the institutional infrastructure that the state is liable to provide to domestic firms remains important as they could help domestic firms to accumulate and develop their ownership-specific advantages. Basically, in parallel to receiving FDI, the host government is liable to implement all the necessary policies that would help to materialise FDI spillovers as well as maintain the best possible scenario of fair competition. This is because market is not perfect particularly in the area where FDI is intensive. It is likely that these imperfections are in favour of TNCs, otherwise they would not have the incentive to internalise in the first place.

The third stage is characterised by an increase in outward FDI and a decrease in the negative NOI. As a result, the NOI position starts to head upward. Nevertheless, it remains negative but to a lesser degree. It is important to note that this scenario could only take place when domestic firms, to some extent, increase their ownership-specific advantages in relation to TNCs. Dunning and Narula (1996) suggest that at this stage, the country starts explicitly to experience structural changes in its comparative advantages. These structural changes are natural results of development, more importantly, the well-crafted development policies. Similarly, factor prices will change. Wages tend to rise. The rising wages and factor prices erode the country's comparative advantage in labour-intensive activities. It must be noted that controlling wages would only increase market imperfections and economic distortions. In addition, maintaining low wages might even raise the risk of a country becoming locked in the specialisation of low value-added activities.

In terms of domestic competition, the protection to domestic firms by the government during the earlier stages of development could be gradually lifted. It is assumed that domestic firms should accumulate enough ownership-advantages and are ready to compete directly with TNCs in some sectors (Dunning and Narula, 1996). At this stage, the role of the government, in supporting domestic firms, remains important even though to a lesser degree. The government could reduce its role to act as a facilitator of domestic firms once they have acquired a significant level of ownership specific advantages.

Regarding outward investment by domestic firms, it is driven by two broad motivations. Firstly, outward FDI is meant to be market-seeking and efficiency-seeking. This outward FDI may serve as a means to relocate the once competitive domestic industries to a foreign territory whose economic environment still offers a favourable return on such investment. For example, as the economy evolves, minimum wages tend to rise and the country loses competitiveness in labour-intensive industries. Hence, its investors look to invest in economies where the labour cost remains low, such as the FDI that Japanese firms made in Thailand after signing the Plaza Accord in 1985. Secondly, it can be explained by strategic-seeking FDI which is an international investment to acquire and control knowledge and technology available outside the home country. This asset is essential to upgrade the comparative advantages and accelerate the growth rate for the late industrialisation. The outward FDI during this period could serve as a means to address the structural change in

the home economy and helps to reinforce its ownership-specific advantages.

In the fourth stage, the stock of outward FDI is greater than or equal to that of the inward FDI. The economy now exhibits the new pattern of specialisation and the number of the domestic TNCs increases. The economy then enters the last stage of development where it is fully industrialised. At the fifth stage, the net value of the outflow of FDI and the inflow of FDI, or the Net Outward Investment fluctuates around zero. It is important to note that the higher stage of development and the more its firms are equipped with ownership-specific advantages, the less direct state intervention in the competition between foreign and domestic firms is needed. More details of the fourth and the fifth stages can be found in Dunning and Narula (1996) and Duran and Ubeda (2001).

4.2.2 Second Scenario: the Capital-Dependent State

The state and its nature of intervention play an important role in determining whether a developing country would enter into the virtuous cycle of development or the vicious cycle of dependency. Whereas the first scenario represents a successful development path of the late industrialised countries whose government implemented development policies and successfully change its relatively backward economy towards a fully industrialised one. The second scenario represents a dependent development path that is depicted by the capital-dependency theory. This scenario depicts the economic development that over-relies on inward FDI and where the state interventions, aimed for helping domestic firms equipped with ownership-specific advantages, are kept to the minimal. It will be seen that this scenario could also explain the phenomenon of the middle-income trap that a number of developing countries, including Thailand, are experiencing. If it is believed that the nature of specialisation dictates the national income, the middle-income trap could be explained as the failure of a country to upgrade successfully its comparative and competitive advantages over the path of its development. It points directly to a lack of productive capability, or the lack of ownership-specific advantages in domestic firms which, in turn, may be the result of over-reliance on inward FDI and the lack of the protection of domestic enterprises.

It will be seen that the role of the state in the second scenario is similar to the role of state in the country where the neo-liberal development prevails. Figure 4.2 depicts the

hypothetically systematic relationship between the NOI and the stage of development in capital-dependent developing countries.

FIGURE 4.2: DEVELOPMENT PATH OF A CAPITAL DEPENDENT STATE
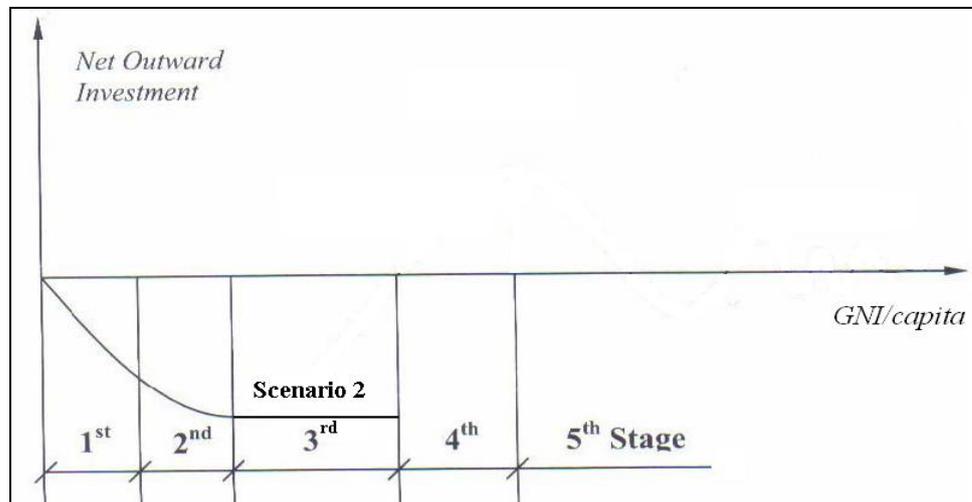
Source: Adapted from Dunning and Narula (1996)

Figure 4.2 exhibits the scenario where a developing country, even after participating in an international economy for some time, fails to increase the nation's ownership-specific advantages relative to that of TNCs. The behaviour of the NOI during the first two stages of development are very similar to those of the first scenario and there are many reasons to believe that there should be great differences in institutional configurations embedded in the host countries, so much so, that the pattern of NOI exhibits differently in the third stage of development.

More specifically, this study will point out that under the neo-liberal influence, several state interventions have been re-directed or suppressed in such a way that the neo-liberal state could not undertake the same set of policies portrayed in the first scenario. This can possible determined the difference behaviour of NOI between the first and the second scenarios and hence the different path of economic development. In fairness, the reasons behind the implementation of ineffective policies may not only be limited to the neo-liberal influence but also to the nature of domestic politics. Specifically, if there are political instabilities and corruptions, the provision of a basic infrastructure may not be as efficient as it intended. For example, the government budget, deemed to be spent on improving education, may be subject to corruption. As most parties involved in the project look to

maximise their own immediate benefits, the goals of increasing human capital cannot be achieved. Consequently, the country fails to improve the quality of resources which are necessary for further development.

Nevertheless, the neo-liberal influence on development policy cannot be underplayed if one seeks to understand the contemporary policy environment in developing countries since they are suggested by the World Bank and the IMF to adopt a free market economy as a means to development. Clearly, this implies the embrace of international trade and investment with limited regulations as discussed in Chapter 3. In addition, on international politics, Amsden (2007, p.929) points out that the acceptance of a legitimacy of a government in developing countries by leading countries depends, to a large extent, on the liberal extent of the policy towards inward FDI. For this reason, the ruling elites in host developing countries are ready to adopt friendly policies towards inward FDI. In fact, in a country where the state is politically weak, its government appear to adopt the neo-liberal policy including lax policies towards inward FDI in order to gain international acceptance and induce economic growth.

The case in point is that over-friendly policies towards FDI, even though it helps to increase locational-specific advantages of a nation to attract more FDI, may have an adverse effect on the creation of the nation's ownership-specific advantages that are embodied in domestic firms. Under these circumstances, domestic firms might face difficulties in accumulating capital, technological and organizational skills as they are left to face with fierce international competitors since their inceptions. Therefore, these domestic firms are likely to be disadvantaged even in their domestic market, particularly when the country becomes more liberal towards FDI. Some domestic firms, however, may benefit if they position themselves as a satellite to TNCs, acting mainly as their suppliers. It is noted that this strategy, unless changed at a later stage, can be even anti-developmental as it tends to establish an outright dependent relationship at the firm level. Moreover, situating in a lower industrial hierarchy normally means being confined to the lower profitability and technology. As a consequence, the country might find difficulties moving towards the third stage of development due to the lack of capital and technological competitiveness.

An enduring and increasing magnitude of negative NOI could reflect an enduring and increasing gap between the ownership-specific advantages of domestic firms in relations to TNCs. In most case, this phenomenon is a result of the non-strategically constructed policies that aim to attract inward FDI. In other words, during the first and the second stages of development, instead of focusing on building the productive capability in domestic firms, the state focuses more on attracting FDI by providing the locational-specific advantages for TNCs with a set of liberal policy.

Emphasising on the creation of locational advantages over the formation of domestic ownership-specific advantages could be regarded as an opportunity cost for a sustainable economic development host developing country. For example, tax incentives may lower revenue for the host government. A state without adequate financial resource for development will then need to seek financial assistance from the World Bank or the IMF. This, in turn, would render them to adopt more neo-liberal policy. Inducing international competition into domestic market at a very early stage may prevent domestic firms from developing ownership-specific advantages.

The locational-specific advantages of a capital-dependent state could take the forms of lax policies for foreign investors and tax privilege schemes, cheap unskilled labour, and easy access to natural resources. The locational advantages have two important implications on economic growth. First, they function as catalysts for economic growth as they help to stimulate more inward FDI. However, it must be noted that growth from inward FDI in capital and technological dependent country tends to be short-lived. Second, by their nature, they would not only make vulnerable domestic firms being exposed to fierce international competition without safeguards but also impede the transformation of domestic productive force necessary for further development. As there is no home grown productive capabilities, the government of a capital-dependent state has no choice but to maintain the locational-specific advantages from lax policies towards FDI even they are anti-developmental in the long run.

4.3 Theoretical Model

This section presents a static exogenous growth model, designed to capture the impact of FDI on gross national income (GNI). This theoretical model aims to serve two main

purposes. First, it can be used to complement the above dynamic conceptual framework, though it will capture only a static relationship between the international investments and the income of the host developing economy during the second and the third stages of development. Second, it will be used as a theoretical platform for empirical analyses.

This growth model takes the form of the Cobb-Douglas production function which is the most straight forward growth formulation and the simplest way to demonstrate the output elasticity of each factor of production in the equilibrium. These particular reasons render the Cobb-Douglas production function a very useful tool. Besides, the Cobb-Douglas production function is also empirically friendly, as it can easily be transformed into a linear form which is useful in regression analysis. Hence, the Cobb-Douglas production function is both informative and understandable for research in the field of economic development. Barro and Xala-i-Martin (2004) commented that development economists always prefer the simple theoretical model with a high empirical application rather than the complicated model with little possibility in empirical application. They argued further that this very reason explains why economic growth discipline and economic development discipline are drifting apart.

However, despite being widely used, the Cobb-Douglas production function is still subject to several criticisms. For example, Kummerow (2002, p.15) contended that the Cobb-Douglas over-simplifies economic reality and that its static property cannot reflect the production function of the real economy which tends to evolve through time. This is because the economic relationships are historical in nature. Furthermore, the objection of the Cobb-Douglas production function stems from the scepticism that the aggregate production function for a whole economy may not exist. This is because the whole economy is made up of a number of different industries whose production function could well vary.

To overcome the static aspect of the Cobb-Douglas production function, it is possible to analyse the data with dynamic econometric methods, such as the Error Correction Model (ECM), the auto-distributed lag model, and the division of the whole sample into sub-periods according to historical events. For the last criticism, Douglas (1976) had addressed this particular point himself. He refers to the empirical studies that tested his model in the form of the logarithmic formulation with constant returns to scale in inter-industry studies.

He mentioned that those studies accepted the hypothesis of the specification of the model and the constant returns to scale assumption. This implies that, to a significant extent, the production functions, regardless of industry, could well be explained in the Cobb-Douglas form. If all features of an industry can be formulated in the Cobb-Douglas form, then it should be possible to formulate the aggregate production function in the Cobb-Douglas form. It is undeniable that any economic production function of any industry requires at least two similar basic inputs, capital and labour, which are the key explanatory variables in the Cobb-Douglas production function. Hence, from a heuristic perspective, it is reasonable for this study to define the aggregate production function of an economy in the form of the Cobb-Douglas formulation.

4.3.1 Static Exogenous Growth Model with International Investment

The theoretical model presented below takes a departure from the standard neo-classical production function in which the factors of productions cover technology, capital and labour. In this setting, the standard model presents the state of the closed economy in developing countries where no international movement of capital or labour is allowed. It also represents the pre-liberalisation of direct investment. For simplicity, this model assumes no portfolio investment. This type of economy exhibits a constant return to scale. The equation can then be denoted as follows:

$$Y = F(A, K, L) \tag{4.1}$$

where Y is the aggregate total output, A is the level of technology, K is domestic capital stock and L is quantity of labour. Equation (4.1) is a function of time and assumed Cobb-Douglas production function. It then takes the form:

$$Y = AK^{\alpha}L^{(1-\alpha)} \tag{4.2}$$

The level of technology, A, is assumed to be greater than 0 therefore $A > 0$. α is the output elasticity of capital and $0 < \alpha < 1$. $(1-\alpha)$ is the output elasticity of labour. To briefly prove the properties of neo-classical growth model, the equation (4.2) can be written in intensive form as

$$y = Ak^\alpha \tag{4.3}$$

The equation (4.3) is derived by dividing the equation (4.2) by L . y and k represents the output and capital- labour ratio. The properties of a neo-classical production function are proved since $f'(k) = A\alpha k^{\alpha-1} > 0$, and $f''(k) = -A\alpha(1-\alpha)k^{\alpha-2}$. This means that the capital in this production function exhibits a diminishing return and the predictions of the standard neo-classical growth theory hold.

When the developing economy is exposed more to the global economy and is driven by neo-liberal globalisation forces, either voluntarily or involuntarily, it starts to open its economy not only to the international trade but also to cross-border investment. For simplicity, the analysis intentionally excludes the movement of goods, service, and labour from the context. It also assumes that labour is homogenous. At this stage, it is necessary to extend the model of the quasi-closed economy found in equation (4.2) to the fully open economy setting.

To formulate the open economy model with several types of investment, this study is influenced by the increasing-return models developed by Griliches, (1979), Findlay (1978), Romer, (1986), Lucas, (1988), and re-represented in the Cobb-Douglas formulation by (Barro and Sala-i-Martin, 2004, p. 445) The model of an open economy, exhibited in equation (4.4), introduces two additional concepts. One is that of multiple products which refer to the segregation of types of factors of production. Second is the spillovers notion which refers to the technological transfer that eventually would increase the level of technology, a source of perpetual growth. The spillovers are the externalities which can take the form of being positive or negative. In the context of FDI and development, the sign of the spillovers depends on the economic context and the FDI related regulations in the host countries.

The aggregate production function of the open economy can, thus, be written in the following form:

$$Y_t = A_t\, K_{d_t}{}^\alpha\, K_{in_t}{}^\delta\, K_{out_t}{}^\beta\, L_t{}^{(1-\alpha)} \tag{4.4}$$

where α remains the output elasticity of domestic capital and it is assumed that $0 < α < 1$. Newly introduced variables in equation (4.4) are K_{in_t} and K_{out_t}. The former denotes the international investment made by a foreign investor in the domestic market (inward FDI) and the latter denotes the international investment made by a domestic investor in the foreign land, namely, outward FDI. Accordingly, $δ$ denotes an output elasticity of inward FDI while $β$ denotes an output elasticity of outward FDI. It is noted that during the first and the second stage of development, according to the IDP framework, K_{out_t} may not be represented in the model due to its non-existence. K_{out_t} will only become meaningful once the country produces outward FDI. However, the implications of equation (4.4) will not change even when there is no K_{out_t} in the model.

The introduction of these two variables and the possibility of spillovers lead to some amendments of the standard neo-classical assumptions made in equation (4.2). Thus, equation (4.4) represents an open economy in which capital mobility, specifically of an FDI nature, is allowed. The direct international investment, in turn, induces a spillover effect that would lead to a change in the return to scale of the whole model, depending on the sign of the spillovers. Hence, the constant return to scale assumption no longer holds.

It is also important to note that the spillover effects, in this model, are captured in the form of elasticities of outputs rather than the level of technological change, *A*. It is reasonable to assume so. Based on Young (1994, 1995), Krugman (1998), and Bosworth (2005), there are many reasons to believe that economic growth in the early stage of development comes from an increase in factors of production, such as, higher rate of capital accumulation and quality improvement of the factors of production instead of growth in productivity.

This model can represent two possible scenarios depicting the impact of FDI in relation to economic development and elaborated in section 4.2. It is assumed that the role of the state and its policies towards FDI and development govern the nature of the output elasticity of inward FDI, $δ$, and outward FDI, $β$. The first scenario, proposed by the conventional perspectives, explains that FDI would generate the spillovers to the developing economy because what comes with the foreign capital is a bundle of technological and managerial knowledge. Inward FDI in the developing countries, therefore, would help to reduce the saving and investment gap in the backward countries and generate a higher growth rate in

120

the process of capital accumulation which is essential for further growth. From the IDP framework, it is assumed that the government's of the host country has also adopted policies that help to create the ownership-specific advantages for domestic firms.

The second scenario refers to the situation where the government plays a limited role in helping domestic firms to develop ownership-specific advantages and tends to favour FDI to a great extent. Under these circumstances, FDI actually hinders the development in the host developing economy, particularly in long term. The explanation is that FDI would displace the domestic investment and allow the transfer of both natural and financial resources to the investors' countries or the rich countries which are the core of the world capitalist system. As the competitiveness of domestic firms remain relatively weaker than that of TNCs, FDI takes an increasingly important role as an impetus for economic growth. So, the country becomes more dependent on foreign capital while it may not necessarily or fully, benefit from it.

To depict the above two scenarios, the study assigns the change in K_{d_t}, K_{in_t}, K_{out_t} and L_t by the same factor λ, this production function yields:

$$Y = A_t (\lambda K_{d_t})^\alpha (\lambda K_{in_t})^\delta (\lambda K_{out_t})^\beta (\lambda L_t)^{(1-\alpha)} \tag{4.4a}$$

$$Y = \lambda^{\alpha+\delta+\beta+(1-\alpha)} A(K_{d_t}^\alpha K_{in_t}^\delta K_{out_t}^\beta L_t^{(1-\alpha)}) \tag{4.4b}$$

$$Y = \lambda^{1+\delta+\beta} A(K_{d_t}^\alpha K_{in_t}^\delta K_{out_t}^\beta L_t^{(1-\alpha)}) \tag{4.4c}$$

From equation (4.4c) it can be seen that an increase in all variable inputs K_{d_t}, K_{in_t}, K_{out_t} and L_t, leads to an increase in Y_t by $\lambda^{1+\delta+\beta}$. Therefore this function is not necessarily homogenous at degree one. In other words, it can also be either homogenous at degree more than one or less than one, depending on the sign and value of the elasticities of output K_{in_t} and K_{out_t}.

The consideration is now made on the first scenario where the positive spillovers from FDI take place in the host developing economy thanks to efficient and appropriate policies, implemented by the host government. In this event, the summation of output elasticity of outputs with respect to K_{in} and K_{out} must be greater than 0. That is $\delta + \beta > 0$. However, it

must be noted that in order to maintain the diminishing return assumption on each type of factor of production, the summation of output elasticities of K_{in_t} and K_{out_t} should be less than one, $\beta + \delta < 1$, so that, $0 < (\delta + \beta) < 1$. Under this circumstances, each output elasticity, δ and β, is less than one. In this situation, each factor of production, individually, exhibits a diminishing return but at the aggregate level, the production function can exhibit an increasing return to scale which is depicted by λ. The positive δ points to the realisation of positive spillovers from inward FDI. The positive β may suggest the existence of ownership-specific advantages possessed by domestic firms and the country.

Turning to the second scenario where the economy is embedded with a weak state, relatively incompetent domestic firms, and lax FDI policies, an inward FDI is expected to have a negative impact on the economy and an outward FDI is limited, or virtually non-existent. This is because the effect of FDI depends on the nature of the host country's market and its adopted policies. In the absence of appropriate regulations and favourable economic environment, the second scenario, elaborated above, would take place. Under this situation, the externalities generated by inward FDI are likely to be negative and could have an adverse impact on economic development.

In the case of a capital dependent state, K_{out_t} is assumed not to exist and can be ignored, the equation (4.4) can be re-written as follows:

$$Y_t = A_t \, K_{d_t}{}^{\alpha} \, K_{in_t}{}^{\delta} \, L_t{}^{(1-\alpha)} \tag{4.5}$$

The output elasticity of K_{in} is assumed to be less than zero but greater than minus one, that is, $-1 < \delta < 0$ Under these circumstances, the multiplier effect, λ, is less than one and the function exhibits a decreasing return to scale. This production function implies that an economy may suffer from leakage of resources, be it physical or financial, induced by inward FDI. This kind of production function is **inefficient** because it exhibits a diminishing return to scale. This means that, when there is a change by λ factor in all variable inputs, it induces a change by less than λ factor in the output. This scenario could take place if an inflow of capital, whose elasticity is denoted by δ, creates an outflow of capital and resources more than the initial inflow, for example, the case of a peripheral economy in the dependency theory.

The same holds for the case where superior foreign firms are introduced into a market where the domestic incumbents are relatively weaker and therefore eventually driven out from the market. Under this particular case, the domestic economy is losing its entrepreneurs and, thus, the major part of the entrepreneurial profits is captured by foreign investors who repatriate them back to their home countries. It is important to note that when $-1 < \delta < 0$, this production function is still capable of exhibiting growth in output but every unit of its output growth requires more than a one unit growth in all variable inputs. It can be said that this type of economic growth is a dependent development. In an extreme case where $\delta = -1$, λ can take value of λ^0, that is, the production function is homogenous at degree zero. This scenario represents the critical situation where, no matter by how much variable inputs are proportionately increased the output of the function remains unchanged.

4.4 Summary

This chapter has illustrated the conceptual framework and FDI-growth model which will be used for both the analysis of the Thai political economy in Chapter 5 and the empirical analyses of the impact of FDI on the Thai Gross National Income (GNI) found in Chapter 6. The conceptual framework points out that the role of the state and its policies towards FDI determine of the country's developmental path. If the state is strong and its developmental policies are in favour of the creation of the ownership-specific advantages for domestic firms, the country is likely to develop successfully productive capability which is important to liberate itself from the dependence on foreign capital and technology at the later stage of development.

If the state takes limited protections fir domestic firms and creates the environment which benefits more TNCs, domestic firms tends to find difficulties in accumulating capital and technology. In this event, the stae could be viewed as lacking the economic vision, possibly due to genuine incompetence, political forces, or both. Hence, its developmental policies are likely to undermine the formation of the ownership-specific advantages of domestic firms. In this event, it is likely that the policy environment in the host country will increase the locational-specific advantages, which are more favourable to TNCs. Under these circumstances, the economy is unlikely to be able to liberate itself from dependence on foreign capital and technology. It may become a capital-dependent state that exhibits most of the economic characteristics that have been portrayed by dependency theorists.

The IDP framework, though being useful for analysing FDI conceptually, does not offer the direct theoretical platform for the empirical analyses on the impact of FDI on economic growth. Thus, the study has developed a static exogenous FDI-growth model to serve this purpose. It is seen that the exogenous FDI-growth model, depicted by equation (4.4) can portray the growth path of an economy in relation to international direct investment. The model can reflect both scenario where FDI is positively impact the economy and where it does not, depending on the nature of δ and β. The nature of δ and β, in turn, is governed by the competitiveness of the local firms and the policies used to construct the market in the host economy. Indeed, the model exhibit in equation (4.4) is not a complete model since the key output elasticities, δ and β, as well as the technology level, A, are still exogenously determined outside the model. However, this study attempts to develop a model that can explain the impact of FDI on the aggregate change of output, taking into account the binary effect of FDI. Hence, it can be argued that the models presented by equation (4.4) and equation (4.5) as well as the set of assumptions attached to them can be very informative and helpful for the use of both development economists and policy makers.

The acknowledgement of the uncertain nature of FDI in advance prevents the policy makers from presuming the positive externalities attached to foreign investments. In addition, such a model tends to remind the policy makers that, in order to get the positive δ and β, the strategic policies need to be put in place to manipulate the occurrence of the most favourable outcome. The last but not necessarily least advantage is that even though the mathematical form of this theoretical model is unsophisticated and relatively simple compared to the more advanced endogenous growth formulation, it is empirically useful. This is because the Cobb-Douglas formulation offers a functional form which is compatible with linear regressions. Therefore, the interconnectedness between the theoretical formulation and the empirical specification could be made clear and evident. The next chapter, this study will give the review of the history of Thai political and economic growth in relation to FDI and the force of globalisation.

Chapter 5: Thai Economic and Political Background

5.1 Introduction

This chapter presents the study of the Thai political economy in a descriptive style with the use of the analytic narrative method. It begins with the analysis of critical parts, which are FDI and its related policies, before proceeding to the analysis of the whole, which is the history of economic growth. The first analysis is focused on FDI. It represents the nature and volume of foreign operations in Thailand. Then, the analysis of FDI policy in Thailand will be introduced. The form and the degree of state interventions in relation of FDI in Thailand will be discussed. Also, in this chapter, the study of the concentration of FDI and Total Factor Productivity in Thailand will be comparatively reviewed. An analysis of the Net Outward Investment, the ratio of GNI to GDP, the terms of trade and the study of balance of payment will be provided. The analysis of the whole historical process of economic development that seeks to portray the characteristics of Thai economy in relation to external relations will then be followed. The holistic analysis should shed some light upon how FDI, under the neo-liberal policy environment, affects the process of growth in Thailand. Knowledge gained from the descriptive analysis in this chapter will help define the hypothesis used in the empirical study, found in the next chapter.

Chapter 5 is structured in the following manner. Section 5.2 presents an analysis of the profile of FDI in Thailand. Section 5.3 provides the background of the Thai political and economic growth experience, including a discussion on development in relation to FDI and FDI-related policies. A Summary is found section 5.4 where the study promulgates the hypothesis of the impact of FDI on the Thai economic growth path.

5.2 FDI in Thailand

This section analyses inward FDI in Thailand. Since the 1960s, inward FDI began to flow into Thailand in response to the implementation of the Investment Promotion Act. It is useful to discuss the motives of the main foreign investors in Thailand. During the 1960s and the 1970s, the main source of inward FDI in Thailand was the U.S. This can be explained by American imperialism which prevailed in the world economy at that time. American foreign investment during these periods was meant to produce household products for domestic consumption and not to use Thailand as off-shore production bases (Phongpaichit and Baker, 2003, p.168). This was partly because the Thai economic regime, at that time, was under import substitution.

In the early 1970s, inward FDI from Japan began to rise significantly. As depicted in Table 5.1, Japanese investment exceeded that of the U.S for the first time in 1973. It is important to note that Japanese differed from American investment in the sense that Japanese investments were largely meant for re-exports.

TABLE 5.1: PERCENTAGE SHARE OF NET INWARD FDI IN THAILAND CLASSIFIED BY COUNTRY

Country/Year	1970	1975	1980	1985	1990	1995	2000	2005	2008
Japan	36.16	24.28	23.31	35.12	43.12	27.77	30.92	45.00	25.08
US	39.51	46.94	18.90	54.46	9.50	12.97	21.95	11.54	10.61
EU 15	8.87	11.02	14.10	10.89	6.83	8.98	18.14	5.15	11.25
ASEAN 6	-0.33	0.61	3.97	1.44	0.83	1.41	1.19	0.51	0.74
Singapore	-0.07	3.05	7.05	-26.52	9.55	6.81	12.64	16.43	26.66
Hong Kong	7.75	3.43	28.74	14.44	10.88	13.93	11.78	0.11	3.93
Taiwan	0.04	0.11	0.05	3.93	11.50	4.82	5.65	0.45	0.95
South Korea	0.07	0.72	0.25	-0.10	0.75	0.62	-0.13	0.42	1.42
Others	8.00	9.84	3.63	6.34	7.04	22.69	-2.14	20.39	19.36
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Bank of Thailand (2009)
Note: 1. minus figure means divestment
          2. EU 15 includes Austria, Belgium, Germany, Denmark, Spain, Finland, France, United Kingdom, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal and Sweden.
          3. ASEAN 6 includes Brunei Darussalam, Indonesia, Malaysia, Philippines, Cambodia and Laos.

Before proceeding to discuss more about Japanese investment in Thailand, it is instructive to discuss briefly the background of Japanese outward FDI. Even though Japanese direct investment became more distinctive after the creation of the Plaza Accord in 1985, Japan had started to enlarge her global stock of outward FDI long before that. Indeed, Japan had successfully identified that international competition had been taking a new form since the early stage of her own development (Ozawa, 1979). This meant that Japan was aware that global competition would no longer limit international trade but expand to international investment, particularly, to control over global productive means. Such control was no longer necessarily empowered by military force, but by productive capability, alternatively known as ownership-specific, and by monopolistic advantages in the international business discipline. It can be said that Japan was long aware of the new set of rules in the modern capitalism and made herself ready for a dominant position, with the help of Japanese TNCs, which, in turn, had grown from a development regime where inward FDI had, at best, played a limited role to play.

Returning to Japanese investment in Thailand, as they were largely meant for re-exports, a rise in Japanese inward FDI increased the significance of Japan as a main trading partner of the country (Phongpaichit and Baker, 2003). This situation made some Thai technocrats worry about the dependency of the Thai economy on Japan. So, from the 1970s onwards, the Japanese government tried to improve the situation by, for example, reducing the import tariff for Thai products and increasing financial aid. During the 1980s where the average share of inter-governments aids stood at 0.3 % of total GDP[4], Japanese financial aid represented two thirds of the amount (Phongpaichit and Baker, 2003). Parallel to this was an increasing dominance of Japanese FDI in Thailand.

Japanese direct investment had been a majority source of inward FDI up until 2006 when Singapore became the biggest foreign investor in Thailand for the first time. The increasing significance of Singaporean investment might be explained by the maturity of Singapore's sovereign wealth funds, such as the Government of Singapore Investment Corporation, and Temasek Holding. It can be argued that a sovereign wealth fund is an alternative form of TNCs. It is an institution that is used to expand control over productive means in foreign markets. The emergence of sovereign wealth funds and their impacts on international

---

[4] Own calculation. Thai balance of payments, IMF (2009)

economic and relations are interesting but are beyond the scope of this study. The dominance of Singapore inward FDI is a new phenomenon. So far, there is virtually no study dedicated to explain this. With the simplest intuition, one might explain this as an attempt of the Singaporean government to establish its dominance and a certain degree of control over the regional, if not global market.

Figure 5.1 also shows an important aspect of inward FDI in Thailand. According to Kentor and Boswell (2003), the percentage share to total foreign investment classified by a country can reflect the structure of foreign capital dependence. Furthermore, they postulate that a high level of concentration will inhibit long-term economic growth in developing countries. Indeed, the structure of foreign capital concentration in Thailand is not as bad as in Honduras in 1967 where British investment represented almost 98% percent of total FDI in the country. However, when combining the share of the largest foreign investors, namely, Japan, U.S. and either Singapore or Hong Kong, their investment represent nearly two-thirds of the total FDI. It is, therefore, likely that these countries, collectively, would have more political and economic bargaining power than that of the Thai government.

Foreign investment concentration, however, is not the only indicator of the economic significance of FDI in the host economy. Among researchers on capital dependency, for example, Dixon and Boswell (1996), Firebaugh, (1996), Kentor, (1998), Soysa and Oneal, (1999), and Kentor and Boswell, (2003), the stock of FDI to GDP is another appropriate measurement that could be used to represent the degree foreign capital penetration. From the Thai data, it can be seen that while the foreign investment concentration as well as its combinations has been slightly varied over the past three decades, the penetration of foreign capital in Thailand has significantly increased, particularly after the Asian Financial Crisis in 1997, Figure 5.1.

FIGURE 5.1: RATIO OF FDI TO GDP FROM 1980-2009
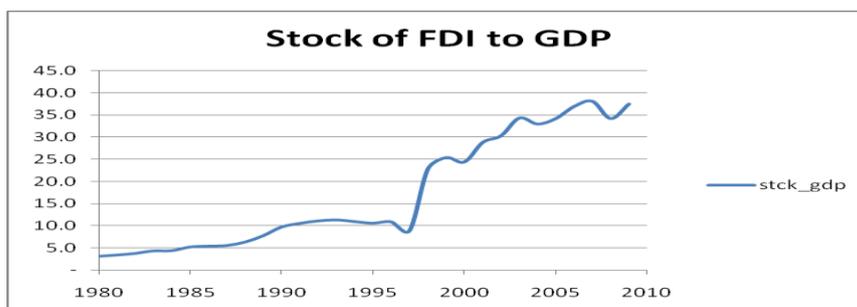
Source: United Nation Conference on Trade and Development (2010)

FDI has been a major source of growth in Thailand since the 1980s. Phongpaichit and Baker (2003) documented that inward FDI during that time flew to export-orientated sectors. As they noted that FDI came with the new establishment of factories and that the country was experiencing an expansion of industrial sector, it can be inferred that FDI during the 1980s were largely green field investment. Table 5.2 shows that FDI in the 1980s were indeed clustered in the industrial sector. Despite a rapid growth in the industrial sector led by inward FDI, the foreign capital stock represented only five to ten *percent* of the total GDP.

TABLE 5.2: NET FLOW OF INWARD FDI BY ECONOMIC SECTOR

Sector/Year	1970	1975	1980	1985	1990	1995	2000	2005	2008
Industry	63	47	62	79	56	33	71	63	56
(Manufacturing)	(50)	(33)	(26)	(31)	(48)	(28)	(64)	(53)	(45)
Agriculture	0	0	5	2	1	0	0	0	0
Service	37	53	33	19	43	67	29	37	43
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Bank of Thailand (2009)

The destination of inward FDI during the first half of the 1990s was different from other periods. In the early 1990s, due to the liberalisation of the capital account, this caused a boom in the domestic, real estate sector. Thus, from 1992, the main destination of FDI shifted to real estate and financial which are classified under the service sector. This pattern remained until 1995, as depicted in Table 5.2, and halted in 1997 when the bubble burst and the crisis took place. After the crisis, inward FDI in Thailand shifted back to the industrial sector, particularly in manufacturing. However, it should be noted that this generation of FDI was largely in the form of Merger and Acquisition (M&A) (WIR, 2000; Brimble, 2002; Phongpaichit and Baker, 2003). M&A FDI after the crisis was encouraged by two key factors, the devaluation of Baht and the fire-sale of assets after the bust (Chang, 2003). Thus, it can be said that a significant rise in FDI both in volume and in intensity after the crisis may not necessarily contribute to the creation of new productive capabilities.

As this study focuses mainly on the impact FDI on economic development at macro-economic level, it is therefore useful to review some key studies on FDI in Thailand that

worked on the industrial level as these findings would help increase an understanding of the effect of FDI at aggregate level.

5.2.1 Empirical Studies of FDI in Thailand

A number of empirical studies have been conducted to assess the impact of inward FDI on the Thai economy using data at the industrial level. Along with these micro-level studies, this section will illustrate the relation of inward FDI in relation to exports, technological transfer, and market concentration, respectively.

Sibunruang-Brimble (1992) found that FDI had a significant impact on Thai exports (Pupphavesa and Pussarungsri, 1994). In her previous study, Sibunruang (1986) revealed that foreign-invested firms had a large share of total exports from the electronic and machinery industries. Similarly, Rasiah (2003), employing data from 71 electronics firms in Thailand and Malaysia, found a strong statistical linkage between foreign ownership and exports. Kohpaiboon (2006) analysed data from the industrial census in 1997. He found that almost 60 % of manufacturing exports were produced by foreign plants. However, in terms of employment share, foreign firms account for only 35 % of manufacturing employment. This suggested that TNCs may use capital-intensive technology. Athukorala (2004, 2006) confirms that export success in Thailand can be largely explained by the entry of TNCs since the mid-1970s. More specifically, Athukorala (2004) acknowledged that the export boom after the crisis was induced largely by the devaluation of the Thai Baht.

Tamboonlertchai (2009) reported that tax incentives, firm's experience, and a presence of foreign ownership positively affect local firm's decision to export. Thanadsillapakul (2010) analysed data of small and medium enterprises (SMEs) in Thailand in 2006. She found that SMEs, almost all owned by Thais, represented 99.5 % of total private enterprises in Thailand. The other 0.5% of private enterprises were large in size and dominated by foreign ownership. She pointed out that while SMEs accounted for roughly 30% of total export, large enterprises accounted for 70%.

On technological transfer, Pupphavesa and Pussarungsri (1994) quoted that Khantachai *et al.*, (1987) found that foreign invested firms in Thailand usually had a higher capital to labour ratio than Thai firms. This implies that the technology adopted by TNCs may not

generate the optimal number of employment. It may well be regarded as an inappropriate technology. Similarly, Dahlman and Brimble, (1991) found that the transfer of technology in Thailand through sub-contract arrangements was minimal because TNCs were not willing to transfer knowledge. Pupphavesa and Pussarungsri (1994) conducted a survey of twenty four firms from the electronics and machinery industries. Of these, there were nineteen foreign invested and five Thai firms. They found no indication that a firm's size affects the speed and scope of technological transfer. Most importantly, they found that virtually all Thai suppliers gained a low level of technological transfer. By way of contrast, Rasiah (2003) carried out interviews with TNCs and local firms in the electronic sector in Malaysia and Thailand. He found anecdotal comment suggesting a significant transfer of technology from TNCs to local firms.

Ramstetter (2002) measured productivity by the value added per plant. He conducted a panel study using firm-level data during 1996-1998 from the Thai industrial census. His results, calculated from the translog production function, suggested that foreign invested firms in Thailand were not necessarily more efficient than their local counterparts. More specifically, Ito (2004), focusing on the Thai automobile industries during 1996-1998, found similar evidence. She reveals that foreign invested plants producing, motor vehicle bodies and motor vehicle parts seemed to have lower capital productivity than local plants. This again points out that foreign owned firms in Thailand tend to use higher capital-intensive technology (Khantachai *et al.*, 1987; Kohpaiboon, 2003). Kohpaiboon (2006) worked on the industrial census data in 1997. He measured spillover by labour productivity and found that labour productivity in locally-owned plants appeared to be positively correlated with FDI in the sector where the effective rate of protection was low. Kohpaiboon (2009) used an industrial survey during 2001-2003 and measured spillover by the value added in domestic plants. He found no evidence of vertical spillover in the samples and that horizontal spillover existed only in sectors where the trade regime is liberal.

On market concentration and FDI, there is only one study that seriously and empirically worked on this aspect. Kohpaiboon and Ramstetter (2008) examined the relationship among producer concentration, conglomerates, foreign ownership and protection in Thai manufacturing firms after the crisis 1997. They found that the production concentration, foreign ownership and the propensity to export in most Thai manufacturing industries began

to increase shortly before the start of the economic crisis in 1997. Interestingly, in contrast to the conventional belief that liberalisation brings more competition, Kohpaiboon and Ramstetter (2008) revealed that, in Thailand, market concentration tended to be lesser in the protected sectors rather than the liberalised sectors.

In summary, TNCs' operations in Thailand are largely located in export sectors. They also account for the major part of total exports from Thailand. Next, the spillovers from TNCs to Thai local firms are not abundantly supported by empirical studies. Lastly, TNCs in Thailand use capital-intensive technology and tend to operate in highly concentrated sectors. The next section will analyse the policy environment in which TNCs in Thailand are carrying out their operations. This may help to understand the evidence drawn from the above studies better.

5.2.2 FDI Policies in Thailand

Economic phenomena can equally be explained by economic theories and policy environment. In this section, this study provides the overview of FDI-related investment policies in Thailand. In the early 1960s, the Thai government started to launch a friendly FDI regime for foreign investors. Most of the FDI incentives in Thailand take the form of fiscal incentives. According to Nikomborirak (2004), the current Thai FDI regime is shaped by three main laws. These are the Foreign Business Act (FBA) of 1999, the Investment Promotion Act (IPA) of 1977 and the Industrial Estate Authority of Thailand Act (IEA) of 1979. She describes that the FBA draws the scope and identifies conditions under which a foreign entity may carry out business transactions. The IPA guarantees foreign investors' protection and offers fiscal incentives to favourable projects. The IEA specifies investment incentives specifically for factories located in industrial zones. In addition to this, the Thai FDI regime is also shaped by bi-lateral and multi-lateral investment treaties as well as Free Trade Areas (FTA). Since their inception until now, all three laws governing FDI regime in Thailand have increasingly become less restricted. The details of the changes made are summarised in Table 5.3.

TABLE 5.3: MAJOR DEVELOPMENTS IN THE FDI POLICY REGIME

Period	Policy Development
State capitalism (1940s–1950s)	• state monopolisation in imports and exports in many industries or sectors.
Import substitution (1958–71)	• 1st Economic Development Plan (1961–66) focused on the reduction in direct government involvement in the economy and greater promotion of private investment. • Import substitution policy introduced. • High levels of protection provided for capital-intensive industries such as automobiles. • High tariffs imposed on finished consumer products. • Industrial Promotion Act of 1960 establishes an organization which later became the Board of Investment, marking the beginning of tax incentives. • Tariff structure revised several times to give greater protection to domestic industries. • Balance of payments problems arise due to the import of parts and components, leading to discussion of the sustainability of the import substitution policy.
Export promotion (1972–92)	• 3rd Economic Development Plan (1972–76) emphasized a shift from import substitution to export promotion. • Investment law revised in 1972 to provide exemption from duties on raw materials and intermediate items for exporting industries. • Alien Business Law of 1972 enacted, prohibiting foreigners from entering several business areas. • 21 of 72 provinces designated as investment zones. • Investment Promotion Act enacted in 1977, introducing income tax holidays and 50% reduction in import duties on machinery. • Four investment zones established in 1978. • Tax incentives in raw materials and machinery reduced for Bangkok and Samut Prakarn, to promote deeper industrial decentralization. • A series of the Thai baht devaluations take place between 1983 and 1991. • Investment Promotion Act revised in 1987, introducing tax privileges and refunds, industrial zones and export-processing zones. • 6th Economic Development Plan (1987–91) aims to improve income distribution and reduce economic disparity.
Promotion of industrial decentralization (1993–96)	• 7th Economic Development Plan (1992–96) aims to reduce income disparity between urban and rural areas and promote sustainable development. • Investment Promotion Act revised in 1993 to promote industrial decentralisation, with generous incentives provided to investment projects located outside Zone 1. • Local content requirements eliminated for motorcycles in anticipation of the TRIMs Agreement of 1993.
Post-crisis liberalization I (1997 – 2004)	• Liberalization extended as part of the IMF-led reform package. • Foreign Business Act of 1999 enacted, allowing full foreign participation in most manufacturing industries. • Condominium Act revised in 1998 to allow foreigners to wholly own buildings on two acres or less of land. • Corporate Debt Restructuring Advisory Committee established to monitor and accelerate debt restructuring. • ASEAN Investment Agreement adopted in 1998. • Bankruptcy Act revised in 1999 to establish a central bankruptcy court. • Local content requirements eliminated for vehicle assembly in 1999. • Foreigners allowed owning 100% of shares in promoted manufacturing projects in 2000. • Local content requirements in diary products eliminated in 2003.

Period	Policy Development
Post-crisis Liberalization II (2005 – 2009)	• FTA signed with Australia in 2007 • FTA signed with New Zealand in 2007. • FTA signed among ASEAN, Australian and New Zealand in 2007 • FTA signed with Japan 2007 • FTA signed with Peru in 2007

Source: Extended from Nikomborirak (2004)
                Department of Trade Negotiation (2010)

From Table 5.3, it can be seen that an institution responsible for attracting and facilitating foreign investors is Thailand's Board of Investment. This institution, initially created to promote private investment, now focuses largely on attracting FDI. BOI's fiscal incentives provide all investment benefits available to foreign investors. These benefits include, for example, a guarantee against the state's nationalisation and monopolistic competition from the state-owned enterprises, liberal terms of remittance of profits, corporate income tax holidays for the first eight years, zero tariffs on imports of intermediate inputs, no obligation to use local contents and no restrictions on exports. Non-tax incentives include investment privileges for foreign investors, land-ownership rights, and permission to bring in foreign personnel. Obviously, apart from having a pool of cheap unskilled labour, lax and friendly policies towards FDI are among Thai locational-specific advantages that have helped to attract FDI to the country.

It is noticed from Table 5.3 that while FDI- related policies appear to be geared to increase locational specific advantages in Thailand, they seem not to be helpful in assisting domestic firms to accumulate and develop ownership-specific advantages. In other words, instrumental policies, used to increase the technological spillovers from TNCs to domestic companies, have gradually been lifted. For example, the requirements to use local content and domestic personnel, restrictions on capital movements have gradually been aborted as a result of neo-liberal forces. In this situation, the possibility of materialising positive spillovers from inward FDI in Thailand become even less, bearing in mind that domestic firms have had relatively fewer ownership-specific advantages, compared to TNCs. Thus, under the current policy environment, the weakness of domestic firms, *vis-à-vis* the TNCs, become even more apparent. Furthermore, the law allowing 100% foreign ownership is more likely to shift the decision by foreign firms to establish wholly owned subsidiaries rather than to conduct a joint venture with domestic firms. If this scenario takes place, it can be expected that domestic firms would have less access to the new technology attached

to foreign operations. Moreover, this policy works against the empirical evidence showing that a joint venture is the mode of TNCs entry that correlates most with the existence of positive spillovers (Aitken and Harrison, 1999).

Indeed, the statistics show that the number of 100% foreign-owned firms has been increasing. Table 5.4, as reported by the BOI (2010), shows the distribution of projects that were granted tax privileges from the government agency. On the basis of their ownership, it can be seen that the tax incentive scheme was initially enjoyed more by domestic investors and joint ventures than foreign-owned firms. Since 2000, as the law had been changed allowing for 100% foreign ownership in promoted industries, the composition of ownership of the projects, has been altered accordingly. While the share of wholly-owned domestic firms slightly decreased, that of joint ventured firms dropped significantly to nearly a half of what it was in the early 1970s. In 2008, the share of 100% foreign-owned firms being granted investment incentives even surpassed the wholly-owned domestic and joint ventured firms.

TABLE 5.4: DISTRIBUTION OF PROJECTS BEING GRANTED INVESTMENT INCENTIVES ON THE BASIS OF OWNERSHIP

Ownership	Percentage Share to Total Projects		
	1960-1974*	2007[+]	2008[+]
100% Thai	34%	32%	32%
100% Foreign	3%	33%	36%
Joint Venture (For equity>10%)	63%	35%	32%
Total	100%	100%	100%

Note: * calculated from registered capital
[+] calculated from number of total projects
Source: Office of the Board of Investment, Research Division (BOI, 1974)
Office of the Board of Investment, Office of the Prime Minister (BOI, 2010)

Taking a closer look at the breakdown of the ownership of registered capital between Thai and foreign-owned firms in Table 5.5 (p.141), it can be seen that domestic capital benefits from the investment incentive scheme at a diminishing pace. By way of contrast, foreign capital gradually enjoys the benefits more. During the first fifteen years of the investment promotion, Thai investors were the main beneficiary of the policy. More recently, however, the pattern has been reversed. More foreign capital has registered to receive the tax incentive grants.

TABLE 5.5: STRUCTURE OF FOREIGN AND DOMESTIC SHARE OF REGISTERED CAPITAL IN GRANTED PROJECTS

Unit: (Billion Baht)	year 1960-1974	%	year 2005	%	year 2006	%	year 2007	%	year 2008	%
Thai	9.2	*71.3*	3.3	*11.3*	8.8	*25.3*	4.0	*10.2*	21.8	*27.6*
Foreign	3.7	*28.7*	26.0	*88.7*	26.0	*74.7*	35.0	*89.8*	57.2	*72.4*
Total registered capital	12.9	*100*	29.3	*100*	34.8	*100*	39.0	*100*	79.0	*100*

Source: Office of the Board of Investment, Research Division (BOI, 1974)

Office of the Board of Investment, International Affairs Division (BOI, 2008)

The reverse pattern can be partly explained by the recently Thai government attempt to provide incentives to promote technological-intensive industries as a result of the need to upgrade the country's comparative advantages. The targeted industries are, for example, alternative energy, high-tech businesses, environmentally-friendly materials production, mega-projects including utilities, tourism and real estate businesses, and high-technological, agricultural businesses. However, as domestic firms are not competitive in these sectors, most eligible projects for the grant are owned by foreigners. It can be argued that, because the country lacks capabilities, it has to create incentives to attract foreign firms, who are capable of conducting such investments.

However, it is important to question that, with the given policy environment that shapes the Thai domestic market, how likely are the positive spillovers to take place. Moreover, under the weak and fragmented national innovation system that is not linked to the country's economic development level (Intarakumnerd, Chairatana, and Tangchitpiboon, 2002) and with no explicit state intervention to assist domestic firms financially and technologically, the possibility that Thailand would have a set of competent domestic firms, performing as efficient receptors of foreign technology spillovers, is unlikely. Besides, the diminishing amount of domestic capital may point to a decreasing capability of domestic entrepreneurs to withstand the force of international competition. It may also point to the failure of the state in creating a defensive mechanism to global competition, embodied both in its domestic firms and institutions, from an early stage of the country's development.

It might be instructive to undertake a brief, comparative study on FDI-related policies and incentives between Thailand and South Korea. According to the information provided by the BOI (2009) and Invest KOREA (2009), it is observed that the conditions for FDI incentives, provided by the Thai government, compared to that of the South Korea, are significantly different in detail. For example, the South Korean regulations specify the minimum value of a foreign investment project that can be eligible for tax incentives is US$ 30 million in the manufacturing sector, and US$ 2 million in research and development. Besides, the process of transfer of technology will be periodically checked by the local authority. The Thai regulations, on the other hand, make no distinction between sector minimum requirements and require no process of inspection of technological transfer. Under The Thai regulations, there is only one single minimum requirement applicable to all promoted industries including from manufacturing, service, and agriculture. The Thai minimum requirement for eligible projects, excluding cost of land and working capital, is only one million Thai Baht, equivalent to about US$ 28,000. Moreover, the Thai Investment Promotion Law does not distinguish between domestic capital and foreign capital. This might initially appear to be favourable to Thai firms with lower capital but the problem is that foreign and Thai firms are treated equally regardless of their competitive ability and size. The simplistic Thai regulations might adversely affect the efficiency of materialising the positive spillovers from FDI. This simplicity may be explained by the neo-liberal ideology that prioritises the market mechanism rather than the planned co-ordination among institutions in the market.

From Table 5.3 (p.138), it can be seen that from 2000 onwards, Thailand increased its involvement in bi-lateral and multi-lateral investment agreements, and Free Trade Agreements, for example, with ASEAN, Australia, New Zealand, and Japan. Such agreements usually involve some clauses on FDI. This participation raised concerns among national academics and activists (Sussangkarn, 2003; Thanadsillapakul, 2004, 2010). Most importantly, Thanadsillapakul (2010) points out that, in many cases, the authority hastily finalised the agreements without careful study and did not encourage public discussion on sensitive issues. These concerns deserve independent studies of their own. This study will only point out that, on top of the BOI's packages, there are more advantages offered to foreign investment in the Thai territory such as an agreement to

compensate for losses in the event of revolution. This simply means that, supposing that there are two plants, one being national and the other being foreign-owned, in the case of insurgency where the two plants happen to be damaged, the government is obliged by law to compensate the foreign firm, whereas whether or not its own national firm will be compensated is uncertain. It is true that the agreement is mutually applied. However, taking into account that most of the countries with which Thailand has entered into agreements are those who produce more outward FDI and that their domestic politics are relatively mature and stable when compared to Thailand, the potential benefits and inherent liabilities may not be distributed equally.

5.2.3 Patterns of FDI in Thailand and Total Factor Productivity

The previous section shows that the country has a lax and friendly FDI regime that helped to attract a significant volume of inward FDI. Prior to conducting empirical tests assessing whether or not these inward FDI empirically explains the country's long term growth, this section will descriptively investigate if the sector where FDI has been mostly clustered is the same sector where the rate of growth of Total Factor Productivity is the highest.

In so doing, Table 5.6 is a reproduction of Table 5.2 (p.134) with more detail in order to show the percentage share of the net inflow of FDI in Thailand by industry. The intensity of inward FDI in each industry, in principle, should reflect both the ownership-specific of domestic firms and locational-specific advantages of the country. However, as Thai firms and TNCs appear to be competitive in different sectors, the sector where foreign investments are mostly clustered may not necessarily reflect the sector in which Thailand is most competitive. Rather, the density of FDI in each sector may reflect the locational-specific advantage, such as the availability of resources and favourable policies towards FDI. Ramsletter and Sjoholm (2006) suggest that data in Table 5.6 can be read as an indicator of TNCs' confidence in different activities in Thailand.

Assessing Table 5.6 through locational advantage analysis, it can be seen that, in the 1970s, the textile industry was attractive to FDI. Textile industry is labour-intensive using heavily unskilled labour which is abundant in Thailand. Later on, the pattern of manufacturing FDI gradually changed. From 1980 onwards, electrical appliances, machinery and transport equipment as well as chemical industries were created by foreign investments and received

a majority share of inward FDI in the manufacturing sector. It should be noted that even though the products from these industries constitute the largest share of Thai export products, it can hardly be said that Thailand has ownership-specific advantages in these products as they are mainly produced by TNCs. Should TNCs leave Thailand tomorrow, her export products would probably be primary and relatively low-technology intensive products.

Indeed, the ownership specific advantage embodied in Thai firms in each industry can be deduced by the output share produced by domestic firms in a given industry. Kohpaiboon (2003) analysed data from the Industrial Census in 1997. He found that an output share of foreign plants to total industry was relatively large in electrical appliances, machinery and transport equipments, chemical and scientific equipments. These industries are capital- and technologically intensive and their products are manufactured with exclusively foreign-owned technology. By way of contrast, the share of output by Thai plants was dominant in industries, such as, footwear, textile, leather products, furniture, and toys. These industries are relatively labour-intensive and use technology which is relatively widely available.

TABLE 5.6: PERCENTAGE SHARE OF NET INFLOW OF FDI IN THAILAND BY SECTOR

Sector/ Industry	1970	1980	1990	2000	2008
Manufacturing	50.18	26.13	47.87	64.36	45.17
-Food and Sugar	5.14	2.35	2.48	3.31	2.42
-Textiles	15.57	-0.04	2.74	-0.12	0.61
-Metal and non Metallic	1.30	1.23	4.45	-2.97	5.19
-Electrical Appliances	2.07	11.57	19.49	18.03	4.05
-Machinery and Transport Equipment	2.49	2.38	3.82	23.30	12.85
-Chemicals	8.85	5.51	6.67	13.98	4.21
-Petroleum Products	11.21	0.05	4.67	1.04	6.38
-Construction materials	0.49	0.03	0.02	2.06	0.18
-Others	3.03	3.02	6.52	5.74	9.29
Financial Institutions	5.82	-4.62	7.10	4.73	20.21
Trade and retails	26.28	19.38	19.96	2.41	10.10
Construction	10.51	20.21	5.10	-0.06	-0.23
Mining and quarrying	2.09	15.41	1.76	-9.77	7.22
Agriculture	0.00	5.42	1.18	0.02	0.09
Services	5.10	11.91	3.17	15.93	7.90
Investment	0.00	0.00	0.00	3.52	-8.28
Real Estates	0.00	6.16	13.01	2.46	13.54
Others	0.00	0.00	0.86	16.39	4.29
Total	100%	100%	100%	100%	100%

Source: Bank of Thailand, (2008)

Recently, due to the further liberalisation of the domestic financial sector, the privatisation of the formerly state-owned enterprises and legal ease to foreign investment in the real estate sector, it is noticed that financial institutions, services and real estate started to receive significant amounts of inward FDI. In summary, inward FDI in Thailand was concentrated only in a few industries in the economy, and particularly in industries that are vibrant and profitable.

FDI in Relation to the Growth Rate of Total Factor Productivity

This section compares the concentration of FDI against the changing pattern of economic activities in Thailand. The overview of the share of GNP by industrial sector is provided in order to give the pattern of structural change in Thailand. Then this study will find out whether or not the FDI intensity happens to be in the same sectors where there is a high Total Factor Productivity (TFP). From Table 5.7, it can be seen that, from 1980, the manufacturing sector makes up the biggest part of the Thai Gross National Product (GNP) and it is also this sector where FDI prevails. The other three sectors which make up a significant part of the Thai GNP are agriculture, service and wholesale trade and retails.

TABLE 5.7: PERCENTAGE SHARE OF GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN

Sector/ Industry	2008	2000	1990	1980
Manufacturing	37.70	35.40	28.15	23.17
Construction	2.96	2.55	6.07	4.60
Mining and quarrying	3.64	2.15	1.62	0.75
Agriculture	12.14	11.62	13.72	20.26
Services	11.36	11.78	12.03	12.64
Banking, and Real Estates	6.54	3.00	5.63	3.11
Wholesale trade and retails	14.18	14.66	17.60	17.97
Others	11.48	18.84	15.18	17.50
Total	100%	100%	100%	100%

Source: National Economic and Social Development Board, (NESDB, 2008)

In common with other nations on their development path, the agricultural share of Thai GNP gradually declined from 20% in 1980 to 12% in 2008. The manufacturing, services and trade sectors, on the other hand, have been enjoying increasing shares of GNP. It is reasonable to deduce that a significant amount of resources moved out from the agricultural sector to the manufacturing and service sectors. Tables 5.6 and 5.7 show that, except for the agricultural sector, there is a preliminary correlation between the size of the sector

share of GNP and the intensity of foreign investment. The inflow of FDI appears to be clustered in sectors that account for a significant part of total GNP. Thus, it is interesting to know if these industries exhibit a higher growth rate in TFP, where FDI is highly clustered compared to those of the industries where domestic investment prevails.

In so doing, stylised facts and empirical evidence on TFP growth in Thailand will be drawn from the literature. There have been, among others, five major studies conducting growth accounting using Thai data. They are Tinakorn and Sussangkarn (1996, 1998), Sitthikul (2001), Chandrachai, Bangorn, and Kamjara (2004), and Bosworth (2005). The methodological approach of each study has been compared and discussed in detail in Bosworth (2005). As the objective of this section is to provide a rough overview on whether or not the TFP is highest in the sector where inward FDI is clustered, the details of growth accounting used in these studies will not be discussed here. Bosworth (2005) is a good source for this information. Detailed results of these studies are found in Appendix C.

Basically, major productivity studies in Thailand classified the economy into three major sectors, namely agriculture, industry, and services. The classification of economic sectors is generally made in accordance with Tinakorn and Sussangkarn (1996, 1998). At the aggregate level, the above studies found that the output growth in Thailand, from 1977-2004, can be generally explained by an increase in the growth rate of capital stock and labour respectively. The growth rate of TFP accounts only marginally for the growth rate of Thai output over the past three decades. When looking at the average TFP growth rate, classified by sectors, it is seen that the sector which has the highest average growth rate of TFP is agriculture. However, among others, Bosworth (2005) found that the average growth rate of TFP in industry became the highest among the other sectors only after the crisis. Besides, he also noted that Thailand's growth has been relatively capital intensive. This is because the growth rate of Thai capital stock is slightly greater than that of the output. Furthermore, compared to other industrial countries, the capital-output ratio in Thailand remains somewhat low (Bosworth, 2005) despite showing an increasing trend from the 1980-2000 (Pholpirul, 2005). Since the capital-output ratio has an inverse relationship with capital productivity, it can be inferred that investment in Thailand can still be made more efficient.

141

As discussed earlier, inward FDI has been clustered mainly in the industrial sector where the TFP growth has been found to be modest, and in many cases, negative. This suggests that output growth in this sector can only be explained by increases in factor inputs such as labour and capital. For example, Tinakorn and Sussangkarn (1996, 1998), using data from 1977-1990 and 1980-1995, found that the average TFP growth rate in industrial sector during these two periods were -0.6% and -0.7% respectively. Similarly, Sitthikul (2001) found that the average TFP growth rates in the manufacturing sector during 1980-1996 stood at -0.5%. Chandrachai, Bangorn, and Kamjara (2004), gathering data from 1977-1999, found no TFP growth in the industrial sector. Nonetheless, in contrast to the above studies, Bosworth (2005), using a more extended set of data, found that the average growth rate of TFP in industrial sector from 1977-2004 was 0.4%. Bosworth (2005) takes into account the structural change in the economy induced by the financial crisis in 1997. He breaks down the whole sample into two sub-periods, which are 1977-1996 and 1999-2004. He finds that the average growth rate of TFP in manufacturing from 1977 to 1996 was relatively small, exhibiting only 0.4%. However, after the crisis, during 1999-2004, the average growth rate of TFP had increased to 2%.

The variation in the findings of these studies resides mainly in two factors. Firstly, there is a variation in the measurement of labour inputs. While some studies made adjustments for differences in labour quality, some did not. Secondly, different empirical findings can also be explained by the difference in subjective choice of weights attached to the growth rates in capital and labour. This, in turn, affects the calculated magnitude of TFP growth rate. Despite the variation in these findings, it can be reasoned that, over the past thirty years, the average TFP growth rate in industrial sector was relatively modest. It is counter-intuitive, at least, through conventional perspectives, to observe that Thai industry, which was the mostly FDI-intensive sector, produced a poor average TFP growth rate even though the growth of the economy was clearly fuelled by this sector through foreign investment. This suggests that, perhaps, FDI had a limited contribution to the improvement of productivity. Moreover, the positive spillovers from FDI may not have optimally materialised. If this is the case, it can then initially be explained by the shortcomings of the industrial policies which, in turn, were the products of the interaction between domestic and international political economies.

5.2.4 Thailand in the Global Economy

This section examines several key indicators, reflecting the international competitiveness of Thailand over the past three decades in relation to the rest of the world. These indicators are the Net Outward Investment position as suggested in Dunning (1981), and the ratio of GNI to GDP. Moreover, it will analyse the Terms of Trade, and the country's balance of payments as discussed in the dependency theory.

Net Outward Investment and income per capita

Net Outward Investment (NOI), measured by the difference between outward FDI stock and inward FDI stock, represents the international direct investment position of a country. It also reflects the extent to which domestic enterprises possess ownership-specific advantages that foreign enterprises do not have. A positive NOI indicates that domestic enterprises are globally competitive and possess a stock of investment abroad. A negative NOI refers to the reverse position.

In the case of Thailand, from 1980 to 1997, the country's NOI appeared to be negative, behaving generally in line with the Investment Development Path that was depicted by Dunning (1981), Figure 5.2 (p.134). The Thai NOI slightly decreased from 1980 to 1987 as a result of opening up of the economy to FDI. After the materialisation of the Plaza Accord, the decreasing rate of NOI accelerated and behaved in the manner depicted by Scenario 1, described in section 4.2.1. Between 1987 and 1996, Thailand was enjoying a boom period largely induced by the growth of the export-led manufacturing sector, which in turn was driven by an inward FDI. As a result, the negative NOI increased steadily during that time. The rate of change of the negative NOI steeply increased from 1997 onwards, mainly due to the impact of the financial crisis in that year. The pattern of Thai NOI appears to be the same as that of resource rich countries depicted in Dunning (1981, p.121). It is also noticed that, with every rebound, the Thai NOI dropped in the following period. This makes the rebound in 2008 worth noting.

FIGURE 5.2: NET OUTWARD INVESTMENT AND GNI *PER CAPITA*
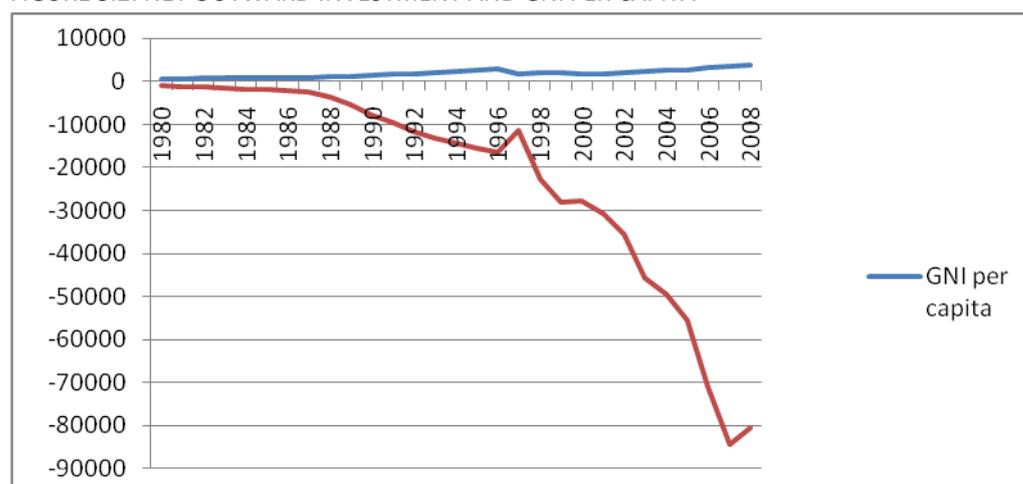
Source: International Financial Statistics, (2009)
        Unit (y, x): US$ Million, year

From Figure 5.2, one might deduce that Thai domestic firms, as a whole, possess fewer ownership-specific advantages *vis-à-vis* TNCs. The steep drop of NOI from 1997 pointed to an important structural problem in Thailand, that is, the lack of vitality of domestic firms. In an unfettered market, every crisis is likely to drive out the weakest and help consolidate the survivors. It follows that the Asian financial crisis in 1997 helped to drive out Thai firms and enhance the position of foreign firms even more in the Thai domestic market. Maybe this happened because domestic firms were lacking competitive advantage, which is the key engine of a defensive mechanism when facing foreign competition. Moreover, as Thai NOI appears to decrease extensively, this suggests that the Thai economic growth path may follow the pattern of NOI in Scenario 2, depicting a capital dependent state, described in section 4.2.2.

There are several sectors that can explain the reason behind the failure of domestic firms to fight back the global competition, even in their own territory. First, it is due to the lack of strategic and specific industrial policies by the government from an early stage of development. The matter was exacerbated when policy instruments that were meant to help absorption of spillovers from FDI were gradually lifted after the 1997 crisis and then replaced with more liberal policies that could become even anti-development. As mentioned in the previous sections, most of the FDI-related policies in Thailand tend to focus more on creating locational-specific advantages rather than creating a market environment that helps to develop the ownership-specific advantages of domestic firms. As

a result, more incentives were given to TNCs to internalise their activities domestically and reap the largest part of the surplus, that is, the entrepreneurial returns.

Secondly, it is because Thai governments in the past mostly played the role of a weak state when it came to economic affairs. More specifically, past governments believed in the market so much that they neglected that TNCs, as well as FDI, are the results of market imperfections. It could be argued that the effective way to deal with them is to use well designed regulations that could serve the national interest. It is also understood that the failure of the state was largely due to unfavourable domestic politics and the neo-liberal hegemony.

Thirdly, the inability to develop ownership-specific advantages can be partly explained by the failure of domestic entrepreneurs themselves. Thai economic history shows that most of her domestic entrepreneurs are merchant capitalists rather than industrial capitalists. Thai conglomerates were largely grown from protected industries. However, they are not competitive in technology-intensive production. For example, Kohpaiboon (2006, 2009), using data from the Thai industrial census in 1996, reported that there were only five industries from the sample where locally owned-plants had higher labour productivity compared to that of foreign-owned firms. These were alcoholic beverages, veneer sheets production, tobacco, toys and paper pulp. Clearly, productions in these industries rely on relatively established and widely available technology. Whenever the country economically advances further, the competitiveness of domestic firms will be challenged. It can be argued that the Thai state did not give any incentive or stimulus to its domestic firms to become industrialised, contrary to the practices of the Japanese and South Korean states.

In summary, Figure 5.2 shows that the NOI in Thailand is significantly deteriorating. This also presents that Thailand, throughout her modern economic history, has always been a net recipient of FDI, with an increasing magnitude. In the next paragraphs, this study will examine other economic aspects that are related to an inflow of FDI.

Gross National Income and Gross Domestic Products

Thai GDP expresses the total value of output produced within Thailand over a given period of time, regardless of the country of origin of the labour or capital that produces those outputs. Thai GNI measures the income earned by Thais and Thai capital anywhere in the

world. Generally speaking, GNI is derived from GDP less net taxes on production and imports, less compensation for employees and property income payable to the rest of the world, plus the corresponding items received from the rest of the world. More specifically, the difference between GNI and GDP is the amount of income received from the rest of the world, less income payable to the rest of the world, that is, the net transfer payment. This amount covers, for example, earnings arising from overseas investments (FDI), and other types of financial assets (PI), entrepreneurial returns on investment, and worker remittances.

No less than the NOI, the ratio of GNI to GDP can also reflect some aspect of an economy in relation to international investment as well as its maturity. In particular, the GDP of a country that either receives or produces FDI extensively can be misleading in representing the wealth of the nation. Indeed, most advanced nations, particularly, U.S., U.K., and Japan, all have positive NOI. Thus, their GNI is larger than their GDP due to the return on investment outside their own country. Harvey (2007) noted that a secret source of American wealth, after WWII, was their income, generated from a large stock of American investment abroad. By the same token, any country whose NOI is negative tends to have GNI less than GDP. Thailand is no exception, Figure 5.3.

FIGURE 5.3: RATIO OF GNI TO GDP FROM1970-2008
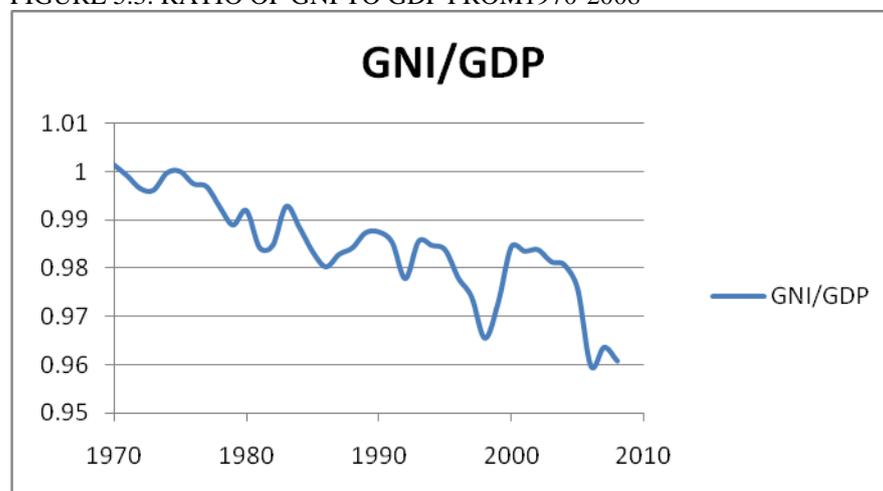
Source: World Development Indicators (2009)

In 1970, Thai GNI was slightly greater than GDP. The higher GNI might come from the remittance of Thai workers aboard. As soon as Thailand became a strategic destination for FDI, her ratio of GNI to GDP gradually dropped, with fluctuations. In 1980, the ratio stood at 0.99. Then, it decreased to 0.98 in 1990. For comparative reason, it should be noted that

in the case of Mexico, Gallagher and Zarsky (2007) claimed that, to be an enclave economy, her ratio of GNI to GDP has never gone lower than 0.98. In 1998, after the crisis, the ratio dropped to 0.965 before it bounced back to 0.98 in 2000. Recently, the GNI/GDP ratio made a new record, dropping to 0.96. While it may not seem significant representing the difference of GNI to GDP in index fashion, it is interesting to note that in US Dollar terms, the ratio of 0.96 in 2008 means that Thais had to spend US$ 10.4 billion less than what was produced domestically. Because of this, Bosworth (2005, p.4) points out that, to a large extent, economic growth in Thailand has been financed by the country's own resources. Then, further notes that

> *'Income payments on FDI and foreign debt have been largely offset*
>
> *by wages and remittances of overseas workers.'*

Yet, it is difficult to conclude that the remittance of Thai workers could 'offset' income payments of FDI and foreign debt. This is because the majority of Thai workers abroad work in unskilled sectors and earn subsistence wages in foreign lands. However, it can be expected that the income payments on FDI are entrepreneurial returns and, by definition, they are larger than subsistence wages. So, given the *status quo* of the country, it is rarely possible that the outflow of income could be largely addressed by the remittances of overseas workers. One way to increase the GNI/GDP ratio for Thailand is to produce outward direct investment. However, if domestic firms have limited ownership-specific advantages, it is difficult to envisage a case where international investment generates a positive profit.

As mentioned earlier, the ratio of GNI to GDP in advanced capitalist countries is usually greater than one. As much as it is expected that the NOI in developing countries would some day become positive, as it represents a higher stage of development, the ratio of GNI to GDP is also expected to be greater than one when the economy becomes more mature. However, this is not the case in Thailand. Even though the country has integrated with the global economy for a considerable time, the ratio of GNI to GDP has only been deteriorating. Both the country's NOI and the ratio of GNI to GDP show no sign of the economy becoming more mature.

Thailand's Balance of Payments

Balance of payments is a statistical statement that summarises the economic transactions of an economy with the rest of the world at a specific time period (BPM5, 1993).[5] The information found in the balance of payments represents the interaction of an economy to external forces, such as international trade and investment. This interaction is a sum of collective actions of economic agents in the economy. Apart from looking at the efficiency and the effect of FDI on GNI, changes in the country's balance of payments can also reflect the impact of FDI in the host country.

In Chapter 3, the literature review showed that FDI is likely to lead to an outward transfer of resources. These transfers, whilst they cannot be directly observed, as that would require access to the data at firm-level, can be indirectly identified by examining the current account in the balance of payments. The current account constitutes three major entries, namely, balance on trade of goods, balance on trade of services and balance on income. The first two entries record exports and imports of goods and services. The last entry records compensation of employees and investment income. Generally, the net balance of income should be more or less the same as the difference between GNI and GDP.

Figure 5.4 shows the net balances on goods, services and income entries. It is noticed that, even during the economic boom period from 1986 to 1996, except for a net surplus in balance on services from 1986 to 1990, all three entries exhibited a deficit balance. This resulted in net current account deficits during this period despite the belief that the economic boom was thanks to export-led growth and the promotion of a FDI regime.

---

[5] Balance of Payments Manual, 5th Edition, IMF, 1993

FIGURE 5.4: NET BALANCE ON GOODS, SERVICES, AND INCOME FROM 1975 - 2008
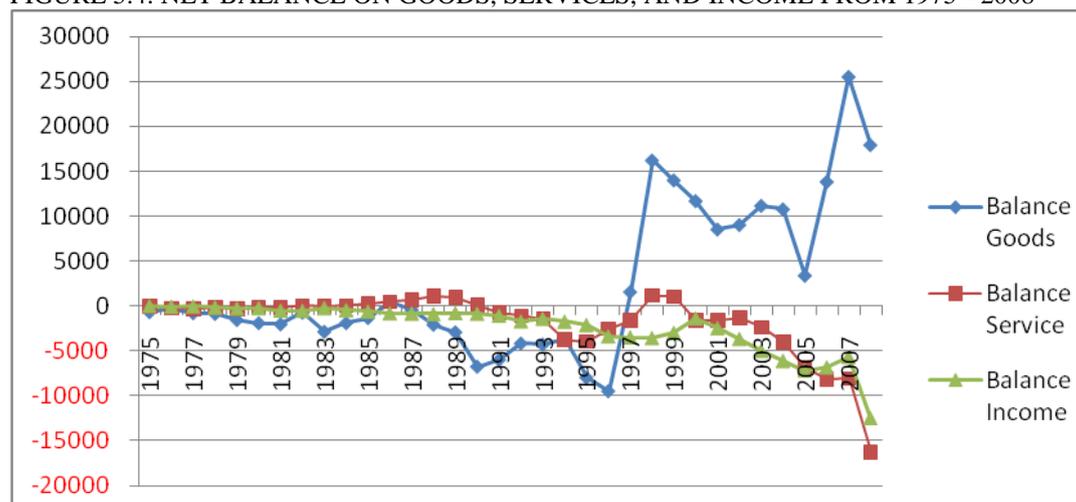
Source: Balance of Payments, IMF, (2009)
          Unit (y, x): US$ Million, year

At that time, Thailand did not suffer from the deficits in current account because she had hosted a large volume of inflow of capital both FDI and PI which resulted in a capital account surplus, Figure 5.5. However, a surplus in capital account does not only mean an increase in liabilities to the rest of the world, it may increase economic vulnerability to external shock such as capital flight and divestment. The Asian financial crisis is a clear example. In the case of Thailand, it is reasonable to say that the reverse of short-term capital, PI, did trigger the financial crisis, caused by the pre-mature liberalisation of financial account, during the boom.

It could be argued that it was the liberalisation and deregulation of FDI at the early stage of development which caused a distortion in the structure of the economy and impeded Thailand for further development. One key structural distortion was an absence of strong domestic entrepreneurs. Taking into account these two factors, it is not surprising to see that, under the liberal and open economy, each crisis would only enhance the position of foreign firms who appear to be stronger than their domestic counterparts.

FIGURE 5.5: NET CURRENT ACCOUNT AND NET FINANCIAL ACCOUNT
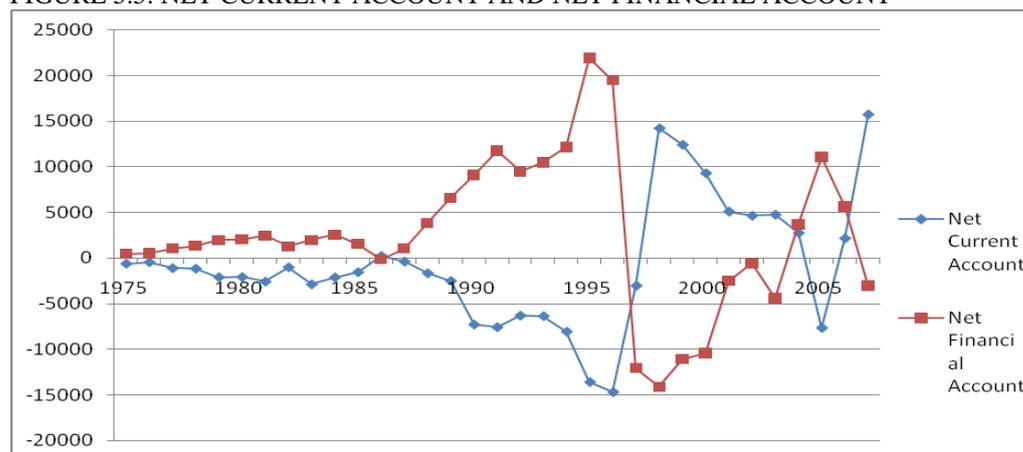
Source: Balance of Payment, IMF, (2009)
Unit (y, x): US$ Million, year

After the crisis, the pattern of the current account dramatically changed. The devaluation of the Thai Baht and a large inflow of FDI which sought to use Thailand as its production base caused a surge in exports of goods from Thailand. Consequently, the export share of GDP in Thailand increased significantly to more than 70% in 2006. This should be economically sound as long as the majority of these export products are produced by domestic capital and controlled by domestic entrepreneurs. However, this is not the case for Thailand. Thanadsillapakul (2010) shows that, in 2006, 99.5% of private enterprises in Thailand were owned by domestic citizens. However, these 99.5% constitute mainly small and medium-sized enterprises that have a share in national exports of only 29.6%. The export from TNCs' operations in Thailand takes up 70.4% of the total exports. It can be expected that these export-oriented, foreign-owned firms would eventually repatriate their profits back to their home countries, or to where their accounts are registered. This can be partly depicted in the income entry.

Figure 5.6 presents the cumulative net balance of three major entries in the current account. It is seen that the biggest source of cumulative deficits is found in the balance of income. From 1975 to 2008, the cumulative deficits in income balance totalled US$ 73 billion. Of this, the cumulative outflow of payable income after the crisis until 2008 is US$ 57 billion, nearly 80% of the total cumulative deficits over the past three decades. So, the massive rise in Thai exports by TNCs may induce the outflow of capital in income balance.

FIGURE 5.6: CUMULATIVE NET BALANCE ON GOODS, SERVICES, AND INCOME
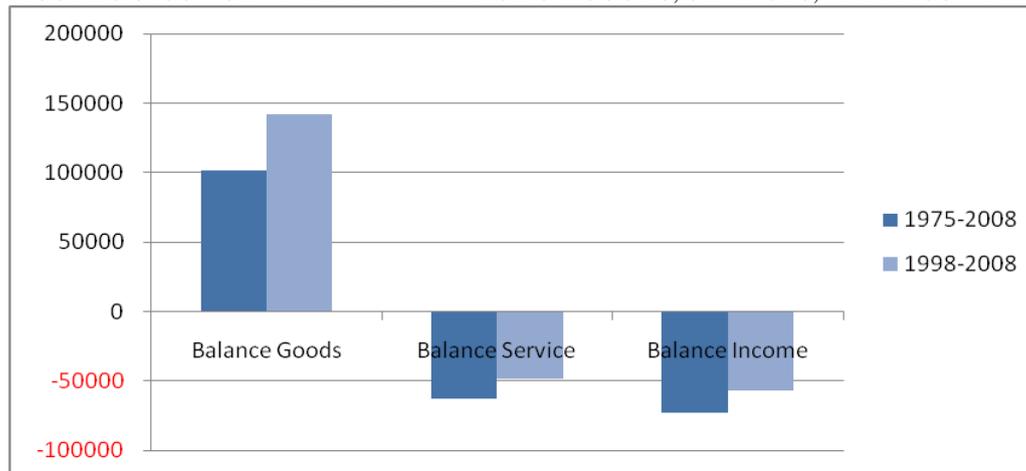
Source: Analytical Balance of Payments, Thailand, IMF, (2009)
              Unit(y): US$ Million

Furthermore, Thailand does not only export heavily, she also imports goods and services significantly, Figure 5.7. As pointed out by Phongpaichit and Baker (2003), the export products, produced by TNCs in Thailand, were largely made with imported intermediate and capital goods. The heavy reliance on imported capital goods not only reflects a high volume of imports of goods but also in the balance of services, the second largest source of deficits. The service entry records, for example, the transactions derived from the use of tangible assets, communication, transportations, media, loyalties and licence fees. As transportation, communications and media remain protected sectors, it can be deduced that outward payments in the service balance may stem from the use of foreign tangible assets, loyalties and licence fees.

FIGURE 5.7: INWARD FDI, EXPORT AND IMPORT OF GOODS, IMPORT OF SERVICES AND INCOME PAYABLE
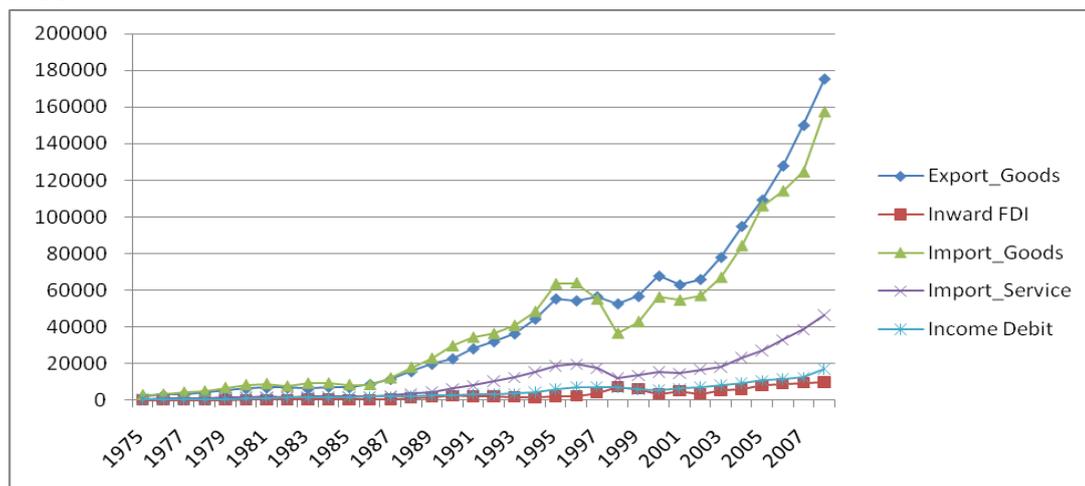
Source: Balance of Payments, IMF, (2009)
              Unit (y, x): US$ Million, year

All in all, it must be noted that the situation of the current account post-crisis is relatively better than the pre-crisis period. However, the economy also becomes more vulnerable to changes in external factors. Considering the great volume of leakages generated in the three main accounts, only a slight drop in exports could cause, Thailand's current account to return to deficit. As the main exporters are TNCs, the government has no other choice, at least in the short run, but to encourage export-oriented foreign investment even more, in order to keep the economy going. If the current account moves into deficit, it would be addressed by a surplus in the financial account which in turn will increase the foreign liabilities to the countries and may cause further leakages of resources in the future. Thailand might then be said to be a capital-dependent state.

Figure 5.8 plots inflow of FDI against the outflow of income payable to the rest of the world. The figure depicts that these two series appear to be negatively correlated. Most importantly, it is seen that the magnitude of the outflow of income appears to be greater than that of inward FDI. In addition to this, the deficits in income balance show no sign of decreasing over the past three decades. It also appears that the more the country liberalised, the larger the leakages became.

FIGURE 5.8: INWARD FDI AND INCOME PAYABLE TO THE REST OF THE WORLD
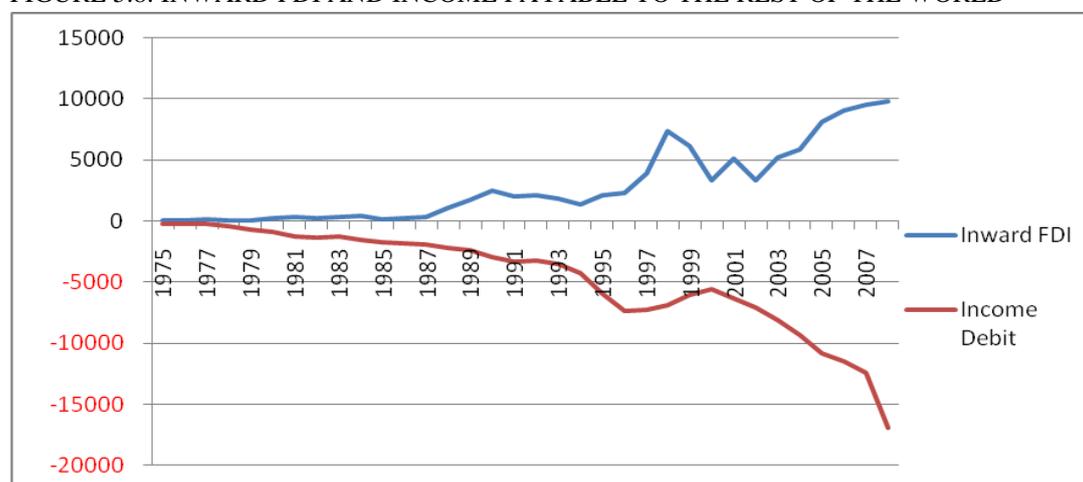
Source: Balance of Payments, IMF, (2009)
Unit (y, x): US$ Million, year

In summary, based on BOP observations, it can be argued that liberalisation of the Thai economy in accordance with the neo-liberal development model tends to make the Thai economy more dependent on the global economy, through TNCs' investment and the need to export. The patterns found in the Thai BOP over the past three decades are similar to the

hypothetical case, described roughly by Hellenier (1989) and Milberg (1999), where FDI might be detrimental to the balance of payment, as well as threatening the prospect of sustainable development.

Thailand's Terms of Trade

So far, it has been shown that Thailand has been increasingly involved in international trade through inward FDI. International trade has become an important element contributing to the growth of the national wealth. In this section, this study conducts a preliminary examination by looking at the country's terms of trade over the past half century. The terms of trade adjustment, or the terms of trade effects, reported in Figure 5.9, equal the capacity to import, less the export of goods and services at constant price, in US Dollar terms. More specifically, WDI (2008) reports that the terms of trade effects are the difference between the value of exports, deflated by the import prices index, and the value of exports, at constant prices. Mora (2006) stated that positive terms of trade are part of a catching-up process. However, it is seen that, since the early 1980s, terms of trade effects in Thailand have only become increasingly negative, over the past fifty years. They appear to be an inverse function of the degree of liberalisation of trade and investment. For example, when the country was still relying on exports of primary products, and when inward FDI remained limited, during the 1960s and 1970s, Thailand enjoyed the gains from trade illustrating the positive terms of trade during these periods.

FIGURE 5.9: TERMS OF TRADE IN CONSTANT PRICE US$
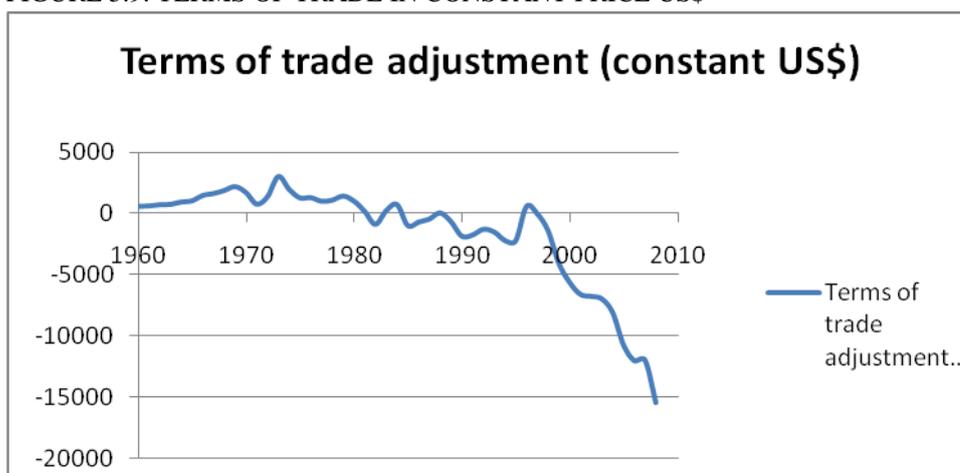
Source: World Development Indicators, (2009)
          Unit (y, x): US$ Million, year

However, from the 1980s onwards, when the country implemented export and FDI-led growth policies, the terms of trade started to drop slightly before falling significantly shortly after the Asian crisis. There are several possible reasons to explain this. First, during the first half of the 1980s, the government attempted to devalue the Baht in order to make the country's exports artificially competitive. Second, noting that Thailand has always relied on imported intermediate and capital goods for export products, the devaluation had a detrimental impact on the terms of trade. Therefore, in 1997, when Thailand decided to float her currency, the Thai Baht was devalued by more than twice of its initial value. This eventually resulted in a plummeting of the terms of trade, as depicted in Figure 5.9. Thirdly, as the terms of trade effect are partly explained by the volume of trade, the sharp deterioration of the terms of trade, after the crisis, can be attributed to a significant increase in international trade volume since 1998, Figure 5.7. Fourthly, it is noted that most of Thai exports were made by TNCs, and therefore may be subject to intra-firm trade. This type of trade could lead to a deterioration in the terms of trade if the transfer pricing practices are being operated. Lastly, the world began to experience the surge in oil prices since 2001, peaking in 2008. The rise in oil price during this period also contributed to the deterioration of the terms of trade of the country.

5.3 Brief History of Modern Thai Political and Economic Growth

In this section, the study presents, both economically and politically, the Thai growth records in relation to the liberalisation of FDI. Since the late nineteenth century, Thailand, even though it had never been colonised, had adopted colonial policies (Evers, 1987, p.766). Therefore, prior to the post-war period, her economy exhibited the feature of a dual economy in which the traditional or rural sector was separated from the modern or export-orientated sector. In the late 1980s, Evers (1987) asserted that this feature represented a 'peripheral capitalist economy' according to dependency theory and the World-system concept. This suggests that the country is not likely to be resistant to openness, or the penetration, of Western influence.

Throughout her history, despite having a liberal economy, the Thai government had hardly adopted the liberal ideology in politics. Since the Siamese revolution in 1932 which marked the change in the political regime from an absolute monarchy to a constitutional monarchy, most of the Thai governments were led by military dictatorships and ex-military officers. The power structure in Thailand, fractional and complicated, contributes largely to the domestic political instability. This, in turn, inevitably affects the path of the country's economic development.

The economic development in Thailand may be regarded as one of the most interesting cases in East Asian development studies, particularly under the hegemony of neo-liberalism and in relation to the management of inward FDI. Whereas the developmental path of Japan and newly industrialised economies (NIEs), did not, to a significant extent, share the common practices, described in the Washington Consensus (Amsden, 2003, 2007; Chang, 2003), the developmental path of Thailand can be said to be the product of the Washington Consensus. Thailand has implemented all the major orthodox development policies guided by the World Bank and the IMF since the beginning of the 1960s. In the early 1970s, Thailand embarked on export promotion policies in parallel to a FDI-led growth strategy. In contrast with other East Asian countries, however, Thailand has never identified specific industries or sectors to be formally promoted (Nokomborirat, 2004). Neither were there any national firms selected to receive special privileges, or protection against international competitors. In other words, Thailand has hardly used subsidies for her own domestic firms or been unfriendly to international investors.

Thailand's industrialisation process has taken place as a result of changes in international political economy, amid domestic political upheavals. The genesis of modern capitalist development in Thailand can be traced back to the mid-nineteenth century. However the point of departure of the historical review in this study starts from the 1970s. This is because it was only from then that Thailand adopted seriously the export promotion and FDI-led growth strategy. More specifically, FDI only started to play the significant role in Thai economic growth from the 1980s onwards. During this period, policies driven by the neo-liberal ideology, for example, trade liberalisation and fiscal discipline, were being implemented. Furthermore, regarding the availability of data, complete series of key variables on the quarterly basis, such as inward FDI, can only be traced back to 1977. Next, during this period, from the 1970s to present, East Asian nations have been exhibiting

155

various degrees of economic development. This has been largely due to the difference in actions taken and policies implemented by their governments, possibly with regard to FDI policies. This difference can reflect the effectiveness, or lack thereof, of neo-liberal development reforms that Thailand has adopted as the model of her development.

Before proceeding further, it is instructive to give a brief political and economic background prior to the 1970s. Phongpaichit and Baker (2003) documented that WWII had brought significant changes to Thai economic development. The end of the WWII had strengthened domestic capital and altered the nature of the relationship between domestic entrepreneurs and the state. Not long after the end of WWII, the world was moving towards the cold-war period and the South East Asian region was flooded with anti-communist sentiment, as well as experiencing the heat of the Vietnam War. The then military junta, led by Field Marshal Plaek Pibulsonggram took the first attempt to promote domestic investment (Siamwalla, 1975). However, it was not totally successful (Pupphavesa and Pattamasiriwat, 1987).

This might be explained that the investment promotion under this nationalist government focusing more on protecting farmers and national peasants against an increasing commercial domination by Chinese immigrants, who constituted the majority of the Thai capitalist class. In brief, as the then government implicitly discriminated against a group of able domestic entrepreneurs, the synergy between the state and domestic entrepreneurs could not materialise. That was contrary to what happened in Japan and South Korea. Additionally, Thailand had a limited infrastructure in the 1950s to encourage FDI. This problem, however, was overcome in the following decades. Economically, Europe and Japan suffered severely from the war. Their international economic expansion had been constrained and then halted. Most of their businesses in Thailand were abandoned. This ownership vacuum provided domestic entrepreneurs in Thailand the opportunities to take over high value-added sectors such as banking, insurance and petroleum. This, in turn, helped to accelerate the rate of capital accumulation for domestic entrepreneurs.

It can be said that the contemporary Thai economic development path is largely shaped by policies that were implemented, and institutional infrastructure that were established, by the military government of Field Marshal Sarit Thanarat. He took power from Plaek by conducting a *coup d'état* in 1957. It is important to note that his *coup d'état*, took place

after he visited the U.S. and had been cordially acknowledged by the United States, the country of democracy (Phongpaichit and Baker, 1996). Unlike his predecessor, Sarit was more liberal and less nationalist. During his visit to the States, he was informed by U.S. officers that economic development was crucially important to Thailand and that it could be facilitated by foreign direct investment (Phongpaichit and Baker, 1996, p.156).

Due to the fear of communist expansion in the Indo-China region and the instability of domestic politics, Sarit and the U.S formed an alliance. Under his regime, Thailand formally started receiving extensive aids and military assistance from the U.S. Indeed, Sarit was very keen in committing to fight against communism. Some of the key military officers even believed that this was the way to get more money from the U.S. (Phongpaichit and Baker, 2003, p.157). At the beginning of Sarit's term in office, the state promoted the process of capital accumulation of domestic entrepreneurs who also benefited not only from financial aids provided by the U.S but also from an increase in domestic and regional demand as a result of the Korean War. Also, in this period, the World Bank started to formally assist the process of development in Thailand. Even though the country voluntarily accepted the World Bank's assistance, it is documented that Sarit was informed by President Kennedy that the acceptance of this assistance was one of the criteria that the U.S. took into account when considering giving financial aid to the country (Phongpaichit and Baker, 2003).

During the 1960s, there were two institutional establishments that deserve to be highlighted. Firstly, it is the establishment of the office of National Economic and Social Development Board (NESDB). This institution is responsible for designing the national economic and social development plans, issued every five years. This five-year plan acts as a framework for economic development. It must be noted that the national technocrats who run these institutions had graduated from U.S. universities. The patron of NESDB at the time was the World Bank which financed all the major infrastructure programmes. The first three economic and social development plans were written by American consultants. As Phongpaichit and Baker (2003) pointed out, the above suggested the U.S.'s strategic influence over Thailand's development path.

Secondly, Sarit was committed to create a good business environment for foreign investors. As a result, he established Thailand's Board of Investment (BOI). This institution was initially designed to promote both domestic and foreign investment by granting fiscal incentives to favourable investment projects. However, later on, BOI's main objective appears to have shifted to attract and to facilitate direct foreign investments in Thailand. Parallel to this, in order to assure a favourable environment for investment, the then government went further by abolishing labour unions and outlawing all kinds of strike (Dilokvidhayarat, 2007).

Since Sarit came into power until the early 1970s, Thailand adopted an import substitution regime similar to other developing countries at that time. The Thai economy was growing largely by the expansion of domestic demand, government spending and private investments in import substitution. Even though the industrial section had rapidly expanded, the economic growth in the 1960s had been driven largely by the agricultural sector (Jitsuchon, 2002). This was because, thanks to the government expenditure in infrastructure such as irrigation system and rail roads, farmers had more access to land further away from the river and better facilities to transport their products to the markets. These agricultural products were largely meant for export. Jitsuchon (2002) notes that the foreign and government revenue generated from the growth of agricultural outputs in this period was used to finance the investment for import substitution. It must be noted that the nexus of capital accumulation was clustered in monopolistic and oligopolistic industries that belonged to a small group of Chinese and aristocratic businessmen and high-ranked military officers. These groups of people have benefited from industrialisation and much of their wealth was generated from the surplus in the agricultural sector (Phongpaichit and Baker, 1996). Indeed, the majority of the population in the agricultural sector remained outsiders in the process of Thai economic development.

5.3.1 Political and Economic Development from the 1970s to Present

The early stage of Thai development was strengthened by the establishment of macroeconomic institutional infrastructure and the implementation of strict fiscal discipline. As a result of a successful macroeconomic management in the 1960s and the exploitation

of national resources, Thailand started to produce high profits from agricultural goods and experienced a rise in investment in import-substitution manufacturing sectors (Jitsuchon, 2002: Phongpaichit and Baker, 2003). Other East Asian economies, such as Taiwan and South Korea also began their export-led growth regime. These factors contributed to the shift in development regime to export promotion. As suggested by the World Bank and the Bank of Thailand (BOT) the export-led growth strategy was, for the first time, specified in the third economic and social development plan. In order to encourage investment for exports, the government passed an Investment Promotion Act (IPA) in 1977, authorising the BOI to provide incentives to foreign investors (Nikomborirak, 2004 and Tamboonlertchai, 2009).

The 1970s

The 1970s were marked by both political and economic instability in Thailand. In terms of politics, domestically, there were two democratic movements in 1973 and 1976. The confrontations between the progressive left-wing and the right-wing military, ended with victory for the latter. Internationally, during the first half of the 1970s, there was the ongoing Vietnam War. In terms of economics, domestically, Thailand faced a volatile growth as depicted in Figure 5.10. This is partly due to the transition from an import substitution to the export promotion regime. Internationally, Thailand was also affected by the energy and oil crises which characterised this decade.

FIGURE 5.10: PERCENTAGE GROWTH RATE OF GDP FROM 1970-2008
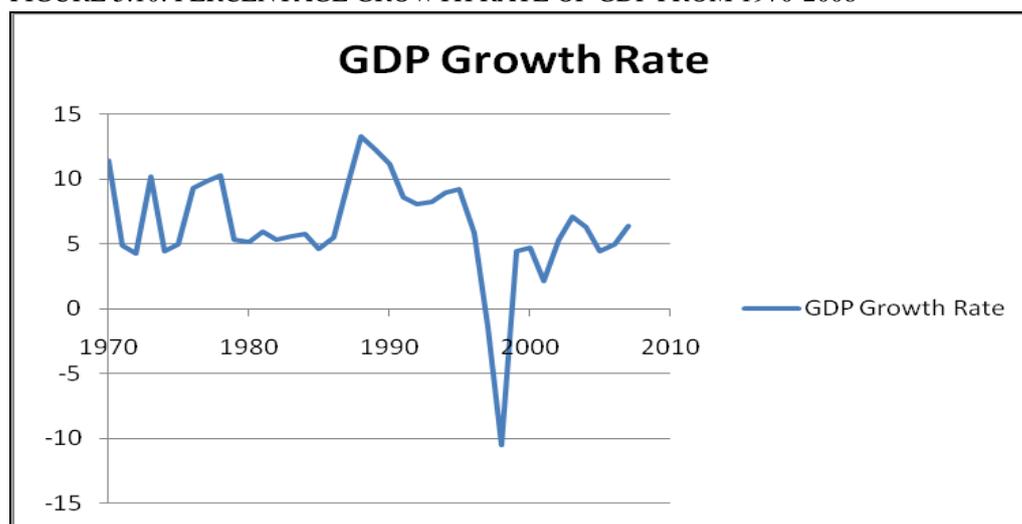
Source: World Development Report (2009)
　　　　Unit (y, x): percentage, year

On domestic politics during the 1970s, Jitsuchon (2002) noted that any government formed after 1976, would not be able to ignore the needs of people. His claim is based on a significant increase in government expenditure since then. This phenomenon was not exactly the result of domestic political movements but was more due to investment banks in New York starting to offer loans to governments in developing countries more readily in order to recycle petrodollars, as private banks perceived that sovereign debts were less risky. Nevertheless, the loans were not necessarily offered cheaply. Not only Thai governments but also those of other developing countries at the time had excessively increased their public debts. The phenomena resulted in the sovereign debt crisis of the 1980s. Thailand, too, suffered the impact of the crisis.

During the 1970s, Thai economic growth was modest and volatile, Figure 5.10 (p.164). Firstly, it was partly because the export-led growth strategy was still in its transition. Many policies at that time were not fully supportive of the new growth strategy, for example, imports of capital goods still faced high tariff. Secondly, the global economy was experiencing oil and energy crises in 1973 and 1979, respectively. The US attempted to appreciate the value of the US dollar in order to reduce the cost of oil imports. Consequently, as the Thai Baht was pegged to the US dollar at the time, this reduced the income from exports. These events are responsible for the first drop in GDP growth rate in the first half of the decade. Thirdly, government spending has been affected by a high level of corruption among politicians. Hence, the government continued to spend extensively on infrastructure and the procurement of arms and munitions, even though the Vietnam War had ended. Besides, not only had the U.S. evacuated from the region after the fall of Saigon in 1975, the U.S. also had reduced the financial aids that were once given to Thailand. Consequently, Thai governments at that time had to borrow heavily to finance their spending. Fourthly, from 1974 to 1976, inflow of inward FDI had been decreased from US$192 to US$80 millions, mostly from American investments. Accordingly, this had reduced the growth rate of the economy by half. The fall in the growth rate, however, was short-lived as the country started to receive a new wave of FDI from Japan and Western European countries, who had already recovered from WWII. As depicted in Figure 5.10, the second surge of GDP growth during the 1970s can be explained by the inflow of FDI from TNCs based in Japan and Western Europe.

The 1980s

In the 1980s, domestic politics were relatively stable. In this decade, Thailand had changed her political leader only once, in 1988. Throughout the 1980s, the country was not ruled by a junta government. However, it was still led by ex-military officers. World politics in this decade experienced the struggle of the central planning economies and eventually their fall. In parallel, there was an establishment of neo-liberal ideologies both in Britain and the U.S. The era of left and right-wing confrontation was gone. Any form of social solidarity was replaced by individualism, family values, private property, and personal responsibilities. The wind of free trade and investment was formed and set ready to roam the world.

At the start of the decade, Thailand was still suffering from the second oil crisis and the debt crisis, accrued from the previous decade. These problems were detrimental to the balance of payments so much so that Thailand had to borrow from the IMF in 1982, Figure 5.5 (p.155). This event is significant because the country once again had to accept external supervision on a policy-making process. As neo-liberalism was already set off, the advice from the IMF at the time was nothing but the neo-liberal policy reforms which were mostly confined to market liberalisation in terms of trade and investment. These policies have already been discussed in Chapter 3. To be fair, it can be argued that the successful implementation of export-promotion policies and FDI-led growth strategy in the 1980s was the first time that neo-liberalism started to shape the Thai economy. It did indeed give a good start.

In the mid-1980s, Thailand was entering into her golden age. The global phenomenon that marked the beginning of the economic boom in this decade was the creation of the Plaza Accord in 1985. This agreement was the result of the U.S. having experienced a recession that was characterised by rising trade deficits particularly with Japan. It was signed by five powerful nations, namely, the U.S., Japan, Germany, France, and Britain. The Plaza Accord is an agreement to depreciate the US Dollar in relation to the Japanese Yen and the German Deutsche Mark. This agreement had significant impacts on the Thai economy in connection with FDI. First, as the Japanese Yen appreciated in relation to the US Dollar up to 89%, this made several Japanese industries that were once competitive, no longer so. These industries were textile, chemical and manufacturers of electrical appliances. As a

result, the inflow of Japanese FDI to Thailand more than doubled during 1985 and 1986, Appendix D.

As a result of pegging her currency with the US Dollar, Thailand could no longer tolerate the continuing appreciation of her currency. She depreciated her currency twice in 1981 and 1984 by 8.7 % and 14.8 %, respectively (World Currency Yearbook, 1985). These events, in combination with the export promotion and FDI-led growth strategies, had increased the attraction of Thailand's locational-specific advantages even more for foreign investors, after 1985. For example, a cheap Baht reduced the cost of investment and increased the competitiveness of Thai-made products in the global market.

A significant increase in inward FDI in 1986 had triggered a considerable rise in the country's economic growth and exports, Figures 5.7 and 5.10. From 1986 to 1987, the growth rate had increased from 5.5% to 9.5%. The then government spontaneously perceived that export promotion and inward FDI could help mitigate the adverse effect of the economic crisis that had taken place in the earlier decade. Thus, in 1987, it went further to promote foreign investment for exports, reduce import tariffs on immediate inputs, and abolish export tariffs on various products (Phongpaichit and Baker, 2003; Nikomborirat, 2004). It was the first time that, apart from American investment, the government allowed 100% ownership for foreign investors of other nationalities. In 1988, the government decided to stop controlling large investment projects. Even though this could potentially cause distortions in competitive environments, there was no objection from any technocrat. The General Secretary of the National Economic and Social Development Board (NESDB), at that time, proposed that Thailand should leave the market to decide where and what to invest and that state intervention in investment and industrial development should be kept to a minimum (Phongpaichit and Baker, 2003). The country was so excited to grow, that no one seemed to have time to think strategically. Indeed, it can be said that an increase in the country's locational-specific advantages, shaped by the neo-liberal ideology, came at the cost of the country's environment (Bello, Cunningham, and Poh, 1998) and the strength of its domestic private sector.

During the second half of the 1980s, Thailand's sources of growth were from exports, expansion of the domestic market, reduction in oil price, an increase of income from tourism that result in a slightly surplus in service balance, and an increase of remittance

from Thai workers. From 1988 to 1991, Thailand experienced an average growth rate of 11%. An inward FDI, during this period, was mainly market-seeking and efficiency-seeking and clustered mainly in the industrial sector. In principle, this inward FDI should, for example, help to upgrade the existing technology in knowledge, stimulate domestic entrepreneurship and increase competition. The analysis of FDI in the previous section did not seem to support this. However, an obvious economic characteristic did emerge, that is, from this time onwards the Thai developmental path became more reliant on exports and inward FDI.

Figure 5.11 shows that from 1985 to 1995, the share of export to GDP had doubled from 20% to 40%. Phongpaichit and Baker (2003) and Jitsuchon (2002) pointed out that the manufacturing sector, dominated by TNCs, grew rapidly in response to the above policies. The share of manufacturing in exports had increased six-fold during the second half of the 1980s. However, the agricultural sector had grown relatively slowly. As a result, this sector did release a pool of cheap and unskilled labour to serve the growth in the manufacturing sector. The industrialisation process developed rapidly.

FIGURE 5.11: EXPORT OF GOODS AND SERVICES AS PERCENTAGE OF GDP
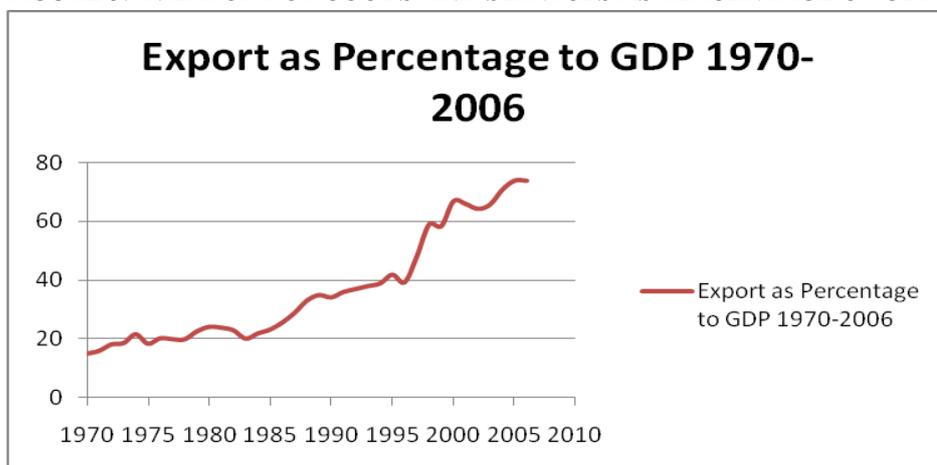
Source: World Development Indicators (2008)
Unit (y, x): percentage, year

The 1990s

In this decade, politically, it can be said that the country started to enjoy more parliamentary politics even though Thailand experienced a *coup d'état* in 1990 and short-lived political instability in 1992. In 1997, Thailand, for the first time in its history, had a constitution that was drafted by the popularly-elected Constitutional Drafting Assembly. In

terms of global politics, the beginning of the 1990s was marked with the end of Cold War, characterised by the fall of the Berlin wall, the collapse of the Soviet Union and the end of the centrally-planned economies. These political events had significant implications for the global economy. They accredited liberal capitalism. Facilitated by the rise of neo-liberal hegemony, the world appreciated that a market economy is the best form of economic system and that free trade and free movement of capital are solutions to development and a key to economic prosperity. It is also observed that there was competition among developing countries to attract more inward FDI.

Economically, in Thailand, still feeling high from the economic boom, the interim government in 1991-1992, whose cabinets were composed of the same group of U.S. graduated technocrats who are in favour of unfettered market economy, proposed that Thailand should further liberalise her financial sector. Phongpaichit and Baker (2003) documented that these technocrats believed that financial liberalisation could make Thailand become the financial hub of the South East Asian region and that the domestic monopoly in the banking sector would be abolished. Thailand experienced economic growth in the reverse pattern to that of the previous decade. During the first half of the 1990s, Thailand's average growth rate remained impressive. The average growth rate between 1990 and 1996 was about 8.6%.

The democratically-elected government during 1992-1995 carried on this project and established the Bangkok International Banking Facility (BIBF) in 1993. The BIBF was an institution that attracted money from the United States, Japan, and Europe and lent in Thailand, through various local and foreign banks, with a lower interest rate (Siamwalla, Vajragupta and Vichyanond, 1999). Consequently, Thailand experienced a surge of inward portfolio investment (PI) within a short period. The inflow of PI increased from US$ 924 millions to US$5.5 billions, Figure 5.12. In 1993, Thailand received more PI than FDI for the first time in her history. This inflow of cheap cash encouraged domestic entrepreneurs to indulge in foreign loans extensively. Most of them saw no necessity to hedge against the currency risk as the domestic currency was under the managed peg regime for at least three decades. This excessive inflow of short-term capital continued until 1997.

FIGURE 5.12: INFLOW OF FDI AND PORTFOLIO INVESTMENT FROM1975-2008
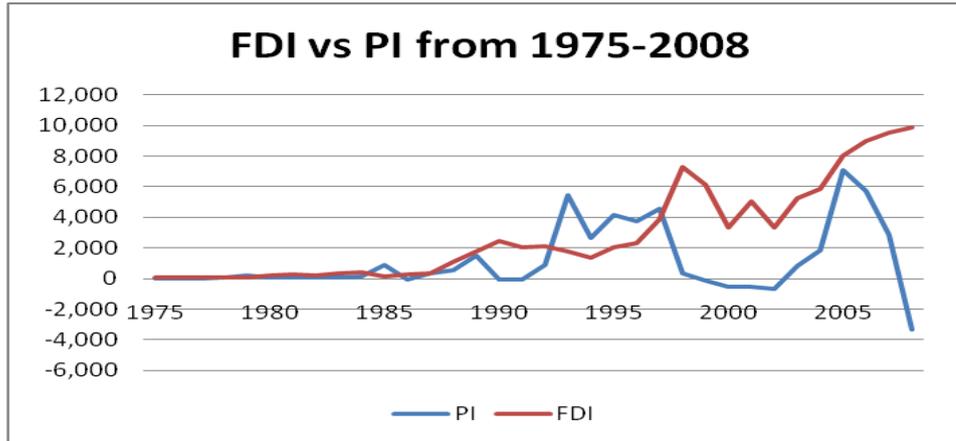
Source: Analytical Balance of Payment, (IMF, 2009)
      Unit (y, x): Million of US$, year

The premature liberalisation of the financial account marked an end of the economic boom. In 1997 and 1998, the country experienced financial and currency crises. These were the result of the pre-matured liberalisation of the financial account. As the global economy was highly integrated, the crisis then spread to other Asian countries such as South Korea and Malaysia. The growth rates for these two years were negative levelling at 1.4 % and 10.5%, respectively. Since then, even though the country's growth rate has bounced back, it has never regained the impressive momentum it once enjoyed.

The crisis may be studied through international finance perspectives, looking at excessive inflow of capital and its sudden reverse (Radelet, *et al*., 1998). However, through the eyes of domestic economic historians, Phongpaichit and Baker (2003, p.204) also emphasised the institutional configuration in Thailand. Amid the abundance of cheap cash, most domestic entrepreneurs were only competitive in some sectors of the domestic market where the government still provided protection. These sectors are, for example, media, communications, agricultural products and real estate. However, in the export sectors, TNCs are more competitive because of their superiority in technology and better knowledge in global networks. Thus, only a number of efficient and visionary domestic entrepreneurs managed to benefit from the flood of these capitals. It was also during this time that Thailand saw a little surge in her outward FDI, as a result international investment conducted by this group of able entrepreneurs. It must be noted that these entrepreneurs, with the possible exception of the Charoen Pokphand group, whilst being successful compared to other domestic counterparts, are not industrialist capitalists in their nature because they do not produce knowledge and technology as most TNCs from industrialised

165

nation do. The business successes of these entrepreneurs resulted from close connections with politicians. In many cases, some of these entrepreneurs are involved in politics themselves. In fact, not only domestic entrepreneurs seek a patronage from the ruling elites, Peng, Yu, and Wang (2001) empirically found that TNCs in Thailand appeared to have more military directors than domestic firms.

As domestic entrepreneurs are not competitive globally and as only few of them used the excess of inflow of capital to invest abroad, this resulted in over-investment and speculation in areas such as real estate and the stock market, where domestic entrepreneurs found themselves most comfortable. Besides, the excess inflow of capital was also used to finance personal consumptions. Taking into account all these factors plus the accumulating deficits in the current account against the inflexible regime of exchange rate, the Thai Baht was attacked by the collective attempts of international hedge funds by mid-1997. Bank of Thailand depleted all of the country's national reserves to protect the Thai Baht. On the 2nd July 1997, Thailand was forced to change its exchange rate regime to a floating regime and seek help from the IMF. As the IMF identified the cause of the crisis as having too much intervention from the state (Hewison, 2005), the second wave of neo-liberal pressure on the country's development policies began.

This financial crisis had a significant implication on the Thai economy in relation to inward FDI. Using the neo-liberal rhetoric, the IMF suggested that Thailand should enhance their market-orientated policies and allow foreign investors to conduct business more freely. These included, for example, an increase in the number of sectors where foreign investors could have a hundred percent ownership, the liberalisation of service sectors, and the privatisation of the state-owned enterprises (Hewison, 2005). Consequently, it is observed that, by 1999, the volume of inward FDI had increased equal to the amount of the total for the period from 1986 to 1997, the boom period. Most of these direct investments were targeted to buy domestic assets at fire-sale prices. Thus, they were not meant to create new production facilities but to take the control over the existing production facilities that once belonged to domestic entrepreneurs. Phongpaichit (2005, 2006) and Kohpaiboon and Ramstetter (2008) saw that the crisis only helped to transfer monopolistic and oligopolistic power in several sectors from domestic entrepreneurs to foreign investors, without any change in the rate of concentration of these sectors. Kohpaiboon and Ramstetter (2008) also noted that a large portion of FDI after the crisis was used to finance buyouts of Thai

partners in joint-ventures. From this crisis, it appeared that domestic entrepreneurs were out-competed and bought-out from the competition with the help of their own government (Hewison, 2005).

From 2000 to Present

The crisis in 1997-1998 not only triggered change in economic environment and growth performance, it also caused changes in domestic politics. The economic crisis and the force of neo-liberalism in Thailand gave way to the rise of a populist politician, who is a self-made tycoon from the economic boom, Thaksin Shinawatra (Phongpaichit, 2005). This was similar to the experience of Peru and Argentina in the 1990s when the populist President Fujimori came into power in Peru, and President Menem, in the case of Argentina. In Thailand, facilitated by the 1997 constitution, Thaksin's newly-established party was democratically elected with a landslide victory in both elections in 2001 and 2005. Phongpaichit (2005) and Hewison (2005) agree that the rise of Thaksin was partly a collective reaction of domestic capital in Thailand to the neo-liberal forces which are more favourable to international capital or TNCs.

Most interestingly, the flagship policies of Thaksin went beyond the protection of domestic capital. They emphasised an increase in social safety nets for the grass-root population who had been left out from enjoying the benefits from the economic development over the past century. Thaksin's political campaign had a nationalist tone and very much emphasised inclusivity. The main political opponent to Thaksin at the time was the right-wing Democratic Party whose alliance and the party itself not only had preference for neo-liberalism but also put all those policies into action. The preceding government which was led by the leader of the Democrat Party was perceived as nothing but a 'lackey' of foreign interests (Hewison, 2005, p.318).

The success of Thaksin's campaign towards grass-root people reflects one important thing. The development model that Thailand has been implementing over the past decades was incapable of addressing the 'dualism' in its economy. In 1981, the country's GINI Index was 45. Despite the fact that the reduction of income inequality between urban and rural areas has been classified as a high agenda item in the national social and economic development plan since 1987, Thai GINI index has never gone below 42. In 2010, Thai GINI index remains relatively high at 43 (WDI, 2010). Clearly, the benefits from economic

development in Thailand have been enjoyed by only a small fraction of her population, namely, the aristocrats, Chinese businessmen, and high-ranking, civil and military officers. Probably, it is because these groups of people have access to the lucrative sectors, driven by foreign investments or technology. A series of political instabilities since 2006 suggest the polarisation between the minority rich and the majority poor, and seem to confirm the presence of uneven development within the country. It is undeniable that the recent political turmoil is the result of the blind implementation of neo-liberal economic development in the past which has generated both the polarisation between urban and rural population and income inequality (Bello, Cunningham, and Poh, 1998; Motonishi, 2003; and Bello, 2010). Indeed, the majority poor still remain outside the circle of economic prosperity that the country has accumulated so far. Recently (Bello, 2010), the statistics show that Thailand exhibits the highest rate of income inequality in Asia. The vulnerability of domestic politics would threaten the confidence of foreign investors and that can only be addressed in the short term with more FDI-friendly policies.

Even Thaksin's governments failed to re-direct Thailand to a better path of development. His government was created thanks to a nationalist rhetoric embedded in his policies, but in practice, it is observed that neo-liberal policies were further implemented. For example, his government decided to liberalise the energy sector and made a vain attempt to privatise the state-owned Electricity Generating Authority of Thailand (EGAT). Further, several local content requirements in a few remaining industries, such as dairy products, have been lifted. As mention earlier, the GINI index showed no sign of improvement. Anuchitworawong (2007) assessed the effectiveness of Thaksin's programme to alleviate the poverty at grass-root levels. He showed that the implementation of such a programme was ineffective as it did not reach the poor but did help a number of non-poor, better-off members of the population. Moreover, Thaksin's reputation and his integrity had been heavily challenged during his second term. The period of stable domestic politics ended in September 2006 when there was a *coup d'état*. The coup was organised by right-wing, royalist military officers.

From 1999, the economy started to recover with a slight drop of growth rate in 2001 due to the global recession. However, the second wave of neo-liberal policies changed the structure of the Thai economy. The degree of market liberalisation was extended. The country started to rely even more extensively on export sectors, particularly in the

technological-dependent products that are produced mainly by the TNCs. Even though the government advertised itself as the guardian of Thai capital, the overall trend of an incoming FDI was increasing, Figure 5.12 (p.170). Parallel to this, the share of exports to GDP had also doubled from about 40% in 1995 to 73% in 2006, Figure 5.11 (p.168). However, these exports, mainly produced by TNCs, appear to rely on imported components and technology. This is why the country also experienced an increase in import of goods and services, Figure 5.7 (p.156). The key sectors responsible for growth are now dominated by foreign investors (Phongpaichit and Baker, 2003; Kohpaiboon, 2006; and Thanadsilapakul, 2010). This economic feature suggests that Thailand may have become a capital-dependent state. As the TNCs' exports are the main sources of economic growth, the government tries to ensure a favourable environment for their investments. This, in turn, means more generous tax incentives and more lax FDI-related investment policies.

Recently, there has been a great concern in the country, mostly at academic level, regarding the middle-income trap that the country might be experiencing. One of the challenges in upgrading the nation's comparative and competitive advantages is the requirement of a high level of commitment by foreign investors. Domestic entrepreneurs play only a limited role in this process as they lack the ability to produce knowledge and technology. This is partly because the government did not try to give them any incentive to do so. Unless they are truly and naively believers of liberalism the past governments were fairly weak and lacking economic vision. The Thai developmental path was determined by external factors, such as foreign investors' decisions, rather than well-crafted policies. The growth rate and economic performance in Thailand after the crisis were moderate and lacking in vital momentum. It should be noted that, as foreign operations become more essential to the Thai economic growth, the state might have less power to regulate them in such a way that serves national interests.

5.4 Summary

Over the path of economic development, Thailand has largely reacted passively to the changes in the global political economy. Thai governments in the past, though trying to pursue an export-led growth development model, did not make strategic interventions to enhance the productive capability of domestic firms. Indeed, past governments tended to

leave the country's development in the hands of the market mechanism which always favours the fittest. The problem is when the domestic firms, from an early stage of development, were not protected or given incentives to be productively and technologically capable of surviving Schumpeterian competition. The fittest that survive are mostly TNCs. By way of contrast, it is observed that the governments of Japan, South Korea and Taiwan had done the opposite to Thailand. They nurtured their domestic firms, where the productive capabilities are stored, and which later on became the nations' TNCs. Soon, these national TNCs, as well as the states, could work in corporation to upgrade the country's comparative and competitive advantages making them suitable for a higher level of development. These lines of actions have never been reflected in Thai economic development history.

The failure of Thai governments in the past to incubate domestic entrepreneurs may be attributed to several reasons. First, it is due to non-homogenous ethnicities among the ruling and affluent classes in the society. For example, in the 1960s, the ruling military were those who come from the local Thai population, whereas the capitalist class was made up mainly by Chinese immigrants. However, this problem should be reduced over time as these people have been merged through marriage and their participation in a limited elite society over the past century. Secondly, it is due to the lack of economic vision of the past leaders and their loose commitment to the country's prosperity. Thai political history constantly shows the case where politicians, military officers, and businessmen were involved in collusion and corruption (Phongpaichit and Baker, 2003; Bello, Cunningham and Poh, 1998; and Chang Noi, 2009). Thirdly, due to the divisions within the domestic power structure, governments chose to resort to international recognition to cement their legitimised position domestically. The cost of doing this is to connect more directly to the global economy, regardless of the readiness of the country's economic conditions. Fourthly, the nature of rent that most of Thai firms have been seeking and benefitting is different from that of TNCs. While the latter was rather a Schumpeterian rent-seeker, the former was confined to static rent. This partly explains why they appear to be sluggish and satisfied with the *status quo*. In turn, to create an institution capable of being a Schumpeterian rent-seeker, for the late developed countries, requires a strategic and significant effort from the state. Lastly, the path dependence concept may help to explain why more recent governments may have limited choices to manage the economy for the better. For example,

economic and legal constrains may arise from past decisions such as the participation in international agreements which contain clauses that are not beneficial to the country, and the implementation of ineffective policies. To reverse or abandon such agreements or policies may be too costly.

The lack of productive capability in Thailand can be partly explained by the lack of the state's support. It can be argued that the matter was exacerbated by the implementation of a FDI-growth strategy, in particular, the creation of export sectors with foreign investments. Thai economic history shows that the past governments focused more on implementing the policies that help to increase the country's locational advantages in such a way that it encourages TNCs more than domestic companies to internalise their transactions and to gain from the market and development. Thailand shares two common institutional aspects, as depicted in the dependency theory, namely, the weak state and weak domestic firms. The institutional configuration in Thailand, in turn, may be explained by the combination of the neo-liberal development model and the unfavourable domestic politics. Moreover, Thailand also has a number of socio-economic features that have been described in the dependency theory, such as, leakage of resources, income inequality, the diminishing power of domestic capital, and an increase in dependency on foreign capital and technology. In addition, the review of empirical studies on FDI in Thailand using data at industrial level does not appear to support the presence of positive spillover from FDI. It can be argued that all of these point to the ineffectiveness of the liberal, FDI-led growth policies as a model for development and the unworthiness of the generous tax incentives, enjoyed mostly by the TNCs.

The analysis of the Thai political economy in relation to FDI tends to indicate that Thailand may not fully benefit from FDI. In fact, the country may even be experiencing adverse impacts. As far as the method of analysis is concerned, this study has strongly used deductions based on the historical evidence and theory. In the following chapter, this study will empirically analyse the impact of FDI on the Thai economic development using econometric tools. In so doing, this study hopes to justify its argument with the use of more objective analytical methods.

Chapter 6: Empirical Analyses, Data Description, and Results

6.1 Introduction

In Chapter 5, this study showed that Thailand has some economic traits indicating it to be a capital dependent state. These features include, for example, a deteriorating position of the terms of trade, an enduring, negative Net Outward Investment (NOI), the falling ratio of Gross National Income (GNI) to Gross Domestic Product (GDP), a significant import of technology, an increasing outflow of income, and the vulnerable position of the balance of payments (BOP). Thus, there is a need for an empirical assessment on the impact of an inward FDI on Thai economic growth. For academic purposes, the empirical results would reveal the nature of the externalities that inward FDI has in Thailand. Therefore, it will add empirical evidence on the subject matter to the existing literature. It could also indicate the most relevant theory that can be used to explain the Thai growth process in relation to FDI. In practice, the evidence could assess the effectiveness of neo-liberal policies towards the operations of TNCs in the country and justify generous tax incentives, used to attract more FDI.

In general, this Chapter attempts to test hypotheses and estimate relationships, derived from economic theories and certain historical events in Thailand. In particular, the objectives of this chapter can be set out as follows. Firstly, the study seeks to identify if there is an equilibrium relationship between pairs of key variables, namely, FDI and GNI,

domestic investment and GNI, trade openness and GNI, FDI and income account deficits, and FDI and imports. This will be carried out using the Engle and Granger (1987)'s two-step procedure. Secondly, if the equilibrium relation can be identified, this study will examine the direction of causation, using Granger causality test. Thirdly, key variables of interest will be pooled together and re-analysed using the system-based cointegration approach by Johansen and Juselius (1990). Quarterly time-series data from Q1:1970 - Q4:2009 are used in this empirical analysis.

This chapter proceeds in the following manner. Section 6.2 presents a brief methodology of the two, adopted, co-integration approaches. They are the single-equation Engle and Granger two-step procedure and the Johansen VECM procedure. Section 6.3 is the analysis of data and variables. Section 6.4 presents the results derived from the single-equation Engle and Granger two-step procedure. Section 6.5 reports the results from the Johansen VECM procedure. Section 6.6 performs Granger causality test. Section 6.7 concludes and gives a summary of the key findings from the empirical analyses.

6.2 Econometric Methods

Like other macroeconomic theories, both FDI-related growth theories and dependency theory imply the long-term relationship between FDI and economic development. Accordingly, econometric tools adopted to analyse such impact should be able to capture the dynamic effects that not only include a long-run equilibrium but also a short-term impact. For this reason, cointegration analysis appears to be the most appropriate empirical framework.

There are several methods to test for cointegration. The most commonly used cointegration tests are the Engle-Granger two-step procedure (Engle and Granger, 1987) and the system based cointegration of Johansen (Johansen and Juselius, 1990; Johansen, 1995). The first test is based on the residuals from a cointegration regression. The second test is based on the system of equation in the form of vector autoregressive models. Cointegration has

become a common econometric tool used to analyse macroeconomic data, such as, investment, national income, consumption, and unemployment, where long-run relationships affect currently observed values. Granger (2004) pointed out that macroeconomic data is rather smooth, moving with local trends, or with long swings, but the swings are not regular. These characteristics make the most of macroeconomic data unsuitable to be analysed with the standard statistical procedures due to the lack of the property called 'stationarity'. Conventionally, applied economists dealt with this problem by re-expressing these data in the form of changes or rates of returns, so that the data would be integrated. In other words, most of the macroeconomic data has been differenced before being used in the regression analysis.

Engle and Granger (1987) proved that the difference between many pairs of non-stationary time-series, that is, the linear combination, could be stationary. Granger (2004) explained that once this property could be identified, it implies that these pairs of series may have the property and nature as suggested by economic theory. Statistically, it suggests that they must be co-integrated with the same common factor. In particular, it can be assumed that these pairs of series may be generated by the error correction model. This idea has later been extended to incorporate more than two variables in a model, see for example, Johansen and Juselius (1990), Inder, (1993), and MacKinnon, Haug, and Michelis, (1998). Cointegration analysis processes non-stationary, stochastic variables in such a way that it can produce the results which are both statistically sound and economically meaningful.

In this study, the Engle-Granger two-step procedure will be used to analyse the relationship between several pairs of variables that have been discussed in FDI-related growth and dependency theories. They are:

    i)   GNI and FDI/GDP;

    ii)   GNI and trade openness;

    iii)   deficit in income balance and FDI; and

    iv)   total imports and FDI.

Next, the system based cointegration of Johansen (Johansen and Juselius, 1990; Johansen, 1995) will be used to analyse the system of equations depicting the relationship among GNI, FDI, domestic investment, and labour as discussed in Chapter 4, where this study presented its theoretical model. The Johansen approach would provide a complementary insight into the relationships between FDI and economic development while taking into account the role of domestic investment, labour, and trade openness, while the empirical results from the Engle-Granger approach do not. The rest of this section will present a brief methodology of two cointegration analyses adopted in this study. However, when it comes to a model specification being used in this analysis, deterministic variables and seasonal dummy variables will be added into the system in order to capture a structural break or a seasonal effect in the time-series data.

6.2.1 Engle-Granger Two-step Procedure

The Engle-Granger residual based test is one of the commonly used cointegration tests (Chakraborty and Basu, 2002). In its original and most effective form, this single-equation error correction model is used to study the existence of a relationship of two variables in equilibrium. Basically, prior to conducting cointegration tests, the analysis of a single series must be carried out in order to identify the order of integration. Tests of the unit root hypothesis or stationarity were developed by, for instance, Fuller (1976), Dickey and Fuller (1979, 1981), Phillips and Perron (1988), and Kwiatkowski-Phillips-Schmidt-Shin (1992). Once it is established that the variables of interest appear to be integrated at the same order, then they can be processed into the Engle-Granger cointegration analysis which involves the following two steps.

First Step: Cointegration Regression

This step involves an estimation of a cointegrating regression whereby variables in levels are estimated with the Ordinary Least Square (OLS) technique. In the simplest form, this regression may be written as:

$$y_t = \alpha + \beta x_t + \varepsilon_t \qquad \text{and} \ \ \varepsilon_t \sim N(0, \sigma^2) \qquad\qquad (6.1)$$

where y_t is the dependent variable, and x_t is the single, exogenous, independent variable. The equation 6.1 is meaningful and consistent only if x_t can produce the major properties of the variable being explained, which is y_t (Granger, 1981). However, in many cases, as proved by Granger and Newbold (1974), a statistically significant relationship can be confirmed where, in fact, none exists. This case is known as a spurious regression. Spurious regression normally carries some characteristics, such as, a relatively high R-square, and abnormal Durbin-Watson statistics. To distinguish whether or not such regression is spurious or meaningful, Engle and Granger (1987) proposed to examine the following criteria. If ε_t is proved to be stationary in levels, that is, I(0), and given that it is a product of two integrated series of higher order, then it can be concluded that equation 6.1 does represent the relationship between the dependent and independent variable in the equilibrium. The requirement to analyse the series of innovation, ε_t, implies the use of the unit root test.

Second Step: Error Correction Model

Once it can be proved that equation 6.1 represents the relationship between y_t and x_t in the long run, the Granger representation theorem shows that equation 6.1 can then be re-represented in a dynamic fashion, the error correction form. The simplest form of such equation can be written as:

$$\Delta y_t = \alpha + \alpha_1 (y_{t-1} - \beta_1 x_{t-1}) + \beta_2 \Delta x_{t-1} + \beta_3 \Delta y_{t-1} + e_t \qquad\qquad (6.2)$$

where Δ is a difference operator, α_1 is a parameter depicting the strength of the disequilibrium correction, and $y_{t-1} - \beta x_{t-1}$ is the first lag of the degree of disequilibrium, known as an error correction term. β_2 and β_3 indicate the short-term impact of the first lagged values of x and y respectively. It must be noted that in practice, the number of lag values and the choices of lagged difference variables in the right-hand side of the equation

will be guided by the unrestricted vector autoregression (VAR), as shown in Engle and Granger (1987). Clearly, equation 6.2 captures the short-term impact and incorporates the built-in tendency to adjust itself towards equilibrium. In summary, an inference derived from equation 6.1 and 6.2 would suggest both the nature of the relationship and its dynamic impact between the two variables of interest.

6.2.2 System Based Cointegration of Johansen

The methodological discovery in Engle and Granger (1987) gave rise to various econometric applications and development. Most importantly, it highlighted the application of VAR, initially developed by Sims (1980). Sims advocated the use of unrestricted VAR models as a means of modelling economic relationships without unnecessary assumption. This is reasonable, particularly in the case where the theory is loose and quiet about the specificity of dynamic relationship. It is in this area that VAR could give tremendous insight into the rich dynamics using time-series data. In addition, VAR is also a framework that is suitable when researchers are not confident if the variables are exogenous or endogenous (Ender, 1995). This is because VAR offers a framework that allows for interdependence among these variables. Similar to the Engle-Granger two-step procedure, a VAR model with cointegration is often based on the idea of a long-run or moving equilibrium.

Among later development of the combination of these ideas, the method developed by Johansen (1988, 1991) and Johansen and Juselius (1990) is most popular and thus adopted in this empirical analysis. The system based cointegration of Johansen can be said to be the second generation of the Engle and Granger approach because even though it uses non-stationary, cointegrated time-series, it builds directly on maximum likelihood estimation instead of partly relying on OLS. Chakraborty and Basu (2002) pointed out that the Johansen approach is regarded as superior to the Engle-Granger because it provides a multivariate framework which allows for more than one cointegration vector in the estimated model. From a statistical point of view, this not only forecloses the loss of efficiency but, in terms of methodology, it represents better the real economic world in

177

which many cointegrating vectors, or long-term relationships among various variables are believed to co-exist. In brief, the Johansen approach helps to explain how multivariate cointegrated systems work, how to estimate them and how to test hypotheses. These are the means to understand the behaviour of time-series of interests in the context from where the observations are collected.

The Johansen cointegration test requires an analysis of single time-series data in order to determine stationary property and identify the degree of integration. Generally, estimation of a vector error correction model (VECM), in the fashion of Johansen and Juselius (1990), also involves the two steps elaborated below.

The First Step: Estimation of Cointegrating Vectors

According to Johansen and Juselius (1990), the methods used to estimate a number of cointegrating vectors in the VAR system involve two tests which are the trace test and the maximum-eigenvalue test. To illustrate, the definition of a VAR of a set of variables Z can be defined as:

$$Z_t = \pi_1 Z_{t-1} + ... + \pi_k Z_{t-k} + e \tag{6.3}$$

If all series in a set of variables Z are non-stationary and integrated at the same degree, then, the system of equations 6.3 may be re-expressed in VECM form as:

$$\Delta Z_t = \Gamma \nabla Z_{t-1} + \Pi Z_{t-k} + \mathrm{E}_t \tag{6.4}$$

where $\nabla Z = [\Delta Z_t, \Delta Z_{t-1}, ..., \Delta Z_{t-k+1}]$

and $E_t \sim N(0, \sigma^2)$

Thus, parameters Γ and Π are formulated as;

$$\Gamma = [(I + \pi_1), (I + \pi_1 + \pi_2), ..., (I + \pi_1 + \pi_2 + \pi_k)] \tag{6.5}$$

$$\Pi = I - \pi_1 - \pi_2 - ... - \pi_k$$

Non-stationary variables in Z imply that Π will have deficient rank. From the Granger representation theorem, it can be implied that the coefficient matrix has reduced rank $r < p$ where p is a number of variables in the set. Then, there exists $n \times r$ matrix such that

$$\Pi = \alpha\beta' \text{ and } \beta'Z_t \text{ is I}(0) \tag{6.6}$$

The rows of β may be defined as the r distinct cointegrating vectors, that is, the number of cointegration. The rows of α represents how these cointegrating vectors are loaded into each equation in the system. The essence of the Johansen cointegration approach is to decompose Π into two matrices, α and β, and to test whether the restrictions implied by the reduced rank of Π can be rejected.

This is where the rank test and the maximum-eigenvalue test come into play. In the trace test, the null hypothesis is that the number of cointegrating vectors is, at most, equal to r, where $r = 0,1,2,...,p$. In each case, the null hypothesis is tested against the relevant alternative, that is, the number of cointegrating vectors is greater than stated in the null hypothesis. The trace test can be computed as follows:

$$LR_{tr} = -T \sum_{i=r+1}^{p} (1 - \lambda_i) \tag{6.7}$$

where LR_{tr} is the test statistic of the trace log likelihood ratio and λ_i is the i-th largest eigenvalue of the Π matrix. In the maximum-eigenvalue test, the null hypothesis is that the number of cointegrating vectors is equal to r. It is tested against the alternative of $r + 1$. The maximum-eigenvalue test is computed as:

$$LR_{max} = -T \log(1 - \lambda_{r+1}) \text{ for } r = 0 \dots p\text{-}1 \tag{6.8}$$

In practice, it is possible that the trace statistic and the maximum eigenvalue statistic yield conflicting results. In this event, Johansen and Juselius (1990) recommended the examination of the estimated cointegrating vector and base the choice on the interpretability of the cointegrating relations. However, Banerjee, *et al*., (1986, 1993)

suggested that the priority should be given to the maximum eigenvalue statistic because its results are more reliable even with a small sample size, which is the common case of empirical analysis. The identification of the unique cointegrating vectors reflects the structural economic relationships underlying the long-run model (Chakraborty and Basu, 2002). This step is equivalent to the Engle-Granger's cointegration regression.

Second Step: Vector Error Correction Model

Once a number of cointegrating relationships among a set of economic variables is identified, the next concern is how these variables adjust in response to a random shock in the system. Similar to the second step of the Engle and Granger procedure, the second step in the system based cointegration approach concerns the short-run disequilibrium dynamics.

This step involves an estimation of the short-run VAR model with error correction form as denoted in equation 6.3. However, in this stage, it is possible to identify explicitly the number of cointegration relationships attached to the residual terms. The error correction terms in this system pick up the speed of adjustment of each variable in response to a deviation from the steady state equilibrium. Another inference that can be drawn from this stage is the direction of causation in the form of Granger causality. A variable with zero speed of adjustment is said to be Granger non-causal in determining short-run dynamics of other variables in the system.

6.2.3 Vector Error Correction Granger Causality

According to Granger *et al.*, (2000), once the statistical property of ε_t from cointegration regression is established to be I*(0),* an error correction term is required in testing Granger causality as shown below:

$$\Delta y_{1t} = \alpha_0 + \delta_1(y_{1t-1} - \eta x_{1t-1}) + \sum_{i=1}^{k}\alpha_{1i}\Delta y_{1t-i} + \sum_{i}^{k}\alpha_{2i}\Delta x_{1t-i} + \varepsilon_{1t} \qquad (6.9)$$

$$\Delta x_{1t} = \beta_0 + \delta_2(y_{1t-1} - \eta x_{1t-1}) + \sum_{i=1}^{k}\beta_{1i}\Delta y_{1t-i} + \sum_{i}^{k}\beta_{2i}\Delta x_{1t-i} + \varepsilon_{2t}$$

In the above equations, δ_1 and δ_2 are speeds of adjustment. They are in fact the first lagged value of the residuals from the cointegration equation. From Engle and Granger (1987), the existence of cointegration implies causality among a set of variables as manifested by $\left|\delta_1\right|+\left|\delta_2\right|>0$. This test looks to reject the $H_0 : \alpha_{21} = \alpha_{22} = ... = \alpha_{2k} = 0$ and $H_0 = \beta_{11} = \beta_{12} = ... = \beta_{1k} = 0$ which signify no Granger causality. However, it must be noted that statistical evidence may not be sufficient to provide a true understanding of the direction of causation. It also requires a good support from economic theories and institutional knowledge (Stock and Watson, 2001). The pair of equations shown above can be extended as a Vector Error Correction Granger causality test in which the number of endogenous or weakly exogenous variables in the system is greater than two.

6.3 Data, Variables, and Analysis of Time-series

Due to the nature and focus of the research question, this study adopts time-series analyses as the method of deriving empirical evidence. This is because, firstly, this research attempts to quantitatively study the growth process in Thailand in relation to an inward FDI, over time, and at aggregate level. Thus, time-series analysis is a natural choice as it can offer an in-depth investigation as well as dynamic changes over time. Indeed, it can be argued that, in ideal cases, this should be complemented with panel studies in which both time dimension and geographical dimensions, such as, industry or region, can be embraced into the same data set. However, quantitative research on developing countries can hardly enjoy such privileges due to an inadequate availability of data. To address this shortfall, this research provides a brief overview of empirical studies that used cross-sectional, firm-level studies in Thailand, such as, Kohpaiboon (2003, 2006) and Tamboonlertchai (2009). Hence, time-series analyses, conducted in this study, can be viewed as complementary to the existing empirical findings which would shed more light into the reality of Thai economic development in relation to FDI.

Secondly, time-series analysis is no less common than panel studies in political and macro-economic studies, for example, see De Mello (1999), Ramirez (2000), Zhang (2001), Chowdhury and Mavrotas (2005) and Ang (2009). Lastly, in empirical growth studies, due to the restriction of the availability of data, the choices between the robustness and the efficiency depend, most of the time, on the subjective decisions of researchers (Durlauf, Johnson and Temple, 2004).

In addition, in recent years, it is observed that the availability of data has dramatically improved so much so that the application of an appropriate time-series analysis is possible. Even though the number of observations offered by time-series data is far less than that offered by firm or industrial panel studies, time-series data at high frequency do provide enough observations to produce valid statistical inferences (De Boef and Keele, 2008).

6.3.1 Data and Variables

Sources of Data

Time-series data used in this study are mainly drawn from statistics' publications in 2010, by three main international organisations, namely, the IMF, the World Bank and the United Nation Conference on Trade and Development (UNCTAD). Data are mostly observed on quarterly basis. It is noted that not all series provide full samples. Missing data are addressed by the interpolation method using related time-series as suggested by Friedman (1962) and Greenberg, Pollard and Alpert (1989).

The whole sample covers from Q1:1970 to Q4:2009, making a total of 30 years and 120 observations. This makes the number of sample size, used in this study, larger than that used in the previous papers. For example, Chowdhury and Mavrotas (2005) studied the direction of causal relationship between FDI and GDP in Thailand, Chile and Malaysia. Their results are drawn from annual time-series from 1969-2000, making 42 observations for each country. Ang (2009) analysed the impact of FDI through the financial deepening

in Thailand. His data set, covering years 1970-2004, has only 25 observations. A summary of the sources of data and the preparation can be found in Appendix E, Table E1.

Variables

There are eight time-series variables and a dummy variable in the analysis. Time-series variables are, namely, *gni, fdi/gdp, fdi, open, imp, def, dinv*, and *lb*. The summary of variables and their construction are summarised in Table E1, Appendix E.

Unlike most past empirical studies that use Gross Domestic Product (GDP) as a measurement of economic growth, this paper chooses GNI. GNI is more appropriate as a measurement of economic growth in relation to FDI because it is a growth indicator that has been addressed for the transfer of income generated from international investment. By conventional standard, GNI take a logarithmic form and is denoted as *gni*.

Two variables approximate FDI in this analysis. One is *fdi/gdp* which is approximated by the value of FDI stock over GDP, $\dfrac{fdi}{gdp}$. According to Kentor and Boswell (2003), this measurement represents foreign penetration. As it can be interpreted as the size of foreign operations in relation to the whole economic activities, it is a suitable approximation of FDI under the context of growth analysis. Another is *fdi* which is value of FDI capital stock. From a theoretical point of view, using FDI stock is more desirable than using FDI inflow data. This is because FDI stock represents directly the value and foreign capital and reserved within the economy (Zhan, 2006). This variable is used in the analyses whose focus is made on FDI and its effect on the BOP.

As trade and investment liberalisation can hardly be analysed separately, it is necessary to incorporate the degree of trade openness in the analysis of liberalisation of FDI and growth. In this study, the measurement of trade openness, denoted as *open*, is measured by the

summation of export and import over the GDP, $\dfrac{\exp + imp}{gdp}$. This is the simplest measurement of trade openness which has its root in Summer and Heston, (1993) and Balasubramanyam, *et al.*, (1996).

The impact of inward FDI on the BOP is also central in the analysis of this study. The emphasis is made on two entries in the current account. They are imports and a remittance of income and profits. Imports are measured by the total import of goods and service and denoted as *imp*. Dependency theory also claims that FDI brings to developing countries a capital intensive technology, which implies quite a heavy import of capital goods and intermediate products. It is interesting to see if imports in Thailand can also be explained by FDI. The nation's import is directly approximated by the total imports and represented in a logarithmic form, denoted as *imp*.

On the remittance of income and profits, denoted as *def*, it is measured by the size of the deficits in the nation's income balance where the remittance and receipt of income and interest between the residents and the rest of the world is recorded. This variable is found to be essential in the analysis because a deficit in income balance is one of the main traits of dependency. It is therefore interesting to find out if this outflow of capital could be explained by FDI. *def* and *imp* are both represented in logarithmic form.

Domestic investment, denoted as *dinv*, is approximated by the difference between gross fixed capital formation (GFCF) and the flow of inward FDI. GFCF is, so far, a conventional approximation of domestic investment. This paper attempts to disaggregate domestic investment and foreign investment. Thus, a portion of foreign flow of investment should be taken away from GFCF. Labour force is denoted as *lb*. It is measured directly from the size of the labour force. *dinv* and *lb* are expressed in the logarithmic form. The last variable refers to a dummy variable capturing the effect of financial crisis in1997. In this variable, Q3:1997 to Q2:1998 takes a value of one while the rest is zero.

6.3.2 Analysis of Time-series

As mentioned in Section 6.2, an examination of single time-series is a prerequisite for cointegration analysis as it is important to be able to prove that time-series are non-stationary property and identify the degree of integration. It is expected that all series should behave in the same manner. They should be non-stationary and integrated in the similar degree. This is because, in terms of interpretation, it is unlikely that a stationary process can be explained by a non-stationary process (De Mello, 1999, p.136). Generally, the most common used unit root test for cointegration is the Augmented Dickey Fuller (ADF) test developed by Dickey and Fuller (1979, 1981) and Said and Dickey (1984). ADF test is the basic autoregressive unit root test that accommodates the general Autoregressive and Moving Average (ARMA(p,q)) model. It is therefore the test that constructs a parametric correction for higher order correlation.

The ADF test normally tests the null hypothesis that a time series is I*(1)* against the alternative that it is I*(0)*, assuming that the dynamics in the data have an ARMA structure. However, the ADF test based on Eview6 is formulated in another fashion and defined as below:

$$\Delta y_t = \beta' D_t + \phi y_{t-1} + \sum_{i=1}^{k} \varphi_i \Delta y_{t-k} + \varepsilon_t \qquad\qquad (6.10)$$

where D_t is a vector of deterministic terms, for instance, intercept and trend. The k lagged difference terms, Δy_{t-k}, are used to approximated the ARMA structure of the errors, and the value of k is set so that the error ε_t is serially uncorrelated. In addition, ε_t is assumed to be homoskedastic. With this form of presentation, the null hypothesis that y_t is I*(1)* It implies that $\phi = 0$. Thus, $H_1 = \phi < 0$. The ADF statistic is usually the t-statistic for testing $\phi = 0$. The ADF normalised bias statistic is computed as

$$t_\phi = \hat{\phi}/(se(\hat{\phi})) \qquad\qquad (6.11)$$

where $\hat{\phi}$ is the estimate of ϕ, and $se(\hat{\phi})$ is the coefficient standard error. Dickey and Fuller (1979) showed that under the null hypothesis of unit root, this statistic does not follow the conventional Student-t distribution. Advanced methods for calculating approximate distribution functions of test statistics that can provide accurate results have been developed, for example, by MacKinnon (1991, 1996, and 2010), Ericsson and MacKinnon (2002). The critical values used in this study are calculated based on the methods developed by MacKinnon (2010). These critical values provide accurate results for both Dickey-Fuller and Engle-Granger tests.

There are two important practical issues in performing the ADF test. Firstly, it is the specification of the deterministic terms. On this aspect, Hamilton (1994) suggests that this specification can be made based on the nature of the data and economic intuition. In general, if the series exhibit a clear trend, the test regression should incorporate both the constant and the trend. Nonetheless, if the series are relatively flat and the data revolve around the non-zero mean, the regression should then include only the constant term. These broad rules imply the use of theoretical knowledge and the graphical examination of each series. Graphical presentation of all the series are reported in Appendix E, Table E2.

Another important practical issue for the implementation of ADF test is the specification of lag length, k. If k is too small then the remaining serial correlation in the errors will bias the test. On the other hand, if k is too large then the power of the test will suffer. The most common used method to determine the number of lag length is devised by Schwartz (1978). It is computed as:

$$k_{max} = [12 \cdot (\frac{T}{100})^{1/4}]$$
(6.11)

where k_{max} is the number of the maximum lag length and T is a sample size which is 120. It must be noted that the criteria of choosing the lag length is not limited to the Schwartz Criteria (SC), there are many other criteria such as the Akaike Information Criteria (AIC). This paper considers two models while performing the tests on both levels and first

186

differences for all time-series variables. These two models are differently specified with regard to deterministic terms. The first model refers to the model that includes only an intercept. The second model incorporates both an intercept and trended variable. In respect to the specification of lag length, this study allows the statistical software Eviews6 to calculate automatically the appropriate lag orders, using the Schwartz Bayesian information criterion. Table 6.1 reports results from the ADF test.

TABLE 6.1: ADF UNIT ROOTS EXAMINATION ON VARIABLES

Variables	Test for unit root in	ADF statistic calculated from the model		Conclusion
		with intercept	with intercept and trend	
gni	level	-0.8012	-1.5396	
	first difference	-10.2071[*]	-10.1628[*]	I*(1)*
fdi/gdp	level	-0.2072	-2.1139	
	first difference	-8.5781[*]	-8.5607[*]	I*(1)*
fdi	level	-1.2735	-1.6587	
	first difference	-3.1672[*]	-3.5443[*]	I*(1)*
def	level	-0.5300	-3.7325[*]	
	first difference	-5.6209[*]	-5.5346[*]	I*(1)* without trend
open	level	-0.8049	-2.9001	
	first difference	-12.6436[*]	-12.5880[*]	I*(1)*
imp	level	-0.6177	-2.0842	
	first difference	-8.3079[*]	-8.2694[*]	I*(1)*
dinv	level	-2.3156	-2.7551	
	first difference	-18.1020[*]	-18.0209[*]	I*(1)*
lb	Level	-1.1658	-2.3483	
	first difference	-3.5165[*]	-3.5347[*]	I*(1)*
5% test critical values[1]		*t* = -2.8859	*t* = -3.4476	

Note: 1. critical values computed from Table 2 and3 in MacKinnon (2010)
     2. * indicates that the null hypothesis of unit root is rejected.

Table 6.1 reports the ADF test on all series to be used in the regressions. It can be seen that when the series are examined in levels, most of ADF statistics are greater than the critical values. However, when series are examined in the first differenced form, the ADF statistics become smaller than the critical values. Thus, it can be concluded that most of the time-series are I*(1.)* It must be noted that, deficit in income account, *def*, gives an inconclusive

result. It indicates that the series is I*(1)* only when examined with the model without a trended variable.

In terms of interpretation, it can be said that all series exhibit persistent movements and appear to have long-term memory. They are also supportive to the linearity hypothesis which implies long-term relationship among these variables. In brief, the results reported in Table 6.1 confirm that all series are non-stationary and integrated in degree one, that is, they are I*(1)*. They have the common traits of most macroeconomic time-series data. It follows that these series can be analysed by cointegration techniques and such analyses will be carried out in the following sections.

6.4 Engle-Granger Two Procedure, Results, and Discussion

This section attempts to identify the existence of a long-term relationship between four pairs of variables defined as follows:

Regression 1: GNI vs. size of foreign operations;

Regression 2: GNI vs. trade openness;

Regression 3: size of income deficits vs. stock of FDI; and

Regression 4: size of total import vs. stock of FDI.

The first two regressions can be regarded as bi-variate income regressions that would explain the growth of income in relation to inward FDI and trade openness respectively. Regressions 3 and 4 seek to explain the impact of FDI on BOP, particularly, on the remittance of profits and imports.

Following the Engle and Granger (1987) procedure, this study estimates a cointegration equation of the form specified below:

$$y_{rt} = \phi_0 + \phi_1 x_{rt} + \phi_2 crisis + \phi_3 trend + e_{rt}, \qquad (6.12)$$

where r refers to a number of regression, t is time. Thus, $r = 1,2,3, and 4$ and $t = 1,2,...,T$. y_{rt} and x_{rt} are dependent and independent variables of interest in each regression. *crisis* is an exogenous shock in the equation, depicting the financial crisis in 1997. *trend* is a trend variable.

188

TABLE 6.2: COINTEGRATION REGRESSIONS

Regression	1	2	3	4
Independent Variable \ Dependent variable	*gni*	*gni*	*def*	*imp*
fdi/gdp	-4.70*** (-14.8)			
open		-0.98*** (-5.09)		
fdi			0.68*** (31.0)	0.83*** (9.62)
crisis	-0.29*** (-4.04)	-0.03 (-0.28)	0.48*** (2.73)	0.02 (0.20)
DW	0.15	0.09	0.22	0.22
S.E of regression	0.14	0.21	0.34	0.21
R-square	0.95	0.88	0.89	0.95
RESET♦	0.15	0.00	0.10	0.89
JB♦	0.02	0.10	0.00	0.39
LM(4)♦	0.00	0.00	0.00	0.00
ARCH(4)♦	0.00	0.00	0.00	0.00

Note: 1. t-statistic is reported in the parentheses.

2. ***,**,* indicate statistical significant at 1%, 5%, and 10% levels, respectively.

3. Except from regression 3 which has only constant, all regressions include unreported constant and trend variables.

4. ♦indicates p-values

5. RESET test has the null hypothesis of no specification errors.

6. Jacque-Bera test has the null hypothesis of normally distributed residuals

7. Lagrange Multiplier test has the null hypothesis of no serial correlations in residuals up to the specified lag order.

8. ARCH LM heteroskedasticity test has the null hypothesis of no autoregressive conditional heteroskedasticity in the residuals up to the specified lag order.

Equation 6.12 is estimated with OLS and the results are reported in Table 6.2. All regressions, reported in Table 6.2, at a first glance, show few traits of being spurious, such as, high R-square and low Durbin-Watson (DW) statistical values. These traits are common in regressions using data in level. However, as mentioned earlier, Engle and Granger (1987) showed that, only by examining the stationary property in the residuals, can one determine whether or not such a regression is meaningful. More specifically, if the residuals of a cointegration regression are stationary in level, it can be said that such a regression represents the relationship between dependent and independent variables in the

long run. The ADF unit root tests were performed on each series of residuals, e_{rt}. The results are reported in Table 6.3.

TABLE 6.3: ADF STATISTICS OF THE RESIDUALS FROM CO-INTEGRATION REGRESSIONS

| Variables | Test for unit root in | ADF test statistic calculated from the model | | Conclusion |
		with intercept	with intercept and trend	
ec1	Level	-2.7651	-2.7593	I(1)
ec2	Level	-1.8261	-1.8115	I(1)
ec3	Level	-3.8730*	-3.8840*	I(0)
ec4	Level	-3.8572*	-3.8709*	I(0)
5% test critical value[1]		$t = -3.3875$	$t = -3.8606$	

Note: 1. critical values computed from Table 2 and3 in MacKinnon (2010)
        2. * indicates that the null hypothesis of unit root is rejected.

ec1, ec2, ec3, and ec4 are residuals from Regressions 1, 2, 3, and 4 respectively. It is seen that only ADF statistics from Regressions 3 and 4 are smaller than the 5% test critical values, signifying that the null hypothesis of unit root is rejected. Hence, it can be concluded that there is a long-term relationship between the dependent and independent variables in Regressions 3 and 4.

Results from Tables 6.2 and 6.3 suggest the following economic interpretation. As the residuals from regression 1 and 2 are not stationary, it points out that there is no relationship between inward FDI and economic growth in Thailand. The failure to establish an empirically long-run relationship between FDI and growth in Thailand, based on bi-variate VAR specifications, has already been recorded in the literature, for instance, Zhang, (2001), and Herzer, *et al.*, (2008). This study also fails to establish a long-term relationship between trade openness and economic growth.

Nevertheless, it appears that inward FDI has a long-term relationship with income deficits and total imports in Thailand. This suggests that inward FDI statistically causes changes in the balance of payments. Regression 3 indicates that FDI would increase income deficits in

the long run and the crisis in 1997 also affected income deficits positively. Regression 4 shows that inward FDI would increase total imports in the long run. The crisis in 1997 appears not to have caused any change in imports in this regression. The results from Table 6.2 support the arguments made by dependency theorists claiming that FDI triggers an outflow of capital in the form of profit and income remittance. The results also support the claims of other empirical studies, reviewed in Chapter 5, that TNCs in Thailand tend to import capital and intermediate goods from elsewhere rather than using locally produced goods. As ec3 and ec4 are stationary, this implies that it is possible to analyse empirically the short-term impact of inward FDI on income deficits and on imports under the specifications of the error correction model (ECM). Thus, regressions 3 and 4 are empirically estimated with the OLS estimation under the following specifications:

$$\Delta y_{rt} = \phi_0 + \phi_1 \Delta x_{rt-i} + \phi_2 \Delta y_{rt-i} + \phi_3 crisis + \phi_4 trend + \phi_5 e_{rt-1} + \varepsilon_t, \qquad (6.13)$$

Δ is a difference operator, e_{rt-1} is the first lagged value of the residuals from the cointegration regression. It must be noted that the residuals from cointegration regression capture the error correction relationship by depicting the degree to which x and y are out of equilibrium. Hence, ϕ_5 captures the rate at which the system y adjusts to the equilibrium state after a shock, in other words, a speed of error correction. *i* is *1, 2,...,T*. According to Engle and Granger (1987), the choice of *i* is determined by estimating the unrestricted autoregression and selecting the lagged variables that appear significant to be included in the error correction model. Table F1, Appendix F reports the results of Regressions 3 and 4, estimated under the unrestrticted vector autoregression specifications.

Table 6.4 reports the results of Regressions 3 and 4, using first-differenced data and incorporating the error correction term. Column 2 of table 6.4 shows that FDI has a short-term impact on income deficits. However, it must be noted that only the coefficient of lagged value of FDI in the long past appears to be significant. This implies that FDI may take at least three years to cause an increase in income deficits. Thus, the positive long-run and short-run impacts of inward FDI on income deficits are empirically found. The coefficient of error correction term is significant. It also gives an appropriate sign, that is,

191

negative. This suggests that deviations from equilibrium are corrected at about 6% quarterly.

TABLE 6.4: ENGLE AND GRANGER ERROR CORRECTION MODEL

Regression	3		4	
Dependent variable / **Independent Variable**	*def*	*Δdef*	*imp*	*Δimp*
fdi	0.68*** (31.0)		0.83*** (9.62)	
Δifdi(-1)		-0.07 (-0.81)		-0.05 (-0.35)
Δifdi(-12)		0.58*** (5.98)		
Δdef(-1)		0.49*** (7.83)		
Δdef(-2)		0.13*** (2.22)		
Δdef(-4)		-0.40*** (-6.58)		
Δdef(-5)		0.34*** (5.43)		
ec3(-1)		-0.06*** (-2.45)		
Δimp(-1)				0.24*** (2.70)
Δimp(-5)				0.26** (2.23)
ec4(-1)				-0.16*** (-3.64)
crisis	0.48*** (2.73)	0.01 (0.35)	0.02 (0.20)	-0.05 (-1.06)
DW	0.22	0.71	0.22	1.92
S.E of regression	0.34	0.05	0.21	0.05
R^2	0.89	1.61	0.95	0.48
RESET♦	0.10	0.33	0.89	0.08
JB♦	0.00	0.00	0.39	0.00
LM(4)♦	0.00	0.09	0.00	0.98
ARCH(4)♦	0.00	0.66	0.00	0.01

Note: 1. t-statistic is reported in the parentheses.

2. ***,**,* indicate statistical significant at 1%, 5%, and 10% levels, respectively.

3. ec3 and ec4 are residuals from the cointegration regressions 3 and 4 respectively.

4. Regression 4 include unreported constant and trend variables while regression contains only constant.

5. ♦indicates p-values

6. RESET test has the null hypothesis of no specification errors.

7. Jacque-Bera test has the null hypothesis of normally distributed residuals
9. Lagrange Multiplier test has the null hypothesis of no serial correlations
in residuals up to the specified lag order.
10. ARCH LM test has the null hypothesis of no autoregressive conditional
heteroskedasticity in the residuals up to the specified lag order.

Regression 4, presented in column 3, Table 6.4, suggests that FDI does not have a short-term impact on imports. This is because the coefficient of the lagged value of FDI is not significant. Even though the short-term impact of FDI on imports is not found, it is seen that at each quarter, the deviations from equilibrium is corrected at the speed of 16%.

In summary, this section adopts the Engle and Granger two-step procedure to analyse the data set. The results indicate that, under the specification of VAR assuming two endogenous variables, inward FDI and trade openness do not have a long-term relationship with economic growth in Thailand. However, it is found that inward FDI has positive long-term and short-term relationships with income deficits. In addition, the long-term impact of FDI on imports is found but its short-term impact is not empirically confirmed by the data.

6.5 Johansen Cointegration and VECM, Results, and Discussion

Failure to establish a long-term relationship between inward FDI and the Thai economic growth, under the specification of the Engle and Granger cointegration approach, may be due to the mis-specification of the model. This is because the specification of equation 6.12 may suffer from the problem of omitted variables. In addition, due to the possibility that there is more than one cointegrating relationship in an economy, the Engle and Granger approach may be inefficient in producing an accurate inference since the model assumes only one cointegrating relationship in the model. It is also noted that assessing the impact of FDI on economic growth is in fact a study of growth in relation to FDI. Thus, a more appropriate attempt to assess the empirical impact of FDI on growth may require the empirical growth framework in which all basic factors of production are taken into account. For this reason, it is reasonable to adopt the growth model that this study developed in Chapter 4.

The growth model of the form of equation 4.5 can be rewritten under the specification of Johansen approach, depicted by equation 6.3, as follows:

$$\begin{bmatrix} \Delta gni \\ \Delta fdi \\ \Delta dinv \end{bmatrix} = \Gamma_0 + \Gamma_1 \Delta lb_t + \Gamma_2 cisis + \Gamma_3 \begin{bmatrix} \Delta gni_{t-1} \\ \Delta fdi_{t-1} \\ \Delta dinv_{t-1} \\ \Delta lb_{t-1} \end{bmatrix} + ... + \Gamma_4 \begin{bmatrix} \Delta gni_{t-k+1} \\ \Delta fdi_{t-k+1} \\ \Delta dinv_{t-k+1} \\ \Delta lb_{t-k+1} \end{bmatrix} + \Pi \begin{bmatrix} \Delta gni_{t-k} \\ \Delta fdi_{t-k} \\ \Delta dinv_{t-k} \\ \Delta lb_{t-k} \end{bmatrix} + E_t \qquad (6.14)$$

gni is an approximation of *Y*, national income. *fdi* and *dinv* represent capital, *K,* which is segregated into foreign capital and domestic capital. *lb* is labour *L*. Theoretically, there is no reason to assume that the labour force would have an endogenous relationship in the system. Thus, this study treats this variable as weakly exogenous. Basically, equation 6.14 can be regarded as a Cobb-Doulas production function under the specification of the Johansen conditional model (Johansen, 1991). As the previous chapter showed that Thailand is in its second stage of economic development, according to the Investment Development Path (IDP), this is why an outward FDI is omitted from equation 6.14.

With respect to the coefficients in equation 6.14, they can be explained as follows. Γ_0 are deterministic terms that include an intercept, a trended variable, and seasonal dummy variables. It must be noted that, according to Johansen (1995), the standard 0/1 dummy variables, if applied, will affect the mean and the trend of a dependent variable in level. Therefore, he proposed the solution of using orthogonalised seasonal dummy variables, which shift the mean without causing changes in the trend. Γ_1 is the coefficient of labour force in the lagged first-differenced. Γ_2 is another deterministic term that captures the financial crisis in 1997. Γ_3, Γ_4, and Π are already defined as presented by equation 6.5.

The objective of this section is to determine whether there is any long-term relationship in the system of equations 6.14. That is, with the Johansen approach, one would be able to identify the number of cointegration vectors. It is seen from Table 6.1 that all variables in the system of equations 6.14 are I(*1*) variables. Thus, it is in Π where this study seeks to identify the *r* linearly independent vectors. As mentioned earlier, this procedure involves

the likelihood estimation based on the maximum eigenvalue test and trace test. At this stage, the system of equations 6.14 is estimated without restriction. The Johansen cointegration test requires two practical specifications as in the Engle and Granger cointegration that are, the deterministic terms of the model and the number of lag length. The deterministic terms have been identified earlier in the previous paragraph. With regards to the number of lag length, it is determined by the SC and the AIC. The lag length selection is reported in Table E.3, Appendix E.

It is noted that the number of cointegrating vectors implies that long-term relationships are sensitive to the number of lag length, k. In the case of this study, the SC and AIC choose different numbers. The SC identifies k to be 1 while the AIC chooses 16. Accordingly, specifying different lag length in the model leads to different results. When the model is specified with lag length equal to one, it indicates one cointegration vector. However, when lag length in the model is specified to be 16, the Johansen cointegration estimation reports four cointegrating vectors. The results of the trace test and the maximum eigenvalue test, performed under different lag lengths, are reported in Table 6.5a, Table 6.5b, Table 6.6a, and Table 6.6b.

TABLE 6.5a: TEST OF THE NUMBER OF COINTEGRATING VECTORS BASED ON TRACE TEST WHERE $k = 1$

Null Hypothesis	Trace Statistic	Critical Value at 5%	Probability
$r = 0$	82.6148	63.8761	0.000
$r \geq 1$	24.8459	42.9152	0.797
$r \geq 2$	11.9608	25.8721	0.814
$r \geq 3$	1.2131	12.5179	0.997
Conclusion:	**Trace test indicates one cointegrating vector at 5% level**		

Note: Critical value is computed based on the statistic reported in Mackinnon, Haug, and Michelis (1999)

TABLE 6.5b: TEST OF THE NUMBER OF COINTEGRATING VECTORS BASED ON MAXIMUN EIGENVALUE TEST WHERE $k = 1$

Null Hypothesis	Maximum Eigenvalue Statistic	Critical Value at 5%	Probability
$r = 0$	57.7689	32.1183	0.000
$r = 1$	12.8851	25.8232	0.812
$r = 2$	10.7476	19.3870	0.539
$r = 3$	1.2131	12.5179	0.997
Conclusion:	**Maximum eigenvalue test indicates one cointegrating vector at 5% level**		

Note: Critical value is computed based on the statistic reported in Mackinnon, Haug, and Michelis (1999)

TABLE 6.6a: TEST OF THE NUMBER OF COINTEGRATING VECTORS BASED ON TRACE TEST WHERE $k = 16$

Null Hypothesis	Trace Statistic	Critical Value at 5%	Probability
$r = 0$	189.7344	63.8761	0.000
r = at most 1	101.5837	42.9152	0.000
r = at most 2	37.9702	25.8721	0.001
r = at most 3	13.2937	12.5179	0.037
Conclusion:	Trace test indicates four cointegrating vectors at 5% level		

Note: Critical value is computed based on the statistic reported in Mackinnon, Haug, and Michelis (1999)

TABLE 6.6b: TEST OF THE NUMBER OF COINTEGRATING VECTORS BASED ON MAXIMUN EIGENVALUE TEST WHERE $k = 16$

Null Hypothesis	Maximum Eigenvalue Statistic	Critical Value at 5%	Probability
$r = 0$	88.1507	32.1183	0.000
$r = 1$	63.6134	25.8232	0.000
$r = 2$	24.6765	19.3870	0.001
$r = 3$	13.2937	12.5179	0.037
Conclusion:	Maximum eigenvalue test indicates four cointegrating vectors at 5% level		

Note: Critical value is computed based on the statistic reported in Mackinnon, Haug, and Michelis (1999)

As is evident, under k equal to one, the trace test and the maximum eigenvalue tests produce similar results which show that there is one cointegrating vector in the system of equations 6.14. Nevertheless, when k is equal to 16, four cointegrating vectors are then identified. Thus, it is inferred that there is at least a long-run relationship among variables in the Thai income growth process as depicted by equation 6.14. It is then possible to examine further a nature of structural relationships underlying the long-run model. This is done by interpreting β and α coefficients, located in Π vectors, estimated by the maximum likelihood method.

In the light of two different results of the number of cointegrating relationships, a judgement needs to be made before this study could proceed further to analyse the structural relationship. At this stage, it can be confirmed that there exists a long-term relationship between GNI, FDI, domestic investment and labour force in Thailand. However, in terms of making an economic interpretation, Johansen and Juselius (1990) noted that when at least two cointegrating vectors are identified the interpretation of β and

α is not straightforward. Thus, for practical purposes, this study will interpret the cointegrating vector which is estimated by the model where $k = 1$. The estimated coefficients β and α from the model, where $k = 1$ and only one cointegrating vector is found, are reported in Table 6.7.

TABLE 6.7: JOHANSEN TEST FOR COINTEGRATING VECTOR OF THE THAI GROWTH REGRESSION

	gni	*fdi*	*dinv*	*lb*	**constant**
β					
	1.000	3.698	-0.504	6.978	-75.665
		(0.842)	(0.047)	(0.954)	
α					
	0.067	-0.013	1.362	-0.019	
	(0.029)	(0.006)	(0.241)	(0.005)	
Test for autocorrelation					
LM(1), *p-value* = 0.47					
LM(2), *p-value* = 0.43					
Test for normality					
JB, *p-value* = 0.00					

Note: The null hypothesis of LM test is no serial correlation
      The null hypothesis of Jacque-Bera (JB) tests is residuals are multivariate normal

Before discussing the structural relationship found in the cointegrating vector, it is worth commenting on the property of the model specification. Based on Chakraborty and Basu (2002), two multivariate diagnostic tests were performed to assess the properties of the residuals of equation 6.14. These are the multivariate Lagrange Multiplier (LM) test and the multivariate extensions of the Jacque-Bera residual normality test. As seen from Table 6.7, the residuals are free from serial correlation but they are not normally distributed. An initial attempt to explain this would be that the model does suffer from the omitted variable. However, this can be considered as a common and trivial problem for growth regression in general. This is because growth process is affected by a wide range of determinants. As a more serious problem of serial correlation is absent, this model can be regarded as a sound model and that the interpretation derived from this model is meaningful.

The interpretation of the cointegration vector in the equilibrium relation can be given by the following equation:

$$gni = 75.665 - 3.698 fdi + 0.504 dinv - 6.978 lb \tag{6.15}$$

The coefficients of α can be interpreted as the weights with which the deviations of GNI enters the four equations of the system of equation 6.14. Indeed, it is the average speed of adjustment towards the estimated equilibrium state. However, in the context of this study, they do not provide much economic sense. Therefore this study will focus only on the interpretation of the β coefficients. The estimated β coefficients, as re-represented in equation 6.15, show that FDI has a long-term negative impact on GNI. It is also found that domestic investment has a long-term, positive impact on GNI. However, counter-intuitively, an increase in the size of the labour force appears to have a long-term negative impact on GNI.

The negative impact on FDI and the positive impact of domestic investment on the Thai GNI in the steady state could be supported by dependency theory. It must be noted that the negative impact of FDI on the Thai GNI is not likely to be caused by the FDI *per se*. From Chapter 5, this study showed that as a result of an attempt to restore market mechanism, the Thai government has gradually lifted policy instruments devised to facilitate materialisation of FDI-positive spillovers. In addition, this study showed that TNCs are the main exporters in Thailand, and that their activities are positively correlated with the outflow of capital. Thus, it is not difficult to comprehend the negative impact from inward FDI on the Thai national income.

In relation to domestic investment, as it gives a positive impact on growth, it can be classified as a more preferred type of investment. This notion has long been advocated in economic development literature and has been reviewed in detail in Chapter 3. It must be noted that the importance of domestic investment, presumably conducted by domestic entrepreneurs, is also the central point in the conceptual framework developed in Chapter 4. The productive capability, acquired by the process of learning by investing and embodied in domestic firms, is the main impetus that would perpetually upgrade the nation's

comparative advantages along the path of development. Thus, it should help accelerate and sustain an increase in national income.

With regard to the negative impact on GNI from an increase in the size of the labour force, it can also be explained within the context of dependency theory. From the historical review of economic development in Thailand in Chapter 5, this study pointed out that only a minority of Thai citizens is the main beneficiary of the FDI-led growth development model. The majority of citizens that makes up a vast pool of unskilled labour still earn the minimum wage which is extremely low compared to the average income of the upper-middle class. In addition, it must be noted that the empirical evidence shows that the nature of technology that has been imported with FDI is capital-intensive. This implies less employment, particularly the employment of unskilled labour. Capital-intensive technology however benefits more the elites and upper-middle classes. In such situations, the unskilled labour may compete for the lower income while the minority upper-middle class would still enjoy a secured and increasing income share. In most cases, the benefits for the minority may not be able to compensate for the social loss from an uneven income distribution. Thus, an increased labour force in an economy where FDI is a key source of economic activities, like Thailand, could result in a decrease in the national income.

Now, the analysis will shift to examine the dynamic or short-term relationships among variables in the system of equation 6.14. Within the Johansen VECM approach, short-run structural relationships are obtained by estimating the VECM that includes the long-run cointegrating relationship. This cointegrating vector acts as the error correction term to be included in the model. In the case of this study, the VECM is defined as follows:

$$\begin{bmatrix} \Delta gni \\ \Delta fdi \\ \Delta dinv \end{bmatrix} = \Gamma_0 + \Gamma_1 \Delta lb_t + \Gamma_2 cisis + \Pi \begin{bmatrix} \Delta gni_{t-1} \\ \Delta fdi_{t-1} \\ \Delta dinv_{t-1} \\ \Delta lb_{t-1} \end{bmatrix} + \alpha_1 (\beta' Z_{t-1}) + E_t \qquad (6.16)$$

where $\beta' Z_{t-1}$ is the cointegrating vector as depicted by equation 6.15. The results from the estimation of equation 6.16 are reported in Table 6.8. The diagnostic tests show that the

model is sound and can be considered as a working one. It also produces the estimated coefficients which appear to be theoretically correct. In particular, the serial correlation tests suggest that, if a higher lag order is included, the serial correlation problem may well be addressed. The JB test shows that the joint residuals of four equations appear not to be normally distributed. This study accepts this breach of assumption but the interpretation of the results will continue as this violation is not considered to be serious.

TABLE 6.8: ESTIMATION OF THE VECM

	Δgni **equation**	Δfdi **equation**	$\Delta dinv$ **equation**
Variables			
$\Delta gni(-1)$	0.034	0.032	0.894
	(0.328)	*(1.488)*	*(1.078)*
$\Delta fdi(-1)$	1.479	0.210	-1.658
	(2.992)	*(2.089)*	*(-0.427)*
$\Delta dinv(-1)$	0.177	-0.002	-0.097
	(1.493)	*(-1.197)*	*(-1.041)*
Δlb	-0.457	-0.015	10.609
	(-0.842)	*(-0.136)*	*(2.363)*
$\Delta lb(-1)$	1.198	-0.280	2.010
	(2.328)	*(-2.669)*	*(0.497)*
crisis	-0.183	0.035	-0.147
	(-6.197)	*(5.935)*	*(-0.635)*
ce(-1)	-0.048	-0.012	1.614
	(-1.546)	*(-2.001)*	*(6.607)*

Test for autocorrelation
LM(2), *p-value* = 0.02
LM(5), *p-value* = 0.19
Test for normality
JB, *p-value* = 0.00

Note: The null hypothesis of LM test is no serial correlation
     The null hypothesis of Jacque-Bera (JB) tests is residuals are multivariate normal
     ce is cointegrating vector

From Table 6.8, column 2, it is seen that inward FDI and labour force appear to have a short-run positive impact on the growth of the Thai GNI. The dummy variable that depicts the crisis in 1997 also produces a correct sign, suggesting that the crisis has a negative impact on the Thai national income. The coefficient of error correction terms is negative and nearly significant. This suggests an error correction mechanism, even though it may well be weakly exogenous. Column 3 from the same table depicts an equation that explains changes in inward FDI in Thailand. It shows that the past value of the stock of FDI helps to

explain an increase in the stock of FDI in the present time. However, it shows that an increase in the labour force has a short-term negative impact on FDI. The crisis variable also gives the coefficient that is in line with the observations made in the previous chapter. That is, the crisis is positively correlated to an increase in the stock of FDI. The error mechanism is also found in this equation because the coefficient of the cointegrating vector is negative and significant. The last column in Table 6.8 depicts the changes in domestic investment in relation to other variables in the system. The only independent variable that appears to have a positive short-run impact on domestic investment is the size of the labour force at the present time. Generally, this equation can be considered as weak because the error correction mechanism cannot be identified and most of independent variables appear not to be significant.

In brief, the short-run structural relationships show that FDI appears to cause growth in the Thai GNI even though it leaves a negative long-term impact on the national income. Domestic investment, whilst giving a long-run positive impact on the Thai GNI, appears not to have a short-term impact on growth. Labour force shows to have a positive short-run impact on growth but a long-run negative impact. Thus, the empirical results again confirm that Thailand appears to have traits of being a capital-dependent state.

So far, this study has focused mainly on establishing long-run and short-run relationships between and among variables of interest. Conventionally, most empirical studies that adopted VAR and VECM approaches for time-series analyses also went beyond estimating parameters to establishing the direction of causation between and among variables of interest. Thus, in the next section, this study will perform the bi-variate Granger causality tests, based on Granger *et al*. (2002) and Vector Error Correction (VEC) Granger causality. The aim of the following section is to identify the direction of causation between and among variables which are cointegrated.

6.6 Bi-variate and VEC Granger Causality

This section looks to identify the direction of causation between two endogenous variables in Regressions 3 and 4 specified and estimated by the Engle and Granger two-step

procedure. It also seeks to identify directions of causation among the variables in the system of equations 6.14, specified under the Johansen cointegration model. The bi-variate Granger causality test is performed on the following pairs of variables: FDI vs. income deficits and FDI vs. total imports. Clearly, they are pairs of variables from Regression3 and 4, respectively. The specification of the bi-variate model is taken from Granger *et al.*, (2000), as elaborated by equation 6.9. The results are reported in Table 6.9.

TABLE 6.9: BI-VARIATE GRANGER CAUSALITY TESTS

H_0: $y_1 -/\rightarrow y_2$ H_0: $y_2 -/\rightarrow y_1$	lag length chosen by			
	intuition[3]	AIC	SC	HQ
	p-value	*p-value*	*p-value*	*p-value*
		(lag length)	(lag length)	(lag length)
fdi$-/\rightarrow$def	**0.012**	**0.000**	0.6763	**0.000**
	(8)	(12)	(6)	(12)
def$-/\rightarrow$fdi	0.960	0.903	0.8913	0.903
	(8)	(12)	(6)	(12)
fdi$-/\rightarrow$imp	**0.000**	**0.000**	**0.000**	**0.000**
	(8)	(10)	(2)	(10)
imp$-/\rightarrow$fdi	**0.011**	**0.0399**	0.239	**0.0399**
	(8)	(10)	(2)	(10)

Note: 1. $-/\rightarrow$ implies the H_0 of no Granger causality.
   2. p-values reported in **bold** represent Granger cuausality significant at 5% level and lower.
   3. Assuming that these variables tend to affect one another in the long run so based on economic intuition, the past information to be taken into account should go back to period t-8 which implies two years.

The numbers of lag length, used in the bi-variate Granger causality test, are chosen by the SC, the AIC, and the Hannan-Quinn (HQ) information criteria. Furthermore, this study also specified lagged value of the period t-8 in order to capture the impact over two years. As seen from Table 6.9, row 2, FDI does Granger cause changes in income deficits and the reversed direction of causality is not found. This, once again, supports the argument made by dependency theory which claims that FDI causes an outflow of capital. Table 6.9, row 3, indicates that FDI and total imports in Thailand appear to have a bi-directional causality. More specifically, it is seen that when consider a shorter lagged value, that is 2, the causation runs from FDI to import, suggesting that FDI Granger causes changes in imports. However, when a longer lagged period is considered, the bi-directional causality appears. This implies that FDI in Thailand could well be a *quid pro quo* FDI and import-

substitution. Nonetheless, in the light of a liberal trade and investment regime, this could also be explained by the following situation. That is, foreign export firms find it is more profitable to produce the products, which they once exported, in Thailand in the form of FDI.

The framework of Granger causality, depicted by equation 6.9, can be extended to examine the direction of causation among the variables of interest in the system. More specifically, it is possible to determine the causation relationship among the variables in the system of equations 6.14 while taking into account the error correction terms and a set of deterministic terms. The results of the VEC Granger causality are reported in Table 6.10.

TABLE 6.10: VEC GRANGER CAUSALITY TESTS

Panel (a)

Dependent variable: *gni*

Lag order	*1*	*16*
dinv	**0.0486**	**0.0000**
fdi	**0.0074**	**0.0000**
lb	**0.0263**	**0.0065**
All	**0.0006**	**0.0000**

Panel (b)

Dependent variable: *dinv*

Lag order	*1*	*16*
gni	0.3487	**0.0179**
fdi	0.6512	0.8216
lb	0.4978	0.1720
All	0.4153	0.4955

Panel (c)

Dependent variable: *fdi*

Lag order	*1*	*16*
gni	0.1040	**0.0001**
dinv	0.2062	0.1307
lb	**0.0073**	**0.0310**
All	0.0920	**0.0021**

Panel (d)

Dependent variable: *lb*		
Lag order	**1**	**16**
gni	0.3163	0.2549
dinv	**0.0070**	0.5422
fdi	0.0670	0.2167
All	**0.0159**	0.0878

Note: 1. Numbers reported are p-values
          2. Numbers reported in **bold** indicate the presence of Granger causality from that variable to the related dependent variable.

As mentioned earlier, from the given dataset, the SC and the AIC selected the numbers of lag length, 1 and 16, to be included in the model, respectively. Thus, this study performed two multivariate Granger causality tests on its cointegrated variables with k equal to 1 and 16 accordingly. A succinct interpretation of the results reported in Table 6.10 is as follows. With the model where only one period lagged value is included, the uni-direction of causation runs from FDI, domestic investment, and labour force, to GNI. No reversed direction of causation was empirically found. This means that in a very short run, FDI, domestic investment, and labour force help to explain changes in GNI but GNI itself does not Granger cause changes in these variables.

Furthermore, the VEC multivariate Granger causality, where k is equal to one, also shows that two causations exist, running from labour force to FDI and from domestic investment to labour force. An initial attempt to explain these relationships would be to suggest that FDI in Thailand is attracted by an increasing pool of cheap labour force. This argument is well supported by the literature review in Chapter 2 where this study showed that when production technology is matured, TNCs look to relocate their productive activities in the country where labour is abundant and cheap. This is also in line with the observations made in Chapter 5 where this study pointed out that most of TNCs activities in Thailand concentrate more on manufacturing rather than developing products. On the causation from domestic investment to labour force, it may well be that an increase in domestic investment may draw a labour force from an informal sector of the economy into the formal sector. However, as the effect is short-lived, that is, it does not take place in the model where more information is included. So, this causation may not be economically significant.

When more past information, higher lagged values, are fed into the model, bi-directional causalities between GNI and investment of both types are empirically found. This confirms that first of all, the treatment of FDI and domestic investment as endogenous variables are indeed statistically correct. It also implies that changes in market size, captured by the size of the national income also help to determine the decision to invest by both foreign and domestic investors. In addition, the causation from labour force to FDI remains significant. Overall, the VEC Granger causality tests confirm that FDI, GNI and domestic investment in Thailand are indeed interrelated.

6.7 Summary

This chapter empirically confirms that there exist equilibrium relationships between i) inward FDI and income deficits, and ii) inward FDI and total imports in Thailand. In addition, this study also found the equilibrium relationship among GNI, FDI, domestic investment, and labour force. The first two long-term relationships were empirically found from the bi-variate endogenous models. They point out that inward FDI helps to explain and increase in income deficits and imports in the long run. This study failed to establish the long-term relationship between GNI and inward FDI from the Engle and Granger two-step procedure. However, such log-run relationship is found when the model is better specified with more variables.

Under the multivariate growth model and estimated by the Johansen cointegration technique and the error correction modelling, the long-run relationship between FDI, domestic investment, labour force, and GNI in Thailand was identified. From this long-run relationship, it was seen that FDI and labour force have a long-term negative impact on GNI while domestic investment appears to have a positive long-run relationship on the Thai GNI. The existence of such a long-run relationship allows the analysis of short-run impact of these variables in a vector error correction model. The VECM then suggests that even though FDI has a long-term negative impact on the Thai GNI, in a short run, it does help increase growth. It is also observed that while domestic investment has a long-term positive impact on GNI, it does not have a short-run impact on growth.

205

Granger causality tests also confirm that inward FDI in Thailand does Granger cause changes in income deficits and total imports. This finding supports the arguments made by dependency theory, which asserts that inward FDI could trigger the outflow of capital and that it could cause balance of payments problems by inducing more imports. In the multivariate Granger causality tests, this study showed that when more past information is taken into account, the Thai GNI appears to have a bi-directional relationship with FDI and domestic investment.

In summary, the empirical evidence presented in this chapter appears to support the hypothesis made in the previous chapter that the Thai developmental path is taking the form of a capital dependent state. This means that economic growth in Thailand is largely dependent on foreign capital and technology. Moreover, it can be deduced that this situation may well be the result of abolishing policy instruments that have been devised to facilitate the spillovers from FDI. On policy implications, this evidence strongly suggests the revision of the Thai investment promotion scheme that appears to favour and benefit foreign investment more than domestic investment.

Chapter 7: Conclusions

7.1 Introduction

This chapter concludes the work presented in this study. Also found in this chapter are implications for public policies and propose areas for further study.

7.2 Review of the Dissertation

The assessment of the impact of Foreign Direct Investment (FDI) on economic growth required theoretical understanding of at least three related disciplines, namely, international business, economic growth and political economy. From institutional perspectives, Chapter 2 showed that firms, particularly, TNCs, exist due to imperfections in the market. FDI is an action of a national firm which decides to internalise transactions across two or more national markets. In other words, a pursuit to grow beyond what the national market can offer. The larger the productive operations of TNCs become in relation to the market, the less power the invisible hand has to deliver the optimal economic efficiency. In addition, this study points out that firms' ownership-specific advantages are their abilities to produce technological and organisational capability. These abilities are sources of survival and growth. They empower firms to be more efficient than the market.

The ownership-specific advantage is created by an interactive use of human and non-human capital which might be controlled by the management or entrepreneurs. It is also important to note that the direction of growth and the availability and quality of a firm's resources are very much dependent on external factors such as regulations, institutions, and the role of the state. At aggregate level, the ownership specific advantages of national firms can be regarded as the country's productive capability in the sense of Chang (2010). This capability is responsible for instigating and sustaining further economic development.

From macro-economic perspectives, Chapter 3 explained that FDI is regarded as a long-term capital flow which brings not only additional capital but also advanced technology to host countries (Borensztein, *et al*., 1998; De Mello, 1999; Ramirez, 2000; Saggi, 2002 and Kohpaiboon, 2006). In growth economics, capital and technology are sources of growth. Thus, when FDI is perceived as an inflow of capital and technology, it is presumed to be beneficial to the growth of host economies. The majority of FDI-growth models reviewed in section 3.2.1.1 have underplayed several qualitative aspects of FDI, such as, the rent-seeking behaviour and foreign nationality of Transnational Corporations (TNCs). Besides, FDI-growth models fail to capture the dynamic impact of FDI such as transfers of resources and capital *ex post*. Therefore, given the complicated implications of FDI for the host economy, it is not sufficient to assess the benefits of FDI by merely adopting a pure growth economic approach.

There are conceptual discrepancies between micro-perspectives and macro-perspective towards FDI. Given these, FDI is more likely to be perceived in accordance with macro-economic perspectives and hence been presumed to be an important source for economic development. Accordingly, attracting FDI has been placed high in the agenda of many developing countries, including Thailand. This agenda is also implemented with neo-liberal development policies which are likely to create an institutional structure that does not facilitate the materialisation of FDI-related spillovers.

This study also points out that the friendly perspectives towards FDI at the moment are contrary to the common perception of FDI in the 1960s and 1970s. Between these two decades, many developing countries were mostly hostile to the penetration of TNCs from more powerful nations. These critical arguments towards FDI were stem from the emblem of dependency theory. Though not unified and rigorous, dependency theorists agreed that FDI is likely to make a developing nation into a dependent capital state, or a peripheral economy, and impede a complete capitalist development.

Dependency theorists perceived FDI more in line with how international business scholars considered it. More specifically, dependency theory is strongly aware the ability of FDI to drive out domestic firms and obstruct the formation of a strong, domestic, capitalist class. Dependency theory has been arguing that FDI, through the use of inappropriate technology and limited interaction with the greater scope of the economy, could cause an uneven development and give rise to social inequality and economic dualism. Most importantly, dependency theory suggested that economic development, led by FDI, could generate only a limited benefit from international trade, due to the deterioration of the terms of trade. It might also cause an outward transfer of resources in the form of outflow of income from investment, natural resources, or products that are produced using cheap domestic resources. All these aspects could have serious adverse impacts on the balance of payments of the nation. It must be noted, however, that dependency theory too carries many shortcomings. The theory assumes a passive role of the state and weak domestic firms. It also underplays the possibility of value creations, expansion of consumer choice and the opportunity of domestic firms to gain knowledge and technology at a lower cost.

Chapter 3 also showed that a friendly attitude towards FDI was a recent phenomenon and a product of world history, namely, the fall of communism and the rise of neo-liberal ideology. These two events had a forceful consequence on economic policies including economic development policies in relation to FDI. Neo-liberalism believes in market efficiency and

supports an idea of free movements of goods, services, and capital, and the minimal role of the state. The case in point is that, theoretically, FDI and TNCs exist because of the inherited inefficiency of the market. Therefore, they may not be effectively managed by neo-liberal policies whose driving ideology lies in a different set of assumptions. Indeed, scholars from international business discipline, such as, Hymer (1979), Penrose (1995), Dunning and Narula (1996), and Dunning (1999) tend to support the state's intervention in the market through policies and regulations when dealing with larger and stronger firms *vis-à-vis* smaller and weaker firms. In fairness, some FDI-growth models also acknowledge the nature of the highly concentrated market in which TNCs operate. However, they appear to underplay the rent-seeking nature of TNCs and overstate the possibility that TNCs will generate technological spillovers. Besides, these models seem to leave out the likelihood that FDI might trigger further transfer of resources across nations when engaged in operations. These transfers may not necessarily generate gains from international investment or even international trade for the host countries. This is partly because international transactions, caused by TNCs are in many cases, not arm's length transactions but likely to be intra-firm transactions that might adopt transfer pricing.

The present study highlighted that the evidence in support of positive spillovers from FDI to growth is inconclusive. Most importantly, the results seem to be negative when using data from developing countries. In cases where positive spillovers are reported, they are conditional on other factors such as human capital, technological gap, liberal trade regime, and financial market development. It should be noted that as these conditions can only be materialised by implementing relevant policies. Thus, it points to the role of the state in regulating FDI and manipulating it to serve the national development objectives. However, in practice, particularly in Thailand, due to the influence of neo-liberalism which attempts to reduce the role of the state in intervening international investment. The country is not only discouraged from regulating FDI but also indirectly guided to prioritise foreign investment over domestic investment.

The conceptual frameworks are developed in Chapter 4. For the purpose of political economy analysis of FDI, this study adopts the concept of the Investment Development Path (IDP) to analyse the dynamic role of FDI in economic growth. The IDP is a concept that is developed within the international business discipline and which, later on, the author has extended to the field of political economy. This framework can be used to assess what type of development a country tends to follow, that is, a complete capitalist development or a dependent development, based on the Net Outward Investment (NOI). This indicator represents the ownership-specific advantages that are embodied in domestic firms in relation to that of TNCs. These ownership-specific advantages, at aggregate level, reflect the country's productive capability or the strength of domestic firms which later will help to increase the country's competitive advantage along its developmental path. As mentioned earlier, the IDP could also shed some light on the dynamic nature of FDI-related policies. The study showed that the modified IDP framework can be used to represent a capital-dependent state which is advocated by dependency theorists.

Nonetheless, as the IDP does not offer a theoretical framework where the impact of FDI can be empirically assessed, this study then resorts to growth economics and adapts the neo-classical growth model as its empirical platform for the assessments of the impact of FDI in the economy of Thailand.

Against the backdrop of the ongoing economic transformations in Thailand that has led to diminishing power of domestic capital, deregulations in the FDI-related area, and increasing dominance of TNCs in growth strategic sectors after the financial crisis in 1997, dependency theory appears to provide a more relevant conceptual framework to analyse the effect of FDI in the Thai economy. Firstly, this is especially important because the Thai state has been relatively weak due to the influence of neo-liberalism, particularly in the area of industrial planning. Secondly, the liberalisation and deregulation of FDI allow TNCs to exercise their

greater ownership-specific advantages with limited restrictions. Thirdly, domestic firms in Thailand appear to be passive and relatively weak, compared to TNCs.

Observations made from the analysis of political economy

In Chapter 5, the study has analysed the role of FDI in the political economy of Thailand in a conceptual framework that is based on the IDP and dependency theory. It has been shown that Thailand has a number of features of being a capital dependent state or a peripheral economy. These features are the following:

1) Thailand has adopted FDI and export-led growth policies since 1970s. Its development was once claimed as a successful case of FDI and export-led growth strategy. Indeed, export and FDI appear to instigate economic growth in Thailand.

2) Despite having been the main recipient of inward FDI in the region for over three decades, the country's NOI does not show any sign of surging. It implies that the technological gap between the domestic firms and TNCs may have increased over time.

3) Thailand appears to have a high level of FDI concentration when measured in terms of the percentage share of total investment by the three largest foreign investors classified by country. Even though the concentration has been slightly decreased recently, the implication remains that a few countries, collectively, may have bargaining power over the Thai government in the international investment-related policies.

4) From 1980, the ratio of the stock of FDI to GDP, which represents foreign capital penetration, has generally been increasing, particularly after the financial crisis of 1997. This can be interpreted as an increasing dominance of TNCs in the economy.

5) Domestic firms and TNCs in Thailand specialise in different sectors. TNCs appear to specialise in the medium and high technology intensive export sectors. TNCs are responsible for more than 60 *percent* of total exports from Thailand. This may suggest limited linkages between domestic firms and TNCs. This limited linkage

may be explained by the small productive capability of domestic firms, which in turn, can be captured by the persistent decline of the negative NOI.

6) The study of FDI and investment-related policies showed that the policies have been mainly influenced by neo-liberal ideology. Explanation of policies also helps to identify the underlying reasons for the limited linkage between TNCs and domestic firms. That is because

    i)   Thailand has no specific and detailed industrial plan.

    ii)   The promotion of investment in Thailand does not distinguish the nationality of the firm except in the case of sensitive industries such as agriculture, media, and communication. In many industries, domestic and foreign firms are treated equally, irrespective of their size and competitive ability.

    iii)   After the financial crisis of 1997, many instrumental policies that are designed to increase the likelihood of technological spillovers from TNCs to local firms were lifted. For example, the requirement of local content, and the limitation of foreign equity were abolished.

    iv)   More liberal FDI policies have been adopted as a result of the participation in international trade and investment agreements.

7) The investment-related policies pursued were mostly aimed at attracting FDI by increasing the country's locational advantages. Little has been done to help increase the ownership-specific advantage of domestic firms. Over time, the country has been receiving more FDI with sophisticated technology. The ownership-specific advantages embodied in domestic firms, however, has remained constant or increased at a slower pace. Thus, the technological gap between TNCs and domestic firms has been widening.

8) The widening technological gap argument is supported by the NOI analysis where it is seen that the Thai NOI has been decreasing, especially from 1997 onwards. The fall of NOI represents the growing difference of the ownership-specific advantages between TNCs and domestic firms.

9) Recently, due to the change in regulations that has been largely influenced by external political influence, the number of 100% foreign establishments has increased significantly while the number of joint-venture projects has decreased by a half.

10) It has also been observed that, since 2005, projects receiving fiscal investment incentives had over 70 *percent* of their capital coming from foreign investors.

11) Even though FDI is highly concentrated in the manufacturing sector, Total Factor Productive (TFP) growth of that sector has remained modest.

12) Regarding resource transfers, the study showed that the ratio of GNI to GDP in Thailand, since the promotion of export and FDI-led growth policies, has always been less than 1.0 and gradually decreased with some fluctuations. This suggests that the country experiences deficits in the net transfer payments which are possibly caused by hosting international investment projects.

13) The study of the Thai balance of payments showed that the Thai income balance has been the largest source of deficits, followed by the balance of services. Even though the balance of goods appeared to generate some surplus, it is noticed that the surplus appears to be marginal.

14) Export of goods from Thailand seems to trigger an increase in import of goods and services. Indeed, data showed that between 1995 and 2008 imports of raw material, intermediate and capital goods on average accounted for almost three-quarters of total imports.

15) The country's terms of trade have also deteriorated significantly especially since the financial crisis of 1997. The deterioration can be partly explained by a heavy reliance on imports of technology and intermediate goods, devaluations, and transfer pricing practices.

16) It is observed that the neoliberal development has affected the Thai economy structurally. The financial crisis of 1997, particularly its cyclical effects highlighted the structural deficiencies of the economy. Some of the key deficiencies are relatively weak domestic entrepreneurs, the dominance of foreign capital in export sectors, and the limited role of the state in engineering the industrial development.

17) The pattern of ownership in a number of economic sectors has considerably changed. For example, there appears to be a growing foreign dominance in key industries such as banking, and medium to high technology intensive manufacturing industries. Moreover, the share of export to total GDP has significantly increased. It must be noted that most of exported products were produced by TNCs. This suggests that the country has also increased an economic reliance on their operations.

18) There has always been a relatively high level of income inequality throughout the history of the Thai development. It is highlighted that income inequality has co-existed with 'economic dualism' over the past fifty years. The inequality has persistently existed under the neo-liberal FDI-led growth model in Thailand. It appears that economic growth in Thailand in the past could not address the inequality and this inequality does underlie the recent political instability recently.

Most of the above-mentioned features are similar to economic traits of a capital-dependent state, as described by dependency theorists, who also argue that these features are largely induced by FDI. It is acknowledged that an export and FDI-led growth strategy helps explain economic growth in Thailand. However, the type of growth it has induced, particularly the institutional transformation, has not been beneficial to Thai development in the long-term. Firstly, this type of growth impedes the formation of a strong entrepreneurial class. Secondly, international pressure has constrained the role of the state in industrial planning and intervention. Thirdly, this type of growth has increased the country's dependence on foreign capital and technology. As a result, the nation's productive capability, which is crucial for a fully capitalist development, cannot be effectively formed.

Observations made from empirical analyses

In Chapter 6, the study carried out some empirical tests. The statistical techniques adopted for the analyses in this chapter were the Engle and Granger two-step procedure and the Johansen cointegration and Vector Error Correction Model (VECM). Empirical analyses are derived from the use of quarterly time-series data from Q1:1970 to Q4:2009. The empirical findings can be briefly outlined as follows:

1) Inward FDI has induced economic growth, measured by GNI, in Thailand only in the short run. However, in the long run, the impact of FDI appears to have a negative impact on GNI. This empirical result supports the hypothesis that Thailand is a capital-dependent state.

2) Domestic investment has had a positive impact on economic growth even though it does not have an impact in the short run.

3) Labour force has a negative long-run effect on GNI but it is able to instigate growth of GNI in the short run. It must also noted that increase in labour force could attract inward FDI

4) Inward FDI is empirically found to induce an increase in income deficits and imports in Thailand in the long run

5) The financial crisis of 1997 was empirically found to have had a detrimental impact to the economy both in the short-term and the long-term. It is also found that the crisis has empirically explained an increase in inward FDI in Thailand.

In addition to the insight gained from growth regressions, the study also provides an analysis of directions of causality. It adopts the bi-variate and multivariate Granger Causality tests for cointegrated variables to identify directions of causality among key variables of interest. The study found that:

6) The results from the bi-variate Granger Causality test shows that inward FDI does Granger cause deficits in income account and not *vice versa*.

7) The bi-variate Granger causality confirms the bi-directional causality between inward FDI and total imports.

8) Finally, the multivariate Granger causality tests show that there are interrelationships between GNI and two types of investment namely FDI and domestic investment.

The proposition claiming that Thailand might be a capital-dependent state due to its development policy which placed too much emphasis on inward FDI seems to be supported by the observations made by the political economy and empirical analyses. Nevertheless, regarding the empirical analyses, it must be noted that the results are based on past performances and specific to the model environment.

7.3 Policy Implications

1) Need for revisions of FDI policies

Most of the scepticism on the impact of financial liberalisation in developing countries tends to focus on the liberalisation of short-term capital flow. This is because the adverse impact from the speculative nature attached to the short-term investments can be realised relatively shortly after the anomalies have taken place in the economic system. However, the long-term capital flow, FDI, has arguably been less criticised since this type of capital inflow produces immediate benefits, such as, the creation of employment and filling the gap in domestic savings. These, in general, tend to increase economic growth, at least in the short term. Nonetheless, the financial and technological superiorities of foreign projects could possibly cause structural damages to domestic markets in the long term by out-competing domestic entrepreneurs. This would happen unless the state sets a number of appropriate policies to guarantee fair competition between domestic and foreign firms. In Thailand, the tax incentive scheme, offered to TNCs, such as no corporate income tax for eight years, no import duty, and the absence of local content requirements, limits the channels through which Thailand could benefit from FDI. Some FDI-growth theories, their empirical evidence, and the IDP suggest that spillovers from FDI can accrue if and only if FDI is

217

regulated with appropriate policies. This, in practice, implies revisions of liberalisation of FDI and reconsiderations of FDI deregulations.

2) Special support for Thai entrepreneurs, particularly in strategic industries

Development theories and historical evidence from industrialised nations show that domestic entrepreneurs are important for economic development. Thailand may be interested in having a special incentives scheme that is exclusively available to domestic entrepreneurs in order to help them to withstand international competition and to develop their ownership-specific advantages.

3) Need for a well-crafted industrial planning

Similarly development theories and historical evidence of other developed countries show that development cannot be achieved without strategic planning and effective policy implementation. Therefore, Thailand might need to reduce its reliance on market mechanism and put more energy towards producing a well-crafted industrial planning which emphasise the strategic coordination between domestic firms and the state. Their coordination is a key to successful economic development.

4) Importance of independence in designing developmental policies

The study shows that the change in the political economy of Thailand has been largely influenced by external factors. The choice of sub-optimal policies that each government in Thailand has implemented over the years not only was not internally driven but mostly externally dictated. In other words, policies were mainly formed as a consequence of collaborations between domestic political leaders and the Washington-based international organisations such as, the IMF and the World Bank with the support of the United States and Japan. These two countries have been the main foreign investors in Thailand. The study

advocates the need for independent control of policy by the Thai government and its technocrats under the assumption that the public interest is always prioritised.

7.4 Limitations and Future Work

Even though the study has made an analytical contribution to the study of FDI and economic development, providing more up-to-date empirical evidence in the case of Thailand, and offered policy implications, there remain some limitations. However, by outlining these limitations, future work can be suggested. Firstly, at the analytical level, the exogenous FDI-growth model, developed in Chapter 4, is still constrained by the nature of neo-classical specifications. That is, the model has left out the institutional aspects of the economy and the role of policies outside the model. Moreover, output elasticities of international investment, δ and β, which are critical in identifying the type of developmental path that the function should exhibit, are left to be determined outside the model. Even though these aspects can be incorporated into an analysis as intuitive after-thoughts, their mechanisms are not identified within the model. Therefore, it is interesting to develop an endogenous FDI-growth model in which δ and β are identified, probably as a function of ownership-specific advantage of the country, and linked to the level of technology, A.

Secondly, on empirical aspects, despite several salient benefits of using macro-economic time-series data, there remain some limitations in terms of the relevance of the research question and its representation of a whole economy. Moreover as FDI in Thailand is clustered in only a number of industries, it would be interesting to assess the impact of FDI at an industrial level. Indeed, the study has acknowledged this shortcoming in Chapter 5 and already addressed the problem by providing a review of empirical works that assessed FDI in Thailand, using industrial level data.

Thirdly, even though the study has paid attention to FDI-related policies and speculated how they might help to explain the impact of FDI in Thailand, a fuller policy analysis can be carried out by a more complete study of international law that governs international trade

and investment, and bi-lateral and multi-lateral agreements between Thailand and other countries. Indeed, the future study of FDI and its impact on economic development should also take into account the study of law and analytical tools developed in the new institutional economics. This is because economic decisions and organisations may not be only determined by the neo-classical lens of choice but also by the lens of contract.

Lastly, the study assessed the empirical impact of FDI on Thai economic development by focusing on FDI in relation to trade and TNCs in relation to domestic firms. Due to limitation of space and scope the study did not cover an important related aspect of TNCs, that is, their role in an international division of labour. It would be useful to investigate how FDI would affect changes in average and minimal wages and how their interactions might help to explain the economic development in relation to FDI.

BIBLIOGRAPHY

Aghion, P. and Durlauf, S., (2007). From growth theory to policy design [online] *Growth Commission*. Available from: <http://www.growthcommission.org/storage/cgdev/documents/aghion-durlauf-wbapr3fin.pdf>

Aghion, P. and Howitt, P., (1992). A model of growth through creative destruction. *Econometrica*, **60**(2), 323-351.

Agosin, M. and Machado, R., (2005). Foreign investment in developing countries: does it crowd in domestic investment? *Oxford Development Studies*. **33**(2), 149-162.

Aitken, B. and Harrison, A., (1999). Do domestic firms benefit from foreign direct investment? Evidence from Venezuela. *American Economic Review*. **89**(3), 605-618.

Akaike, H., (1973). Information theory and an extension of the maximum likelihood principle. In Parzen, E., Tanabe, K. and Kitagawa, G. (eds.), *Selected Papers of Hirotugu Akaike*. London: Springer.

Akaike, H., (1987). Factor analysis and AIC. *Psychometrika*. **52**(3), 317-332.

Akamatsu, K., (1962). Historical pattern of economic growth in developing countries. *Developing Economies*. **1**(s1), 3-25.

Alfaro, L., Chanda, A., Kalemli-Ozcan, S. and Sayek, S., (2004). FDI and economic growth, the role of local financial markets. *Journal of International Economics*. **64**(1), 113-134.

Alfaro, L., Chanda, A., Kalemli-Ozcan, S. and Sayek, S., (2006). Does foreign direct investment promote growth? Exploring the role of financial markets on linkages. *NBER Working Paper.* No. W12522, September.

Alfaro, L., (2003). *Foreign direct investment and growth: Does the sector matter*. Harvard Business School. April, 2003.

Amsden, A., (1979). Taiwan's economic history: a case of étatisme and a challenge to dependency theory. *Modern China*. **5**(3), 341-379.

Amsden, A., (1991). Big business and urban congestion in Taiwan: the origins of small enterprise and regionally decentralized industry (respectively). *World Development*. **19**(9), 1121-1135.

Amsden, A., (2001). *The rise of "The Rest": challenges to the West from late-industrializing economies*. Oxford: Oxford University Press.

Amsden, A., (2007). *Escape from empire: the developing world's journey through heaven and hell*. Cambridge: The MIT Press.

Amsden, A. and Chu, W., (2003). *Beyond late development: Taiwan's upgrading policies*. Cambridge: The MIT Press.

Amsden, A. and Singh, A., (1994). The optimal degree of competition and dynamic efficiency in Japan and Korea. *European Economic Review*. **38**(3-4), 941-951.

Ang, J. (2009). Foreign direct investment and its impact on the Thai economy: the role of financial development. *Journal of Economics and Finance*. **33**(3), 316-323.

Angrist, J. and Pischke, J., (2010). The credibility revolution in empirical economics: How better research design is taking the con out of econometrics. *Journal of Economic Perspectives*. **24**(2), 3-30.

Antras, P., (2005). Incomplete contracts and the product cycle. *American Economic Review*. **95**(4), 1054-1073.

Anuchitworawong, C., (2007). Credit access and poverty reduction. *TDRI Quarterly Review*. December, 2007.

Arrighi, G., Silver, B. and Brewer, B., (2003). Industrial convergence, globalization, and the persistence of the North-South divide. *Studies in Comparative International Development*. **38**(1), 3-31.

Arrow, K., (1962). The economic implications of learning by doing. *Review of Economics Studies*. **29**(3), 155-173.

Arrow, K., (1969). The organization of economic activity: Issues pertinent to the choice of market versus nonmarket allocation. In *The Analysis and Evaluation of Public Expenditure: The PPB System*. Washington, DC: U.S. Government Printing Office.

Aspkrs, P., (1999). The economic sociology of Alfred Marshall: an overview. *American Journal of Economics and Sociology*. **58**(4), 651-667.

Athukorala, P., (2006). Multinational enterprises and manufacturing for export in developing Asian countries: emerging patterns and opportunities for latecomers. *Discussion Paper No. 193*. Hitotsubashi University.

Athukorala, P. and Suphachalasai, S., (2004). Post-crisis export performance in Thailand. *ASEAN Economic Bulletin*. **21**(1), 19-36.

Attakorn, (1975). *Role of Japanese investment in Thailand*. Bangkok: Odium Store Publishing.

Audretsch, D., Keilbach, M. and Lehmann, E., (2006). *Entrepreneurship and economic growth*. New York: Oxford University Press.

B.O.T. (2008). Online Statistical Database [online] Bank of Thailand, Available from <http://www.bot.or.th/ENGLISH/STATISTICS/Pages/index1.aspx>

Baker, C. and Phongpaichit, P., (2005). *A history of Thailand*. Cambridge: Cambridge University Press.

Balasubramanyam, V., Salisu, V. and Sapsford, D., (1996). Foreign direct investment and growth in EP and IS countries. *Economic Journal.* **106**(434), 92-105.

Banerjee, A., (1986). On a quantity discount pricing model to increase vendor profits. *Management Science*. **32**(11), 1513-1517.

Banerjee, A., Dolado, J., Galbraith, J. and Hendry, D., (1993). *Co-integration, error-correction, and the econometric analysis of non-stationary data.* New York: Oxford University Press.

Baran, P., (1957). *The political economy of growth.* New York: Monthly Review Press.

Baran, P. and Sweezy, P., (1968). *Monopoly capital*. London: Penguin Books.

Barro. R., (1990). Government spending in a simple model of endogenous growth. *Journal of Political Economy*. **98**(October, part II), S103-S125.

Barro, R., (1991). Economic growth in a cross section of countries. *Quarterly Journal of Economics*. **106**(2), 407-443.

Barro, R. and Lee, J., (1994). Sources of economic growth. *Carnegie-Rochester Conference Series on Public Policy*. **40**, 1-46.

Barro, R. and Sala-i-Martin, X., (1992). Convergence. *Journal of Political Economy*. **100**(2), 223-251.

Barro, R. and Sala-i-Martin, X., (1995). *Economic growth.* Cambridge, MA: McGraw-Hill.

Barro, R. and Sala-i-Martin, X., (2004). Economic growth (2nd ed.). Cambridge, Massachusetts: The MIT Press.

Barro, R., Sala-i-Martin, X., Blanchard, O. and Hall, R., (1991). Convergence across states and regions. *Brookings Papers on Economic Activity*. **1991**(1), 107-182.

Basu, P., Chakraborty, C. and Reagle, D., (2003). Liberalization, FDI, and growth in developing countries: a panel co-integration approach. *Economic Inquiry*. **41**(3), 510-516.

Basu, P. and Guariglia, A., (2007). Foreign direct investment, inequality, and growth. *Journal of Macroeconomics*. **29**(4), 824-839.

Bates, R., Greif, A., Levi, M., Rosenthal, J. and Weingast, B., (2000). Review: the analytical narrative project. *American Political Science Review*. **94**(3), 696-702.

Batten, J. and Vo, X., (2009). An analysis of the relationship between foreign direct investment and economic growth. *Applied Economics*. **14**(13), 1621-1641.

Baumol, W., (2002). Entrepreneurship, innovation and growth: the David-Goliath symbiosis. *Journal of Entrepreneurial Finance and Business.* **7**(2), 1-10.

Becker, G., Murphy, K. and Tamura, R., (1990). Human capital, fertility, and economic growth. *Journal of Political Economy*. **98**(5), S12-S37.

Bello, W. (2010). A class war with Thai characteristics. *International Journal of Socialist Renewal*. May 25, 2010.

Bello, W., Cunningham, S. and Poh, K. (1998). *A Siamese tragedy: development and disintegration in modern Thailand*. London: Zed Books.

Bende-Nabende, A. and Slater, J., (2005). Government policy, industrialisation and investment development path. The case of Thailand. Global Business and Economic Review. **6**(1), 55-81.

Bengoa, M. and Sanchez-Robles, B., (2003). Foreign direct investment, economic freedom and growth: new evidence from Latin America. *European Journal of Political Economy*. **19**(3), 529-545.

Bhagwati, J., (1968). Distortions and immiserizing growth: a generalization. *Review Economic Studies*. **35**(4), 481-485.

Bhagwati, J., (1985). Protectionism: old wine in new bottles. *Journal of Policy Modeling*. **7**(1), 23-33.

Bhagwati, J., (1994). Free trade: old and new challenges. *Economic Journal*. **104**(423), 231-246.

Bhagwati, J., Brecher, R., Dinopoulos, E. and Srinivasan, T., (1987). Quid pro quo foreign investment and welfare: a political economy theoretic model. *Journal of Development Economics*. **27**(1-2), 127-138.

Bhagwati, J., Dinopoulos, E. and Wong, K., (1992). Quid pro quo foreign investment. *American Economic Review*, **82**(2), 186-190.

Biersteker, T., (1978). *Distortion or development?* London, England: MIT Press.

Biersteker, T., (1990). Reducing the role of the state in the economy: a conceptual exploration of IMF and World Bank prescriptions. *International Studies Quarterly*. **34**(4), 477-492.

Biswas, R., (2002). Determinants of foreign direct investment. *Review of Development Economics*. **6**(3), 492-504.

Blalock, G. and Gertler, P., (2008). Welfare gains from foreign direct investment through technology transfer to local suppliers. *Journal of International Economics*. **74**(2), 402-421.

Blomstrom, M., (1986). Foreign investment and productive efficiency: the case of Mexico. *Journal of Industrial Economics*. **35**(1), 97-110.

Blomstrom, M. and Hakan, P., (1983). Foreign investment and spillover efficiency in an underdeveloped economy: evidence from Mexican manufacturing industry. *World Development.* **11**(6), 493-501.

Blomstrom, M. and Kokko, A., (1998). Multinational corporations and spillovers. *Journal of Economic Surveys.* **12**(3), 247-278.

Blomstrom, M. Kokko, A. and Zejan, Z., (2000). *Foreign direct investment. Firms and host countries strategies.* London: Macmillan.

Blomstrom, M., Lipsey, R. and Zejan, M., (1992). What explains developing country growth? *NBER Working Paper, No. W4132*.

Blonigen, B., (1997). Firm-specific assets and the link between exchange rates and foreign direct investment. *American Economic Review*. **87**(3), 447-465.

Blonigen, B. and Figlio, D., (1998). Voting for protection: does direct foreign investment influence legislator behaviour? *American Economic Review*. **88**(4), 1002-1014.

Borensztein, E., De Gregorio, J. and Lee, J., (1998). How does foreign direct investment affect economic growth? *Journal of International Economics*. **45**(1), 115-135.

Bornschier, V. and Chase-Dunn, C., (1985). *Transnational corporations and underdevelopment*. New York: Praeger

Bosworth, B., (2005). *Economic growth in Thailand: the macroeconomic context*. New York: The World Bank.

Bosworth, B. and Collins, S., (2003). The empirics of growth: an update. *Brookings Papers on Economic Activity*. **2003**(2), 113-179.

B.O.T., (2009). Bank of Thailand Statistics [online] *Bank of Thailand*. Available from < http://www.bot.or.th/English/Statistics/Pages/index1.aspx>

Bourdieu, P., (1998). The essence of neoliberalism. *Le Monde diplomatique*, December, 1998.

Buckley, P., (2006). Stephen Hymer: three phases, one approach? *International Business Review*. **15**(2), 140-147.

Buckley, P. and Casson, M., (1976). *The future of multinational enterprises*. London: Macmillan.

Buckley, P. and Casson, M., (1981). The optimal timing of a foreign direct investment. *The Economic Journal*. **91**(361), 75-87.

Buckley, P. and Casson, M., (1985). *The economic theory of the multinational enterprises.* London: Macmillan.

Buckley, P. and Casson, M., (1991). Cultural and economic interactions. In Buckley, P. and Clegg, J., (eds.), *Multinational enterprises in less developed countries*. London: Macmillan.

Buckley, P. and Casson, M., (1998). Analyzing foreign market entry strategies: extending the internalization approach. *Journal of International Business Studies*. **29**(3), 539–561.

Buckley, P. and Casson, M. (2009). The internalisation theory of the multinational enterprise: A review of the progress of a research agenda after 30 years. *Journal of International Business Studies*. **40**(9), 1563-1580.

Buckley, P. and Castro, F., (1998). The investment development path: the case of Portugal. *Transnational Corporations*. **7**(1), 1-15.

Busse, M. and Groizard, J., (2008). Foreign direct investment, regulations, and growth. *World Economy*. **31**(7), 861-886.

Cantwell, J., (1995). The globalisation of technology: what remains of the product cycle model? *Cambridge Journal of Economics*. **19**(1), 155-174.

Caporaso, J., (1980). Review: dependency theory: continuities and discontinuities in development studies. *International Organization*. **34**(4), 605-628.

Cardoso, F., (1977). The consumption of dependency theory in the United States. *Latin American Research Review*. **12**(3), 7-24.

Cardoso, F. and Faletto, E., (1979). *Dependency and development in Latin America.* USA: University of California Press.

Carkovic, M. and Levine, R., (2002). *Does foreign direct investment accelerate economic growth?* Paper presented at the financial globalisation: a blessing or a curse. Washington DC.

Cassidy, J., (2009). *How markets fail: the logic of economic calamities*. London: Penguin Group.

Caves, R., (1974). Multinational firms, competition, and productivity in host country markets. *Economica*. **41**(162), 176-193.

Chakraborty, C. And Basu, P., (2002). Foreign direct investment and growth in India: a cointegration approach. *Applied Economics*. **34**, 1061-1073.

Chandra, V. and Kolavalli, I., (2006). Technology, adaptation, and exports: how some countries got it right. In Chandra, V., (eds.), *Technology, adaptation and exports*. World Bank Publication.

Chandrachai, A., Tubtimtong, B. and Chockpisansin, K., (2004). Thailand. In *Total Factor Productivity Growth: Survey Report*. Tokyo: Asian Productivity Organisation.

Chang, H-J., (1993). The political economy of industrial policy in Korea. *Cambridge Journal of Economics.* **17**, 131-157.

Chang, H-J., (2003). *Kicking away the ladder: development strategy in historical perspective.* London: Anthem Press.

Chang, H-J., (2009). *Economic history of the developed world: Lesson for Africa*. University of Cambridge.

Chang, H-J., (2010). Hamlet without the prince of Denmark: how development has disappeared from today's 'development' discourse. In Khan, S. and Christiansen, J., (eds.), *Towards new developmentalism: market as means rather than master*. Abingdon: Routledge

Chang, H-J. and Evans, P., (2000). *The role of institutions in economic change*. Paper presented at the meetings of the "Other Canon" group.

Chang, H. and Ilene, G., (2004). Reclaiming development from the Washington Consensus. *Journal of Post Keynesian Economics*. **27**(2), 273-291.

Chang Noi, (2009). *Jungle book: Thailand's politics, moral panic, and plunder, 1996-2008*. Bangkok: Silkworm Books.

Chase-Dunn, C., (1975). The effects of international economic dependence on development and inequality: a cross-national study. *American Sociological Review*. **40**(6), 720-738.

Chase-Dunn, C. and Grimes, P., (1995). World-systems analysis. *Annual Review of Sociology*. **21**, 387-417.

Chilcote, R., (1974). Dependency: a critical synthesis of the literature. *Latin American Perspectives.* **1**(1), 4-29.

Chilcote, R., (1978). A question of dependency. *Latin American Research Review*. **13**(2), 55-68.

Chilcote, R., (1981). Issues of theory in dependency and Marxism**.** *Latin American Perspectives*. **8**(3/4), 3-16.

Chowdhury, A. and Mavrotas, G., (2005). FDI and growth: a causal relationship. *United Nation University Wider Research Paper*, **2005**(25).

Chowdhury, A. and Mavrotas, G. (2006). FDI and growth: what causes what? *World Economy,* **29**(1), 9-19.

Chuenchoksan, S. and Nakornthab, D., (2008). Past, present, and prospects for Thailand's growth: a labour market perspective. *Bank of Thailand Discussion Paper No. DP/06/2008.* Bank of Thailand.

Schumpeter, J., (1942). *Capitalism, socialism and democracy*. USA: Harper and Brothers.

Coase, R., (1937). The nature of the firm. *Economica*. **4**(16), 386-405.

Contessi, S. and Weinberger, A., (2009). Foreign direct investment, productivity, and country growth: an overview. *Federal Reserved Bank of St. Louise Review*. March/April

Crespo, N. and Fontoura, M., (2007). Determinant factors of FDI spillovers - what do we really know? *World Development*. **35**(3), 410-425.

Dahlman, C. and Brimble, P., (1991). Technology strategy and policy for industrial competitiveness: a Case study of Thailand: decision and change in Thailand. In *Three Studies in Support of the Seventh Plan, Part II.* Washington D.C.: World Bank.

Das, S., (1987). Externalities, and technology transfer through multinational corporations: a theoretical analysis. *Journal of International Economics*. **22**(1-2), 171-182.

Davidson, R. and Mackinnon, J., (1993). *Estimation and inference in econometrics.* Oxford: Oxford University Press.

De Backer, K. and Sleuwaegen, L., (2003). Does foreign direct investment crowd out domestic entrepreneurship? *Review of Industrial Organization*. **22**(1), 67-84.

De Boef, S. and Keele, L., (2008). Taking time seriously. *American Journal of Political Science,* **52**(1), 184-200.

De Gregorio, J., (1992). Economic growth in Latin America. *Journal of Development Economics*. **39**(1), 59-84.

De la Porterie, B. and Litchtenberg, F., (2001). Does foreign direct investment transfer technology across borders. *Review of Economics and Statistics*. **83**(3), 490-497.

De Long, J. and Summers, L., (1991). Equipment investment and economic growth. *Quarterly Journal of Economics*. **106**(2), 445-502.

De Long, J. and Summers, L., (1993). How strongly do developing economies benefit from equipment investment? *Journal of Monetary Economics*. **32**(3), 395-415.

De Mello, L., (1999). Foreign direct investment-led growth: evidence from time series and panel data. *Oxford Economic Papers*, **51**(1), 133-151.

Demsetz, H., (1988). The theory of the firm revisited. *Journal of Law, Economics, and Organization.* **4**(1), 141-161.

Dicken, P., (2003). Global shift: reshaping the global economic map in the 21st century. London: Sage Publications Ltd.

Dickey, D., and Fuller, W., (1979). Distribution of the estimators for autoregressive time series with a unit root. **74**(366), 427-431.

Dickey, D., and Fuller, W., (1981). Likelihood ratio statistics for autoregressive time series with a unit root. Econometrica. **49**(4), 1057-1072.

Dilokvidhyarat, L. (2007). The development of the union in Thailand from 1958-1986. In Dilokvidayarat, L., (eds.), *Archive of academic papers written by assistant to professor Lae Dilokvidayarat*. Bangkok: Same sky Publishing

Ding, M., Chen, Y. and Bressler, S., (2006). Granger causality: basic theory and application to neuroscience. In Schelter, S., Winterhalder, N. and Timmer, J., (eds.), *Handbook of time-series analysis.* Wienheim: Wiley.

Dixon, C., (1999). The developmental implications of the Pacific Asian crises: the Thai experience. *Third World Quarterly.* **20**(2), 439-452.

Dixon, R. and Shepherd, D., (2001). Trends and cycles in Australian state and territory unemployment rates. *Economic Record.* **77**(238), 252-269.

Dixon, W. and Boswell, T., (1996). Dependency, disarticulation, and denominator effects: another look at foreign capital penetration. *American Journal of Sociology.* **102**(2), 543-562.

Djankov, S. and Hoekman, B., (2000). Foreign investment and productivity growth in Czech enterprises. *World Bank Economic Review.* **14**(1), 49-64.

Doan, T., (1992). *RATS user's manual.* Evanston, I11: Estima.

Doner, R. and Hawes, G., (1995). The political economy of growth in Southeast and Northeast Asia. In Dorraj, M., (Ed.), *The changing political economy of the Third World.* Lynn Riener Publishers.

Douglas, P., (1976). The Cobb-Douglas production function once again: its history, its testing, and some new empirical values. *Journal of Political Economy.* **84**(5), 903-915.

Duran, J. and Ubeda, F., (2001). The investment development path: a new empirical approach and some theoretical issues. *Transnational Corporations.* **10**(2), 1-34.

Dunning, J., (1958). *American investment in British manufacturing industry.* London: George Allen and Unwin.

Dunning, J., (1977). Trade, location of economic activity and MNE: a search for an eclectic approach. In Ohlin, B., Hesselborn, P. and Wijkmann, P. (eds.), *The international allocation of economic activity.* London: Macmillan.

Dunning, J., (1981). *International production and multinational enterprise.* London: George Allen and Unwin.

Dunning, J., (1986). The investment development cycle revisited. *Weltwirtschaftliches Archiv,* **122**, 667-677.

Dunning, J., (1988). The eclectic paradigm of international production: a restatement and some possible extensions. *Journal of International Business studies.* **19**(1), 1-31.

Dunning, J., (1990). *Globalisation of firms and the competitiveness of nations.* Lund: Lund University Press.

Dunning, J., (1993). *Multinational enterprises and the global economy.* Massachusetts: Addison-Wesley Publishing.

Dunning, J., (1994). *Re-evaluating the benefits of foreign direct investment*. UNCTAD, **3**(1), (1994/95).

Dunning, J., (1995). Reappraising the eclectic paradigm in an age of alliance capitalism. *Journal of International Business studies*. **26**(3), 461-491.

Dunning, J., (1997). *Alliance capitalism and global business*. London and New York: Routledge.

Dunning, J., (2000). The eclectic paradigm as an envelope for economic and business theories of MNE activity. *International Business Review*. **9**(2), 163-190.

Dunning, J., (2001). The eclectic (OLI) paradigm of international production: past, present and future. *International Journal of the Economics of Business*. **8**(2), 173-190.

Dunning, J. and Narula, R., (1996). The investment development path revisited: some emerging issues. In Dunning, J. and Narula, R., (eds.), *Foreign direct investment and governments: catalyst for economic restructuring.* London and New York: Routledge.

Dunning, J. and Pitelis, C., (2009). The political economy of globalization–revisiting Stephen Hymer 50 years. *Munich Personal RePEc Archive*.

Duran, J. and Ubeda, F., (2001). The investment development path: a new empirical approach and some theoretical issues. *Transnational Corporations*. **10**(2), 1-34.

Duran, J. Ubeda, F., (2005). The investment development path of newly developed countries. *International Journal of ten Economics of Business*. **12**(1), 123-137.

Durlauf, S., (2001). Essays: manifesto for a growth econometrics. *Journal of Econometrics*. **100**(1), 65-69.

Durlauf, S., Johnson, P. andTemple, J., (2004). Growth econometrics. *Unpublished Working Paper.* University of Wisconsin.

The Economist (2010). *Thailand bouncing briefly back: the country is roaring back after its political impasse but for how long?* The Economist, September, 16, 2010.

Enders, W., (1995). *Applied econometric time-series.* New York: John Wiley and Sons, Inc.

Ericsson , N., and MacKinnon, J., (2002). Distribution of error correction tests for cointegration. *Econometrics Journal*. **5**, 285-318.

Engle, R. and Granger, C., (1987). Co-integration and error correction: representation, estimation, and testing. *Econometrica*. **55**(2), 251-276.

Evans, P., (1979). *Dependent development: the alliance of multinational, state, and local capital in Brazil*. Princeton University Press.

Evans, P., (1995). *Embedded autonomy: states and industrial transformation.* Princeton: Princeton University Press.

Evans, P., (1996). Government action, social capital and development: reviewing the evidence on synergy. *World Development*. **24**(6), 1119-1132.

Evers, H., (1987). Trade and state formation: Siam in the early Bangkok period. *Modern Asian Studies*. **21**(4), 751-771.

Fan, E., (2002). *Technological spillovers from foreign direct investment: a survey*. Tokyo: Asian Development Bank.

Ferguson, C., (2008). *The neoclassical theory of production and distribution.* Cambridge: Cambridge University Press.

Findlay, R., (1978). Relative backwardness, direct foreign investment, and the transfer of technology: a simple dynamic model. *Quarterly Journal of Economics*. **92**(1), 1-16.

Fine, B. and Stoneman, C. (1996). Introduction: state and development. *Journal of Southern African Studies*, **22**(1), 5-26.

Fine, B., (2006). New growth theory: more problem than solution. In Jomo, K.S. and Fine, B., (eds.), *The new development economics: after the Washington Consensus.* London: Zed Book Ltd.

Firebaugh, G., (1992). Growth effects of foreign and domestic investment. *American Journal of Sociology.* **98**(1), 105-130.

Firebaugh, G., (1996). Does foreign capital harm poor nations? New estimates based on Dixon and Boswell's measures of capital penetration. *American Journal of Sociology*. **102**(2), 563-575.

Fosfuri, A., Motta, M. and Rønde, T., (2001). Foreign direct investment and spillovers through workers' mobility. *Journal of International Economics*. **53**(1), 205-222.

Friedman, M., (1953). *Essays in Positive Economics.* Chicago: Chicago Press.

Fuller, A., (1976). *Introduction to statistical time series.* Wiley, New York.

Funke, M. and Strulik, H., (2000). On endogenous growth with physical capital, human capital and product variety. *European Economic Review*. **44**(3), 491-515.

Gallagher, K. and Zarsky, L., (2007). *The enclave economy: foreign investment and sustainable development in Mexico's Silicon Valley.* USA: MIT Press.

Gerschenkron, A., (1965). *Economic backwardness in historical perspective*. Praeger.

Giddens, A., (1985). *A contemporary critique of historical materialism: the nation-state and violence.* Great Britain: TJ Press.

Glass, A. and Saggi, K., (1998). International technology transfer and the technology gap. *Journal of Development Economics*. **55**(2), 369-398.

Glass, A. and Saggi, K., (2002). Multinational firms and technology transfer. *Scandinavian Journal of Economics*. **104**(4), 495-513.

Globerman, S., (1979). Foreign direct investment and 'Spillover' efficiency benefits in Canadian manufacturing industries. *Canadian Journal of Economics*. **12**(1), 42-56.

Gorg, H. and Strobl, E. (2001). Multinational companies and productivity spillovers: a meta-analysis. *Economic Journal*. **111**(475), F723-F739.

Goss, E., Wingender J. and Torau, M., (2007). The contribution of foreign capital to U.S. productivity growth. *Quarterly Review of Economics and Finance*. **47**(3), 383-396.

Granger, C., (1981). Some properties of time series data and their use in econometric model specification. *Journal of Econometrics*. **16**(1981), 121-130.

Granger, C., (1990). *Modelling economic series: advance texts in econometrics*. Oxford: Oxford University Press.

Granger, C., (2001). Seasonality: causation, interpretations and implications. In Granger, C., Ghysels, E., Swanson, N. and Watson, M., (eds.), *Essays in econometrics: spectral analysis, seasonality, nonlinearity.* Cambridge: Cambridge University Press.

Granger, C., (2004). Time series analysis, cointegration, and applications. American Economic Review. **94**(3), 421-425.

Granger, C., Bwo-Nung, H., Chin-Wei, Y., (2000). A bivariate causality between stock prices and exchange rates: evidence from recent Asian flu. *The Quarterly Review of Economics and Finance*. **40**(2000), 337-354.

Granger, C., and Newbold, P.,(1974). Spurious regressions in econometrics. *Journal of Econometrics*. **2**(1974), 111-120.

Greenberg, E., Pollard, W. and Alpert, W., (1989). Statistical properties of data stretching. *Journal of Applied Econometrics*. **4**(4), 383-391.

Grilliches, Z., (1979). Issues in assessing the contribution of research and development to productivity growth. *Bell Journal of Economics*. **10**(1), 92-116.

Grosse, R. and Behrman, J., (1992). Theory in international business. *Transnational Corporations*. **1**(Feb), 93-126.

Grossman,G. and Helpman, E., (1991). *Innovation and growth in the global economy*. Cambridge, MA: MIT Press.

Grossman, G. and Helpman, E., (1995). Chapter 25: Technology and trade. In Grossman, G. and Rogoff, K., (eds.), *Handbook of international economics*. **3**, 1279-1337. Holland: Elsevier.

Haddad, M. and Harrison, A., (1993). Are there positive spillovers from direct foreign investment? Evidence from panel data for Morocco. *Journal of Development Economics*. **42**(1), 51-74.

Hagendorf, K., (2009). The Cobb-Douglas production function and political economy [online], *Universite Paris X – Nanterre*. Available from <http://eurodos.free.fr/mime/Hagendorf%202009%20-%20The%20Cobb-Douglas%20Production%20Function%20and%20Political%20Economy.pdf>

Hamilton, J., (1994). *Time-series analysis*. West Sussex: Princeton University Press.

Hannan, E. and Quinn, B., (1979). The determination of the order of an autoregression. *Journal of the Royal Statistical Society*. **41**(2), 190-195.

Hanson, G., (2001). Should countries promote foreign direct investment? *G-24 Discussion Paper Series, No.9, February, 2001.* United Nations Conference on Trade and Development.

Harrison, A., (1994). The role of multinationals in economic development: the benefits of FDI. *Columbia Journal of World Business*. **29**(4), 6-11.

Harrison, A. and Rodríguez-Clare, A., (2009). Trade, foreign investment, and industrial policy for developing countries. *NBER Working Paper, No. W12522, Feb.*

Hart, O., (1989). An economist's perspective on the theory of the firm. *Columbia Law Review*. **89**(7), 1757-1774.

Hart, O. and Holmstrom, B., (2010). A theory of firm scope. *Quarterly Journal of Economics*. **125**(2), 483-513.

Hartwich, O., (2009). Neoliberalism: The genesis of a political swearword. *CIS Occasional Paper.* New South Wales: The Centre for Independent Studies.

Harvey, D. (2007). *A brief history of neoliberalism*. Oxford University Press.

Haskel, J., Pereira, S. and Slaughter, M., (2007). Does inward foreign direct investment boost the productivity of domestic firms? *Review of Economics and Statistics*. **89**(3), 482-496.

Hausman, D., (1984). *The philosophy of economics.* Cambridge: Cambridge University Press.

Hausman, D., (1989). Economic methodology in a nutshell. *Journal of Economic Perspectives*. **3**(2), 115-127.

Hausman, J., (1978). Specification tests in econometrics. *Econometrica*. **46**(6), 1251-1271.

Helleiner, G., (1989). Transnational corporations and direct foreign investment. *Handbook of Development Economics*. **2**, 1441-1480.

Hendry, D. and Richard, J.F., (1982). On the formulation of empirical models in dynamic econometrics. *Journal of Econometrics*. **20**(1), 3-33.

Hendry, D. (1995). *Dynamic econometrics*. Oxford: Oxford University Press.

Hendry, D. and Krolzig, H., (1999). Improving on 'Data mining reconsidered by K.D. Hoover and S.J. Perez'. *Econometrics Journal*, **2**(2), 202-219.

Hendry, D. and Krolzig, H., (2001). *Automatic econometric model selection using PcGets.* London: Timberlake Consultants.

Hendry, D. and Krolzig, H., (2002). *New developments in automatic general-to-specific modelling.* Oxford: Economics Department, Oxford University.

Hendry, D. and Krolzig, H., (2004). We ran one regression. *Oxford Bulletin of Economics and Statistics*. **66**(5), 799-810.

Henisz, W., (2003). The power of the Buckley and Casson thesis: the ability to manage institutional idiosyncrasies. *Journal of International Business Studies*. **34**(2), 173-184.

Hennart, J., (1982). *A theory of multinational enterprise:* University of Michigan Press.

Hennart, J., (1991). The transaction costs theory of joint ventures: an empirical study of Japanese subsidiaries in the United States. *Management Science*. **37**(4), 83-497.

Hennart, J., (1999). What is internalization?. *Weltwirtschaftliches Archiv*, **122**, 791-804.

Hermes, N. and Lensink, R., (2003). Foreign direct investment, financial development and economic growth. *Journal of Development Studies*. **40**(1), 142-163.

Herzer, D., Klasen, S. and Lehmann D., (2008). In search of FDI-led growth in developing countries: the way forward. *Economic Modelling*. **25**(5), 793-810.

Hewison, K., (1999). *Localism in Thailand: a study of globalisation and its discontents.* Coventry: Centre for the Study of Globalisation and Regionalisation, University of Warwick.

Hewison, K., (2000). Resisting globalization: a study of localism in Thailand. *Pacific Review*. **13**(2), 279 – 296.

Hewison, K., (2005). Neo-liberalism and domestic capital: the political outcomes of the economic crisis in Thailand. *Journal of Development Studies*. **41**(2), 310-330.

Higgott, R. and Nesadurai, H., (2002). Rethinking the Southeast Asian development model. Bringing ethical and governance questions. *ASEAN Economic Bulletin*. **19**(1), 27-39.

Hillman, A., Keim, G. and Schuler, D. (2004). Corporate political activity: A review and research agenda. *Journal of Management*, **30**(6), 837.

Hirsch, S., (1976). An international trade and investment theory of the firm. *Oxford Economic Papers.* **28**(2), 258-270.

Hirschman, A.,(1969). *How to divest in Latin America, and why. Essays in international finance No.76*. Princeton University.

234

Hoekman, B. and Djankov, S., (1997). Competition law in post-central-planning Bulgaria. *CEPR Discussion Paper No. 1723.* The World Bank.

Hoover, K., (2005). The methodology of econometrics. *Paper prepared for the Palgrave Handbooks of Econometrics, Volume 1.* University of California.

Hoover, K. and Perez, S., (1999). Data mining reconsidered: encompassing and the general-to-specific approach to specification search. *Econometrics Journal*. **2**(2), 167-191.

Hosseini, H., (2005). An economic theory of FDI: a behavioural economics and historical approach. *Journal of Socio-Economics*. **34**(4), 528-541.

Huizinga, H., (1995). Taxation and the transfer of technology by multinational firms. *Canadian Journal of Economics*. **28**(3), 948-955.

Hymer, S., (1970). The efficiency (contradictions) of multinational corporations. *American Economic Review*. **60**(2), 441-448.

Hymer, S., (1971). The multinational corporation and the law of uneven development. In Bhagwati, J., (eds.), *Economics and World Order*. New York: Macmillan Publishing Co., Inc.

Hymer, S., (1972). The internationalization of capital. *Journal of Economic Issues*. **6**(1), p.91-111.

Hymer, S., (1976). *The international operation of national firms: a study of foreign direct investment.* Cambridge: The MIT Press.

Hymer, S., (1979). The multinational corporation and the international division of labour. In Cohen, R., Felton, N., Liere, J. and Nkosi, M., (eds.), *The multinational corporation: a radical approach.* Cambridge: Cambridge University Press.

Hymer, S. and Pashigian, P., (1962). Firm size and rate of growth. *Journal of Political Economy*. **70**(6), 556-569.

Ietto-Gillies, G., (2007). Theories of international production: a critical perspective. *Critical Perspectives on International Business*. **3**(3), 196 - 210.

ILSakong, (1993). *Korea in the world economy*. Washington DC: Institute for International Economics.

IMF. (2008). Balance of payments statistics (BOP) [online]. *International Monetary Funds.* Available from <http://www.esds.ac.uk/international/access/dataset_overview.asp>

IMF. (2009). Balance of payment statistics (BOP) [online]. *International Monetary Funds.* Available from <http://www.esds.ac.uk/international/access/dataset_overview.asp>

IMF. (2009). International financial statistics (IFS) [online]. *International Monetary Funds.* Available from <http://www.esds.ac.uk/international/access/dataset_overview.asp>

Inder, B., (1993). Estimating long-run relationships in economics: a comparison of different approaches. Journal of Econometrics. **57**(1-3), 53-68.

Intarakumnerd, P., Chairatana, P. and Tangchitpiboon, T., (2002). National innovation system in less successful developing countries: the case of Thailand. *Research Policy*. **31**(8-9), 1445-1457.

Ito, K., (2004). Foreign ownership and plant productivity in the Thai automobile industry in 1996 and 1998: a conditional quantile analysis. *Journal of Asian Economics*. **15**(2), 321-353.

Iverson, C., (1936). *International capital movements.* Oxford: Oxford University Press.

Janicki, H. and Wunnava, P., (2004). Determinants of foreign direct investment: empirical evidence from EU accession candidates. *Applied Economics*. **36**(5), 505-509.

Javorcik, B., (2004). Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American Economic Review*. **94**(3), 605-627.

Jitsuchon, S., (2002). *Thailand's economic growth: a fifty-years perspective (1950-2000).* Thammasat University.

Johansen, S., (1988). Statistical analysis of cointegration vectors. *Journal of Economics Dimension and Control*. **12**, 231-254.

Johansen, S., (1991). Estimation and Hypothesis testing of cointegration vectors in Gaussian vector autoregressive models. *Econometrica*. **59**, 1551-80.

Johansen, S., (1995). Identifying restrictions of linear equations with applications to simultaneous equations and cointegration. *Journal of Econometrics*. **69**(1), 111-132.

Johansen, S., and Juselius, K., (1990). Maximum likelihood estimation and inference on cointegration – with application to the demand for money. *Oxford Bulletin of Economics and Statistics*. **52**(2), 169-210.

Keynes, J., (1999). *The scope and method of political economy.* (4th Ed): Batoche Books.

Kaldor, N., (1934). The equilibrium of the firm. *Economic Journal*. **44**(173), 60-76.

Kantichai, *et al*. (1987). *Technology and skill in Thailand*. Singapore: Institution of South East Asian Studies.

Kaosa-ard, (1992). Manufacturing growth: a blessing for All! *Paper presented at the TDRI Synthesis report*. The Year End Conference.

Keller, W. and Yeaple, S., (2009). Multinational enterprises, international trade, and productivity growth: firm level evidence from the United States. *Review of Economics and Statistics*. **91**(4), 821-831.

Kentor, J., (1998). The long-term effects of foreign investment dependence on economic growth, 1940-1990. *American Journal of Sociology*. **103**(4), 1024-1046.

Kentor, J. and Boswell, T., (2003). Foreign capital dependence and development: a new direction. *American Sociological Review*. **68**(2), 301-313.

Kim, S., (2000). *Korea's globalisation*. Cambridge: Cambridge University Press.

Kogut, B. and Zander, U., (1995). Knowledge, market failure and the multinational enterprise: a reply. *Journal of International Business Studies*. **26**(2), 417-426.

Kogut, B. and Zander, U., (2003). Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of International Business Studies*. **34**(6), 516-529.

Kohpaiboon, A., (2003). Foreign trade regimes and the FDI-growth nexus: a case study of Thailand. *Journal of Development Studies*. **40**(2), 55-69.

Kohpaiboon, A., (2006). Foreign direct investment and technology spillover: a cross-industry analysis of Thai manufacturing. *World Development*. **34**(3), 541-556.

Kohpaiboon, A., (2009*). Vertical and horizontal FDI technology spillovers: evidence from Thai manufacturing.* Bangkok, Faculty of Economics: Thammasat University.

Kohpaiboon, A. and Ramstetter, E., (2008). *Producer concentration, conglomerates, foreign ownership, and import protection: Thai manufacturing firms a decade after the crisis.* Bangkok, Kitakyushu: Thammasat University, ICSEAD and Graduate School of Economics, Kyushu University.

Kojima, K., (1973). A macroeconomic approach to foreign direct investment. *Hitotsubashi Journal of Economics*. **14**, 1-20.

Kojima, K., (1975). International trade and foreign direct investment: substitutes or complements. *Hitotsubashi Journal of Economics*. **16**, 1-12.

Kojima, K., (1977). Transfer of technology to developing countries - Japanese type versus American type. *Hitotsubashi Journal of Economics*. **17**, 1-14.

Konings, J., (2001). The effects of foreign direct investment on domestic firms: evidence from firm-level panel data in emerging economies. *Economics of Transition.* **9**(3), 619-633.

Krugman, P., (1979). A model of innovation, technology transfer, and world distribution of income. *Journal of Political Economy*. **87**(Apr), 253-266.

Krugman, P., (1995). Cycle of conventional wisdom on economic development. *International Affairs* . **4**(Special RIIA 75th Anniversary issue), 717-732.

Krugman, P., (1994). The myth of Asia's miracle. *Foreign Affairs*, **6**(Nov/Dec), 62-78.

Krugman, P., (1998). What happened to Asia [online] *Bresserpereira.* Available from <http://www.bresserpereira.org.br/Terceiros/Cursos/Krugman-WhatHappenToAsia.pdf>

Krugman, P. and Venables, A., (1995). Globalization and the inequality of nations. *Quarterly Journal of Economics*. **110**(4), 857-880.

Kuznets, S., (1981). Modern economic growth and the less developed countries. *Paper presented for the conference on experiences and lessons of economic development.* Taiwan,Taipei: The Institute of Economics.

Kwiatkowski, D., Phillips, P., Schmidt, P. and Shin, Y., (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: How sure are we that economic time series have a unit root? *Journal of Econometrics*. **54**(1-3), 159-178.

Lall, S., (1980). Vertical inter-firm linkages in LDCs: an empirical study. *Oxford Bulletin of Economics and Statistics*. **42**(3), 203-226.

Lall, S., (2000). *FDI and development: policy and research issues in the emerging context*. University of Oxford.

Lall, S. and Narula, R., (2004). Foreign direct investment and its role in economic development: do we need a new agenda? *European Journal of Development Research.* **16**(3), 447 – 464.

Lenin, V., (1948). *Imperialism, the highest stage of capitalism*. London: Lawrence and Wishart.

Levine, R. and Renelt, D., (1992). A sensitivity analysis of cross-country growth regression. *American Economic Review*. **82**(4), 942-963.

Lewis, A., (1980). The slowing down of the engine of growth. *American Economic Review*. **70**(4), 555-564.

Li, X. and Liu, X., (2005). Foreign direct investment and economic growth: an increasingly endogenous relationship. *World Development*. **33**(3), 393-407.

Lucas, R., (1988). On the mechanics of economic development. *Journal of Monetary Economics*. **22**, 3-42

MacDougall, G., (1960). The benefits and costs of private investment from abroad: a theoretical approach. *Economic Record*, **36**(73), 13-35.

MacKinnon, J., (1991). Critical values for cointegration tests. In Engle, R. and Granger C., *Long-run economic relationships: Readings in cointegration.* Oxford. Oxford University Press.

MacKinnon, J., (1996). Numerical distribution functions for unit root and cointegration tests. *Journal of Business and Economic Statistics*. **12**, 167-176.

MacKinnon, J., (2010). Critical values for cointegration tests. Working paper No. 1277. Queen Mary's Economic Department. Canada.

MacKinnon, J., Haug, A. and Michelis, L., (1998). Numerical distribution functions of likelihood ratio tests for cointegration. Economic *Publications and Research, Paper 7.*

Mah, S-J., (2010). Foreign direct investment inflows and economic growth: the case of Korea. *Review of Development Economics*. **14**(4), 726-735.

Mansfield, E., (1961). Technical change and the rate of imitation. *Econometrica*. **29**(4), 741-766.

Marin, D. and Schnitzer, M., (2006). When is FDI a capital flow? [online]. *Munich Discussion Paper, 2006-22.* Available from http://epub.ub.uni-muenchen.de/1158/1/FDIasCapitalFlow.pdf

Markusen, J. and Venables, A., (1999). Foreign direct investment as a catalyst for industrial development. *European Economic Review*. **43**(2), 335-356.

Marshall, A., (1881). *The economics of industry*. London: Macmillan.

Marshall, A., (1890). *Principles of economics*. London: Macmillan.

Milberg, W., (1999). Foreign direct investment and development: balancing costs and benefits. *International Monetary and Financial Issues for the 1990s*. **11**, 99-116.

Mileva, E., (2008). The impact of capital flows on domestic investment in transition economies [online] *European Central Bank.* Available from <http://www.ecb.int/pub/pdf/scpwps/ecbwp871.pdf>

Miliband, R., (1969). *The state in capitalist society.* New York: Basic Books.

Milton, F., (1962). The interpolation of time series by related series. *Journal of the American Statistical Association*. **57**(300), 729-757.

Misun, J. and Tomsik, V., (2002). Does foreign direct investment crowd in or crowd out domestic investment? *Eastern European Economics*. **40**(2), 38-56.

Mora, M., (2006). *Terms-of-trade effects in catching-up countries: the case of the Czech Republic.* Luxembourg: European Commission.

Moran, T., (1978). Multinational corporations and dependency: a dialogue for dependentistas and non-dependentistas. *International Organization*. **32**(1), 79-100.

Motonishi, T., (2003). *Why has income inequality in Thailand increased? an analysis using 1975-1998 surveys.* Tokyo: Asian Development Bank.

Mundell, R., (1957). International trade and factor mobility. *American Economic Review*. **47**(3), 321-335.

Nair-Reichert, U. and Weinhold, D., (2001). Causality tests for cross-country panels: a new look at FDI and economic growth in developing countries. *Oxford Bulletin of Economics and Statistics*. **63**(2), 153-171.

Ministry of Trade (2010). FTA by Country [online] *Department of Trade Negotiation*, *Thailand.* Available from http://www.thaifta.com/engfta/Home/Agreements/tabid/168/Default.aspx

Nelson, R. and Pack, R., (1999). The Asian miracle and modern growth theory. *Economic Journal*. **109**(457), 416-436.

Nelson, R., (1968). A "Diffusion" model of international productivity differences in manufacturing industry. *American Economic Review*. **58**(5), 1219-1248.

Nelson, R. and Phelps, E., (1966). Investment in humans, technological diffusion, and economic growth. *American Economic Review*. **56**(1/2), 69-75.

NESBD, (2008). *National income of Thailand.* Bangkok: Office of the National Economic and Social Development Board.

Newbold, P., and Granger, C., (1974). Experience with forecasting univariate time-series and the combination of forecasts. *Journal of the Royal Statistical Society*. **137**(2), 131-165.

Nikomborirak, D., (2004). *An assessment of the investment regime: Thailand country report.* The International Institute for Sustainable Development (IISD) and Thailand Development Research Institute.

Ozawa, T., (1979). *Multinationalism, Japanese style: the political economy of outward dependency.* Princeton: Princeton University Press.

Ozawa, T., (2007). *Professor Kiyoshi Kojima's contribututions to FDI theory: trade, structural transformation, growth and integration in East Asia.* Centre on Japanese Economy and Business, Columbia University, June.

Pack, H. and Saggi, K., (1997). Inflows of foreign technology and indigenous technological development. *Review of Development Economics*. **1**(1), 81-98.

Pack, H. and Saggi, K., (2001). Vertical technology transfer via international outsourcing. *Journal of Development Economics*. **65**(2), 389-415.

Pagan, A., (1990). Three econometric methodologies. In Granger, C. (eds.), *Modelling economic series*. Oxford: Oxford University Press.

Palma, G., (1981) Dependency and development: a critical overview. In Seers, D. (eds.), *Dependency theory: a critical reassessment*. London: Frances Pinter.

Peng, M., Au, K. and Wang, D., (2001). Interlocking directorates as corporate governance in third world multinationals: theory and evidence from Thailand. *Asia Pacific Journal of Management.* **18**(2), 161-181.

Penrose, E., (1956). Foreign investment and growth of the firm. *Economic Journal*. **66**(262), 220-235.

Penrose, E., (1995). *The theory of the growth of the firm.* New York: Oxford University Press.

Phillips, P., and Perron, P., (1988). Testing for a unit root in time series regression. *Biometrika*. **75**(2), 335-346.

Pholphirul, P., (2005). *Competitiveness, income distribution, and growth in Thailand: What does the long-run evidence show?* Bangkok: Thailand Development Research Institute.

Phongpaichit, P., (2005a). *Money politics and its impact.* Paper presented at the Political economy Centre's Annual Seminar.

Phongpaichit, P., (2005b). *Thailand: wide angle*. Paper presented at the 9th International Conference of Thai Studies.

Phongpaichit, P., (2006). *'Karn Tor Su Kong Toon Thai' (The Struggle of Thai Domestic Capital) (Vol. 2).* Bangkok: Matichon Publishing.

Phongpaichit, P. and Baker, C., (2003). *Settakit Karnmeung Thai Samai Krungthep (Thai Economics and Politics during the Bangkok Era).* Bangkok: Silkworm Books.

Pitelis, C., (1998). Transaction costs and the historical evolution of the capitalist firm. *Journal of economics Issues*. **32**(4), 999-1017.

Pitelis, C., (2000). A theory of the (growth of the) transnational firm: a Penrosean perspective. *Contributions to Political economy.* **19**(1), 71-89.

Pitelis, C., (2007). Edith Penrose and a learning-based perspective on the MNE and OLI. *Management International Review*. **47**(2), 207-219.

Polanyi, M., (1962). *Personal knowledge*. London: Routledge.

Porter, M., (1980). Industry structure and competitive strategy: keys to profitability. *Financial Analysts Journal*. **36**(4), 30-41.

Prebisch, R., (1982). *The crisis of capitalism and the periphery.* Paper presented at the 1st Raúl Prebisch Lecture. UNCTAD.

Pupphavesa, W. and Pattamasiriwat, D., (1987). Literature survey: Thailand's international trade and industrialisation. In Dhiratayakinant, K. (eds.) *Knowledge of Thai economists in 1986.* Bangkok: Thai Economist Association.

Pupphavesa, W. and Pussarungsri, B., (1994). *FDI in Thailand.* International Economic Relations Program: TDRI Publication (April).

Ramirez, M., (2000). Foreign direct investment in Mexico: a cointegration analysis. *Journal of Development Studies*. **37**(1), 138-162.

Ramstetter, E., (1997). *International trade, multinational firms, and regional integration in Thailand.* Toronto: International Development Research Centre and Singapore Institute of South East Asian Studies.

Ramstetter, E., (2002). Does technology differ in local plants and foreign multinationals in Thai manufacturing? Evidence from translog production functions for 1996 and 1998. *ICSEAD Working Paper Series*, The International Centre for the Study of East Asian Development: Kitakyushu.

Ramstetter, E. and Sjoholm, F., (2006). The Issues. In Ramstetter, E. and Sjoholm, F., (eds.), *Multinational Corporations in Indonesia and Thailand*. New York: Palgrave Macmillan.

Ran, J., Voon, J. and Li, G., (2007). How does FDI affect China? Evidence from industries and provinces. *Journal of Comparative Economics*. **35**(4), 774-799.

Rasiah, R., (2003). Foreign ownership, technology and electronics exports from Malaysia and Thailand. *Journal of Asian Economics*. **14**(5), 785-811.

Reinert, E., (1999). The role of the state in economic growth. *Journal of Economic Studies*, **26**(4/5), 268 - 326.

Res, Z. and Motamen-Samadian, S., (1987). *International debt and central banking in the 1980s*. New York: St. Martin's Press.

Rivera-Batiz, F. and Rivera-Batiz, L., (1990). The effects of direct foreign investment in the presence of increasing returns due to specialization. *Journal of Development Economics*. **34**(1-2), 287-307.

Rivera-Batiz, L. and Romer, P., (1991). Economic integration and endogenous growth. *Quarterly Journal of Economics*. **106**(2), 531-555.

Robertson, S. (1923). *The control of industry*. Cambridge: Cambridge University Press.

Robinson, J., (1934). What is perfect competition? *Quarterly Journal of Economics*. **49**(1), 104-120.

Rodriguez-Clare, A., (1996). Multinationals, linkages, and economic development. *American Economic Review*. **86**(4), 852-873.

Rodrik, D., (1999). *The new global economy and developing countries: making openness work.* Washington, DC: Overseas Development Council

Rodrik, D., (2005). *Why we learn nothing from regressing economic growth on policies.* Harvard University.

Rodrik, D., (2007). World too complex for one-size-fit-all models. *Post-Autistic Economics Review*. **44**, 73-74.

Romer, P., (1986). Increasing returns and long-run growth. *Journal of Political Economy*. **94**(5), 1002-1037.

Romer, P., (1990). Endogenous technological change. *Journal of Political Economy*. **98**(5), S71-S102.

Rowthorn, R., (1979). The future of the world economy: introduction. In Cohen, R., Felton, N., Liere, J. and Nkosi, M. (eds.), *The multinational corporation: a radical approach. Papers by Stephen Herbert Hymer*. Cambridge: Cambridge University Press.

Royal Danish Embassy. (2006). *Sector overview: The automotive industry in Thailand.* Bangkok.

Rugman, A., (1981). *Inside the multinationals: the economics of international markets.* London: Columbia University Press.

Rugman, A., (1985). Internationalisation is still a theory of foreign direct Investment. *Weltwirtschaftsliches Archive*. 121, 570-575.

Rugman, A., (1996). New Theories of the multinational enterprise: An assessment of internationalisation theory. In Rugman, A., *The theory of Multinational enterprise. The selected scientific paper of Alan M. Rugman.* Cheltenham: Edward Elgar Publishing.

Rugman, A., (1999). Forty years of the theory of the transnational corporation. *Transnational Corporations*. **8**(2), 35-70.

Rugman, A., (2005). *The regional multinationals: MNEs and " global" strategic management.* London: Cambridge University Press.

Rugman, A. and Oh, C., (2008). Korea's multinationals in a regional world. *Journal of World Business*. **43**(1), 5-15.

Rugman, A. and Verbeke, A., (2002). Edith Penrose's contribution to the resource-based view of strategic management. *Strategic Management Journal*. **23**(8), 769-780.

Rugman, A. and Verbeke, A., (2003). Extending the theory of the multinational enterprise: internalization and strategic management perspectives. *Journal of International Business studies.* **34**(2), 125-138.

Saggi, K., (2002). Trade, foreign direct investment, and international technology transfer: a survey. *The World Bank Research Observer*. **17**(2), 191-235.

Said, E., and Fuller, A., (1984). Testing for unit roots in autoregressive-moving average models of unknown order. *Biometrika.* **71**(3), 599-607.

Santos, T., (1970). The structure of dependence. *American Economic Review*. **60**(2), 231-236.

Santos, T., (2005). Andre Gunder Frank. *Latin American Perspectives*. **32**(6), 90-92.

Sargan, J., (1964). Wages and prices in the UK. In Hart, P., Mills, G. and Whittaker, J., (eds.), *Econometric analysis for national economic planning*. London: Butterworth.

Schwarz, G., (1978). Estimating the dimension of a model. *Annals of Statistics*. **6**(2), 461-464.

Seers, D., (1983). *Dependency theory : a critical reassessment.* London: Frances Pinter.

Siamwalla, A., (1975). Stability, growth, and distribution in the Thai economy. In Sondsuwan, P., (eds.) *Finance, trade and economic development in Thailand*. Bangkok: Sompong Press.

Siamwalla, A., Vajragupta, Y. and Vichyanond, P., (1999). *Foreign capital flows to Thailand: determinants and impact.* Bangkok: Thailand Development Research Institute.

Sibunruang, A., (1986). *Foreign direct investment and manufactured exports in Thailand.* PhD Thesis: University of Sussex.

Sibunruang-Brimble, A., (1992). *Changing pattern of foreign direct investment.* Paper presented at the Pacific Economic Outlook Specialist Meeting.

Simon, H., (1957). *Models of man: social and rational*. New York: Wiley.

Sims, C., (1980). Macroeconomics and reality. *Econometrica*. **48**(1), 1-48.

Sims, C., (1996). Macroeconomics and methodology. *Journal of Economic Perspectives*. **10**(1), 105-120.

Sitthikul, K., (2001). *Thailand's total factor productivity.* Bangkok: Bank of Thailand.

Smith, T., (1979). The underdevelopment of development literature: the case of dependency theory. *World Politics*. **31**(2), 247-288.

Smith, T, (1981). The logic of dependency theory revisited. *International Organization*. **35**(4), 755-761.

Solow, R., (1957). Technical change and the aggregate production function. *Review of Economics and Statistics.* **39**(3, Aug), 312-320.

Solow, R., (1985). Economic history and economics. *American Economic Review*. **75**(2), 328-331.

Soysa, I. and Oneal, J., (1999). Boon or bane? Reassessing the productivity of foreign direct investment. *American Sociological Review*. **64**(5), 766-782.

Stallings, B., (1995). The new international context of development. In Stallings, B., (eds.), *Global change, regional response: the new international context of development*. New York: Cambridge University Press.

Stock, J. and Watson, M., (2001). Vector Autoregressions. *Journal of Economic Perspectives*. 15(4), 101-115.

Sunkel, O., (1972). Big business and "dependencia". *Foreign Affairs*. **50**(3), 517-531.

Sunkel, O., (1973). *The pattern of Latin American dependence*. MacMillan.

Sussangkarn, C., (2003). Thailand and the China-ASEAN FTA. *TDRI Quarterly Review*, March

Schwartz, G., (1978). Estimating the dimension of a model. *Annals of Statistics*. **6**(2), 461-464.

Takii, S., (2005). Productivity spillovers and characteristics of foreign multinational plants in Indonesian manufacturing 1990-1995. *Journal of Development Economics*, **76**(2), 521-542.

Tambunlertchai, S., (1975). *Foreign direct investment in Thailand's manufacturing industry*. Duke University.

Tambunlertchai, S., (2009). *Foreign direct investment and Eexport performance in Thailand.* Bsc. Dissertation: Wesleyan University, Connecticut, USA.

Teece, D., (1996). Firm organization, industrial structure, and technological innovation. *Journal of Economic Behaviour and Organization*. **31**(2), 193-224.

Teece, D., (2006). Reflections on the Hymer thesis and the multinational enterprise. *International Business Review*. **15**(2), 124-139.

Thanadsillapakul, L., (2004). The harmonisation of ASEAN competition laws and policy from an economic integration perspective. [online] *Online Thailand Law Journal*. Available from http://www.thailawforum.com/articles/theharmonisation.html

Thanadsillapakul, L. (2010). Legal complications of the liberalisation of international investment in Thailand [online] *Issara.* Available from <www.thaireform.in.th/various-reform-dimensions/political-justice/item/1896-2010-09-10-08-22-37.html>

Tinakorn, P. and Sussangkarn, C., (1996). *Productivity growth in Thailand.* Bangkok: Thailand Development Research Institute.

Tinakorn, P. and Sussangkarn, C., (1998). Total factor productivity growth in Thailand. Macroeconomic Policy Program: *TDRI Publication*, (July).

Tosh, J., (1991). *The pursuit of history.* London: Longman.

Udomkerdmongkol, M., and Morrissey, O., (2008). *Political regime, private investment, and foreign direct investment in developing countries.* United Nations University: World Institute for Development Economics Research.

UNCTAD. (2006). Method of data collection and national policies in the treatment of FDI. [online] United Nation. Geneva. Available from http://www.unctad.org/templates/Page.asp?intItemID=3157&lang=1

UNCTAD. (2006). *World Investment Report (WIR 2006).* New York and Geneva: United Nations Conference on Trade and Development.

UNCTAD. (2008a). Background and activities of the commission and the centre on transnational corporation 1972 to 1975 [online]. *United Nations of Conference on Trade and development*. Available from

< http://unctc.unctad.org/aspx/UNCTC%20from%201972%20to%201975.aspx>

UNCTAD. (2008b). *World Investment Report (WIR 2008).* New York and Geneva: United Nations Conference on Trade and Development.

UNCTAD. (2010) FDI statistics [online] *United Nations of Conference on Trade and development.* Available from

< http://www.unctad.org/Templates/Page.asp?intItemID=4979&lang=1>

Veblen, T., (1915). *Imperial Germany and the industrial revolution*. New York: Macmillan.

Vernon, R., (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*. **80**(2), 190-207.

Vernon, R., (1967). Multinational enterprise and national sovereignty. *International Executive*. **9**(3), 11-13.

Vernon, R., (1979). The product cycle hypothesis in a new international environment. *Oxford Bulletin of Economics and Statistics*. **41**(4), 255-267.

Volpe, L. and Biferali, D., (2008). Edith Tilton Penrose, the theory of the growth of the firm. *Journal of Management and Governance*. **12**(1), 119-125.

Vu, T., (2008). Foreign direct investment and endogenous growth in Vietnam. *Applied Economics*. **40**(9), 1165-1173.

Wallerstein, I., (1974). *The modern world-system (Vol. 2).* New York: Academic Press

Wallerstein, I., (1976). Semi-peripheral countries and the contemporary world crisis. *Theory and Society*. **3**(4), 461-483.

Wallerstein, I. and Maurice, I., (1974). *The modern world-system*. New York: Academic Press New York.

Wang J., (1990). Growth, technology transfer, and the long-run theory of international capital movements. *Journal of International Economics*. **19**(3-4), 255-271.

Wang, J. and Blomstrom, M., (1992). Foreign investment and technology transfer: a simple model. *European Economic Review*. **36**(1), 137-155.

Wang, Z. and Swain, N., (1997). Determinants of inflow of foreign direct investment in Hungary and China: Time-series approach. *Journal of International Development*. **9**(5), 695-726.

Warr, P. and Nidhiprabha, B., (1996). *Thailand's macroeconomic miracle: stable adjustment and sustained growth.* Kuala Lumpur: Oxford University Press.

WCY. (1985). World Currency Yearbook [online] *International Monetary Fund*. Available from < http://intl.econ.cuhk.edu.hk/exchange_rate_regime/index.php?cid=2>

Weber. (2004). *The essential Weber, a reader*. (Whimster eds.) London: Routledge.

Williamson, J., (1990). *What Washington means by policy reform in Latin American adjustment: How much has happened?* Washington, D.C.: Institute for International Economics.

Williamson, J., (2004). The strange history of the Washington Consensus. *Journal of Post Keynesian Economics*. **27**(2), 195-206.

Williamson, O., (1973). Markets and hierarchies: some elementary considerations. *American Economic Review*. **63**(2), 316-325.

Williamson, O., (1975). *Markets and hierarchies.* New York: The Free Press.

Williamson, O., (1979). Transaction-cost economics: the governance of contractual relations. *Journal of Law and Economics*. **22**(2), 233-262.

Williamson, O., (1981). The economics of organization: the transaction cost approach. *American Journal of Sociology*. **87**(3), 548-577.

Williamson, O., (1985). *The economic institutions of capitalism: firms*. New York: The Free Press.

Williamson, O., (1993). Introduction. In Williamson, O. and Winter, S., (eds.), *The nature of the firm: origins, evolution, and development.* Oxford: Oxford University Press.

Williamson, O., (1998). Transaction cost economics: how it works: where it is headed. *De Economist* (0013-063X), **146**(3), 23.

Williamson, O., (2000). The new institutional economics: taking stock, looking ahead. *Journal of Economic Literature*. **38**(3), 595-613.

Williamson, O., (2002). The theory of the firm as governance structure: from choice to contract. *The Journal of Economic Perspectives.* **16**(3), 171-195.

Williamson, O., (2009). Transaction cost economics: the natural progression. *Nobel Prize Lecture.* December 8, 2009.

Williamson, O. and Winter, S., (1993). *The nature of the firm: origins, evolution, and development.* Oxford: Oxford University Press.

Winichakul, T., (2008). Nationalism and the radical intelligentsia in Thailand. *Third World Quarterly*. **29**(3), 575-591.

Wooldridge, J., (2002). *Introductory econometrics: a modern approach*. Mason, USA: Thomson South-Western.

World Bank. (1993). *The East Asian miracle: economic growth and public policy*. New York: Oxford University Press.

WorldBank. (2010). *World Development Indicators (WDI2010).* [online] *Economic and Social Data Services*. Available from < http://www.esds.ac.uk/international/access/dataset_overview.asp>

WorldBank. (2010). *World Development Indicators (WIR2010).* [online] *Economic and Social Data Services*. Available from < http://www.esds.ac.uk/international/access/dataset_overview.asp>

Xu, B., (2000). Multinational enterprises, technology diffusion and host country productivity growth. *Journal of Development Economics*. **62**(2000), 477-493.

Xu, B. and Wang, J., (2000). Trade, FDI, and international technology diffusion. *Journal of Economic Integration*. **15**(4), 585-601.

Yang, B., (2008). FDI and growth: a varying relationship across regions and over time. *Applied Economics Letters.* **15**(2), 105-108.

Young, A., (1994). Lessons from East Asian NICs: a contrarian view. *European Business Review*. 38(3-4), 964-973.

Young, A., (1995). The tyranny of numbers: confronting the statistical realities of the East Asian growth experience. *Quarterly Journal of Economics*. **110**(3), 641-680.

Zhan, J., (2006). *FDI Statistics: a critical review and policy implications*. Geneva: The World Association of Investment Promotion Agencies.

Zhang, K., (2001). Does foreign direct investment promote economic growth? Evidence from East Asia and Latin America. *Contemporary Economic Policy*. **19**(2), 175-185

APPENDIX A: SUMMARY OF EMPIRICAL STUDIES OF INWARD FDI ON GROWT

Foreign Investment and Positive Externalities							
Authors	**Country**	**Year**	**Data**	**How Positive Externalities are measured (DV)**	**Independent Variables (IV)**	**Identification Strategy**	**Findings**
Cave (1974)	Australia and Canada	1965-1967	Cross-Sectional/Industry level	Value added per worker	Average profit, sales, firm's assets, Change in number of firms with the majority foreign equity	-OLS regression (level linear)	-Positive spillovers are found **-Foreign presence tends to increase efficiency through competition**
Globerman (1979)	Canada	1972	Cross-Sectional/industry level	Labour Productivity in domestic owned plants	Asset/labour, wages*/labour, Tariff rate, Concentration index, value added in plant*	-OLS regression (level linear)	-Positive spillovers are found
Blomström (1986)	Mexico	1970-1975	Cross-Sectional/industry level	Efficiency Index (constructed variable)	Foreign share/industry, concentration index, market growth rate, rate of T progress	-OLS regression (level and log linear)	-Positive relationship is reported between foreign ownership and efficiency however this is pronounced only in the modern sectors. **-Foreign presence tends to increase efficiency through competition**
Balasubramanyam, Salisu and Sapsford (1996)	46 developing countries divided in to ES, IS according to the WB	1970-1985	Cross-Sectional/country level	GDP growth rate	Labour, domestic capital stock/GDP, FDI stock/GDP, export, time trend	-OLS regression, -Generalised Instrumental Variable Estimation (log linear)	-Confirm Bhagwati's Hypothesis: country tends to benefit FDI more when they adopt Export Promotion (EP) policies

249

Foreign Investment and Positive Externalities						
Authors	**Country**	**Year**	**Data**	**How Positive Externalities are measured (DV)**	**Independent Variables (IV)**	**Identification Strategy**	**Findings**

Authors	**Country**	**Year**	**Data**	**How Positive Externalities are measured (DV)**	**Independent Variables (IV)**	**Identification Strategy**	**Findings**
De Mello (1999)	-OECD vs non OECD **not** including Thailand	1970-1990	Panel Time Series/country level	-Capital Accumulation -Output Growth -TFP	FDI	-Bivariate VAR (use growth rate and prove that I(0))	-Non OECD countries exhibit more of the heterogeneity in the positive relationship between FDI and capital accumulation and output growth.
Aitken and Harrison (1999)	Venezuela	1976-1989	Panel Data /Plant level	Log of real output at plant level	Foreign ownership in plant, foreign ownership in sector	-OLS regression, -WLS regression (log linear)	-Foreign investment negatively affects domestically owned firms. -Plants with foreign ownership are more productive. -The benefit from FDI appear to be captured only by JV
Ramirez (2000)	Mexico	1960-1995	Time series analysis	GDP growth rate	Domestic capital stock, FDI, labour, Government consumption, dummies, time trend	-Co-integration analysis -ECM model (1st dif form)	-Positive impacts of FDI on the labour productivity is reported.
Xu (2000)	US MNEs	1966-1994	Panel Data/Country level	TFP growth rate	Technological gap, human capital, Foreign activity in host country	-2SLS **IVs are the predicted value of endogenous variables** (level linear)	-U.S. MNEs contribute to the productivity growth in DCs but not LDCs. - a minimum threshold of human capital is required in order to reap the benefit from FDI

Foreign Investment and Positive Externalities							
Authors	Country	Year	Data	How Positive Externalities are measured (DV)	Independent Variables (IV)	Identification Strategy	Findings
Konings (2001)	Bulgaria, Romania and Poland		Panel Data/ plant level	Log of real output at plant level	Time trend, capital, material capital, FDI, foreign output/sector output	-OLS regression (fixed effect) (log linear) -GMM **IVs are endogenous variables in level**	-No evidence of positive spillovers but rather the negative effects in Romania and Bulgaria. -In Poland, foreign firms do better than the domestic firms.
Nair-Reichert and Weinhold (2001)	Developing countries including Thailand	1971-1995	Panel Data 24 developing countries/country level	GDP growth rate	Domestic investment, inflation, FDI, export (all in growth e=rate)	-Granger Causality -OLS fixed effect panel regression -Holtz-Eakin *et al*. Causality test (level linear)	-The relationship between growth and FDI is heterogeneous across countries. -No report on country basis. -reject Bhagwati's hypothesis
Zhang (2001)	East Asia and Latin America Including Thailand	1957-1997	Annual Time-series	GDP	FDI	Granger Causality and ECM	The result of FDI-led growth is specific to different country. In Thailand, no long run relationship can be established. In short run, causality runs from GDP to FDI and not vice versa.
Carkovic and Levine (2002)	Not identified	1960-1995	Panel Data of 72 Countries/Country level	GDP growth rate	Initial per capita income, avg years of schooling, inflation, trade openness, government size, FDI, FDI*schooling	-OLS regression, -Dynamic panel regression -IV (GMM) (1st dif form) **IVs are lagged value of endogenous variables.**	-FDI does not exert a reliable positive impact on economic growth

Foreign Investment and Positive Externalities							
Authors	**Country**	**Year**	**Data**	**How Positive Externalities are measured (DV)**	**Independent Variables (IV)**	**Identification Strategy**	**Findings**
Alfaro (2003)	47 countries	1981-1999	Panel Data/Country level	GDP growth rate	Initial GDP, FDI, inflation, government consumption, private credit	-OLS panel regression -Instrumental variables, **IVs are one-period lagged of FDI** (log linear)	-FDI in primary sector tends to give negative impact on growth. -FDI in manufacturing sector appears to give positive impact. -FDI in service sectors is ambiguous.
Basu, Chakraborty and Reagle (2003)	23 developing countries including Thailand	1978-1996	Panel Data/Country level	GDP, FDI	FDI, GDP	-Granger causality test -Co- integration (level and 1st dif form)	-FDI and growth have bi-directional relationship in open economy. -GDP causes FDI in close economy.
Alfaro, Chanda, Kalemni-Ozcan and Sayek (2004)	Mixed of developing and developed countries including Thailand	1980-1995	Panel Data of proximately 50 Countries/Country level	GDP growth rate	Initial GDP, FDI, FDI*finance, , finance, pop growth, human capital government consumption, black market premium, and regional dummy	-OLS regression, -Instrumental Variables, **IVs are one-period lagged of FDI and a measure of creditors rights** (log and ration variables)	-FDI alone plays ambiguous contribution to economic growth. -FDI tends to beneficial when the host country has a well-developed financial market.
Jarvorcik (2004)	Lithuania	1996-2000	Panel Data/Plant level	Real output of firm	Value of fixed assets, labour, material, foreign share/total equity, horizontal and vertical integration	-OLS regression -Olley-Pakes Regression (allow for dynamics in production functions)	-Positive effect of FDI is capture by JV and not by wholly subsidiaries

252

Foreign Investment and Positive Externalities							
Authors	Country	Year	Data	How Positive Externalities are measured (DV)	Independent Variables (IV)	Identification Strategy	Findings
Chowdhury and Mavrotas (2005)	Chile, Malaysia and Thailand	1969-2000	Time series analysis	GDP	FDI	-Toda-Yamamoto test (level)	**-A bi-directional causality between FDI and GDP in Thailand and Malaysia.** -Only GDP to FDI in the case of Chile.
Yao and Wei (2007)	China	1979-2003	Panel Data of 19 provinces/Micro Level	Log of GDP	Labour, capital, exchange rate, human capital, FDI/total investment, time trend, export/GDP	-Random effect Model, Fixed effect model (OLS) -GMM. **No IV identified** (level)	-Positive impact of FDI on the growth of output is found. -The asymmetric economic performance is found between different regions.
Busse and Groizard (2006)	Not identified	1994-2003	Panel Data/ Country level	Log of per capita GDP	-initial GDP per capita, FDI inflows/GDP, black market premium for foreign currency, changes in CPI, pop growth, Gove con/GDP, openness to trade	-OLS regression -2SLS, **IVs are log level of GDP per capita, FDI in level and the interaction between FDI in level and regulation dummy variables** (log linear)	-Heavily regulated countries are unlikely to benefit from FDI. -Any attempt to offer tax incentive for FDI is unlikely to realise the positive externalities if the quality of regulatory is low. -Advocate for sound institutional framework, trade liberalisation and economic integration

Foreign Investment and Positive Externalities						
Authors	**Country**	**Year**	**Data**	**How Positive Externalities are measured (DV)**	**Independent Variables (IV)**	**Findings**
Ran, Voon and Li (2007)	China	2001-2003	19 industries in 30 provinces (excluding Taiwan and Tibet)	Gross output	Total labour productivity, number of high school and college graduate, FDI	-GLS regression -Instrumental Variables, **IVs are one period lagged of FDI and rate exchange rate in level** (log and level linear)	-The positive impact of FDI fades over time and heterogeneous across regions. -China as a whole does not appear to benefit from inflow of FDI
Goss, Wingender and Torau (2007)	U.S.	1988-1999	Cross-sectional/Industry level	Industry's output	Labour's hours by industry, FDI by industry, domestic capital by industry, age, education and timer variables	-Fixed effect panel regression (log linear)	-The positive impact of foreign capital on the U.S, productivity is reported.
Basu and Guariglia (2007)	Not identified	1970-1999	Panel Data of 119 developing countries/ Country level	Gini index, GDP per capita growth rate, Share of agriculture/GDP	FDI, black market premium, openness, pop growth rate.	-Instrumental Variables, **IVs are 2 to 5 lag of FDI, M2/GDP, black market premium, openness, pop growth rate** (growth level)	-FDI positively relates to the educational inequality -FDI positive relates to the growth rate -FDI relates to the decline of the agriculture share in GDP.

Foreign Investment and Positive Externalities							
Authors	**Country**	**Year**	**Data**	**How Positive Externalities are measured (DV)**	**Independent Variables (IV)**	**Identification Strategy**	**Findings**
Yang (2008)	Not identified	1973-2002	Panel Data of 110 countries/ Country level	GDP growth rate	Domestic investment, initial GDP, FDI inflows, Government size, Inflation, trade openness, availability of credit	-Fixed effect panel regression	-The effect of FDI on growth is heterogeneous across time and region. -Positive effect of FDI on growth ion OECD countries. FDI positively affect Latin America and negatively affect Middle East. **-No significant effect of FDI found in East Asia**
Bang Vu (2008)	Vietnam	1990-2002	Cross-Sectional/Industry Level	Log of output per sector	Capital, Human Capital, FDI*Human Capital, interest rate, interest rate*capital	-OLS regression, -Feasible GLS -Least square Dummy Variable -Granger Causality (log linear)	-FDI has a positive effect on economic growth through labour productivity. -The effect is not equally distributed.
Herzer, Klasen and Lehmann (2008)	28 developing countries including Thailand	1970-2003	Time series analysis	Log GDP in real terms	FDI/GDP	-Bivariate ECM model -Granger Causality	-No robust evidence to support the positive impact of FDI on growth. **-Thailand exhibits short-run bi-directional between FDI and** GDP but not in a long run. Only

Foreign Investment and Positive Externalities							
Authors	Country	Year	Data	How Positive Externalities are measured (DV)	Independent Variables (IV)	Identification Strategy	Findings
Batten and Vinh Vo (2009)	Not identified	1980-2003	Panel Data of 79 countries/ country level	GDP growth rate	FDI, FDI/GDP, Education, Government consumption, Trade openness, Inflation, size of stock market, domestic credit	-Fixed effect panel data -GMM **No IV is identified** (level)	-Positive impacts are conditional on the level of education, trade openness. Note that the results are sensitive to the sensitivity analysis.
Ang (2009)	Thailand	1970-2004	Time series analysis	GDP per capita in real terms	Gross fixed capital formation/GDP, FD-M2/GDP and credit to private sector/GDP, FDI and FDI*FD	-ECM (level)	-FDI has a negative impact on output -FDI through FD give positive impact but the magnitude is modest.

256

APPENDIX B: SOME LIKELY BENEFITS AND COSTS OF DIFFERENT TYPE OF FDI TO HOST COUNTRIES

Type of FDI	Some Likely benefit to host countries	Some Likely costs to host countries
Natural Resources-Seeking	1) Upgrading existing technology and knowledge 2) Providing access to foreign market 3) Creating the local spin-off for example, help creating secondary processing industries 4) Increasing the standard of product qualities 5) Fostering clusters of resource-based related activities	1) Creating an outflow of natural resources 2) Depleting natural resources and casing environmental problems
Market-Seeking	1) Upgrading the existing technology and knowledge 2) Enhancing vertical linkages spillovers through an establishment of suppliers and consumers network 3) Stimulating local entrepreneurship and domestic rivalry	1) Distorting the competition by inducing too strong firms into the domestic markets 2) Impeding the formation of domestic entrepreneurs 3) Substitute for international trade when domestic market is protected
Efficiency-Seeking	1) Improving international division of labour and cross border networking 2) Facilitating the structural adjustment 3) Increasing the comparative advantages of host countries 4) Similar to the effects induced by market seeking	1) Impeding the formation of high skill workers in case where the host countries are located in the low level of production process
Strategic-Seeking	1) Providing new financial capital and complementary assets 2) Providing access to foreign market 3) Stimulating local entrepreneurship and domestic rivalry 4)Improving international division of labour and cross border networking	

Source: Adapted from Dunning (1994

257

APPENDIX C: REPORT OF TFP STUDIES IN THAILAND

This appendix reports Total Factor Productivity studies from Tinakorn and Sussangkarn (1996, 1998), Sitthikul (2001), Chandrachai, Bangorn, and Kamjara (2004), and Bosworth (2005) respectively. All studies adopted the parametric approach assuming the Cobb-Douglas or the Translog production function. The weight attached to capital and labour varies from one study to another but the classification of economic sector is consistent in all studies. The classification is made as follows. The economy is classified into three different sectors, namely, agriculture, industry, and service. Mining and quarrying, manufacturing, construction and utilities are categorised as industry. Service sector includes transport, communication, wholesale and retail trades, banking, insurance, real estates, ownership dwelling, public administration and other services.

TABLE C1: SOURCE OF GROWTH BY SECTOR, TDRI STUDY, 1977-1990

Component	Total Economy	Agriculture	Industry	Services and Others
Real Output Growth	7.6 (100.0)	4.0 (100.0)	9.0 (100.0)	8.0 (100.0)
Contribution of:				
- Labor	3.5 (45.7)	1.9 (47.6)	3.8 (42.0)	5.0 (62.4)
• Employment	2.0 (26.0)	1.3 (31.2)	3.2 (35.7)	2.9 (35.5)
• Quality Changes	1.5 (19.8)	0.7 (16.4)	0.6 (6.3)	2.2 (26.9)
- Capital	2.8 (37.2)	0.7 (17.9)	5.8 (64.8)	3.3 (40.9)
- Land	0.1 (1.2)	0.1 (2.2)	-	-
- TFP	1.2 (10.2)	1.3 (32.2)	-0.6 (-6.8)	-0.3 (-3.2)

Source: Tinakorn and Sussangkarn (1996), Tables 4.12 and 5.21.
Note: Percentage distribution in parentheses

TABLE C2: SOURCE OF GROWTH BY SECTOR, TDRI STUDY, 1980-1995

Component	Total Economy	Agriculture	Industry	Services and Others
Real Output Growth	8.1 (100.0)	3.7 (100.0)	10.5 (100.0)	7.8 (100.0)
Contribution of:				
- Labor	1.8 (22.2)	0.5 (13.5)	4.0 (37.8)	2.9 (37.4)
• Employment	1.0 (11.8)	0.1 (3.8)	2.9 (27.4)	2.1 (26.7)
• Quality Changes	0.8 (10.3)	0.4 (9.7)	1.1 (10.4)	0.8 (10.7)
- Capital	5.0 (61.7)	2.2 (60.4)	7.2 (68.6)	5.3 (67.7)
- Land	0.0 (0.4)	0.0 (1.1)	-	-
- TFP	1.3 (15.6)	0.9 (25.1)	-0.7 (-6.4)	-0.4 (-5.1)

Source: Tinakorn and Sussangkarn (1998).
Note: Percentage distribution in parentheses

TABLE C3: SOURCE OF GROWTH BY SECTOR, SITTHIKUL STUDY, 1980-1996

Component	Sector			
	Total	Agriculture	Non-Agriculture	Manufacturing
Real Output Growth	8.0	3.8	8.8	10.1
Contribution of:				
- Labor	2.7 (33.8)	1.2 (31.6)	3.7 (42.0)	3.9 (38.5)
• Employment	0.9 (11.3)	-0.1 (-2.6)	2.5 (28.4)	2.3 (22.7)
• Quality Changes	1.8 (22.5)	1.3 (34.2)	1.2 (13.6)	1.6 (15.8)
- Capital	4.9 (61.3)	2.3 (60.5)	5.5 (62.5)	6.8 (67.2)
- TFP	0.5 (6.3)	0.2 (5.3)	-0.4 (-4.5)	-0.5 (-4.9)

Source: Sitthikul (2001).

TABLE C4: SOURCE OF GROWTH BY SECTOR, ACHARA ET AL. STUDY, 1977-1999

Component	Aggregate Economy			Sectors, 1977-96		
	1977-1999	1977-1996	1977-1990	Agriculture	Industry	Services
Real Output Growth	6.0	7.5	7.3	3.5	7.8	7.5
	(100)	(100)	(100)	(100)	(100)	(100)
Contribution of:						
- Labor	1.9	2.0	2.5	n/a	n/a	n/a
	(31.7)	(26.9)	(34.7)			
- Employment	1.2	1.4	1.8	0.4	1.4	1.9
	(19.4)	(18.4)	(25.4)	(10.5)	(18.3)	(25.7)
- Quality Changes	0.7	0.6	0.7	n/a	n/a	n/a
	(12.3)	(8.5)	(9.3)			
- Capital	3.6	3.9	3.0	1.3	6.4	5.0
	(59.7)	(52.3)	(40.9)	(37.4)	(81.1)	(67.1)
- Land	n/a	n/a	n/a	n/a	n/a	n/a
- TFP	0.5	1.6	1.8	1.8	0.0	0.5
	(100)	(100)	(100)	(100)	(100)	(100)

Source: Achara and others (2004).

TABLE C5: SOURCE OF GROWTH BY SECTOR, BOSWORTH STUDY, 1977-2004

Component	Total Economy			Agriculture			Industry		
	1977-2004	1977-1996	1999-2004	1977-2004	1977-1996	1999-2004	1977-2004	1977-1996	1999-2004
Real Output Growth	6.0	7.7	5.0	2.9	3.3	3.2	8.0	10.2	6.3
Contribution of:									
- Labor	1.8	2.0	1.9	0.4	0.5	0.1	2.7	3.5	2.9
	(30)	(25)	(30)	(14)	(16)	(14)	(34)	(34)	(34)
- Employment	1.4	1.6	1.4	0.2	0.4	-0.1	2.3	3.2	2.7
	(23)	(21)	(23)	(8)	(12)	(8)	(29)	(31)	(29)
- Quality	0.4	0.3	0.4	0.2	0.1	0.2	0.4	0.3	0.4
	(7)	(4)	(7)	(6)	(4)	(6)	(5)	(3)	(5)
- Capital	3.1	4.0	0.9	1.9	1.9	1.6	4.7	6.1	1.2
	(52)	(51)	(52)	(68)	(59)	(68)	(59)	(59)	(59)
- Land	0.0	0.0	0.0	0.0	0.1	0.0	n/a	n/a	n/a
- TFP	1.0	1.6	2.1	0.5	0.7	1.4	0.4	0.4	2.0
	(16)	(21)	(16)	(17)	(23)	(17)	(5)	(4)	(5)

Component	Manufacturing			Services		
	1977-2004	1977-1996	1999-2004	1977-2004	1977-1996	1999-2004
Real Output Growth	8.4	10.2	6.6	5.4	7.3	4.2
Contribution of:						
- Labor	2.8	3.2	2.9	3.4	3.5	3.6
	(34)	(31)	(34)	(63)	(47)	(63)
- Employment	2.4	2.8	2.6	2.9	3.1	2.7
	(29)	(27)	(29)	(53)	(42)	(53)
- Quality	0.4	0.4	0.4	0.5	0.4	0.5
	(5)	(4)	(5)	(10)	(5)	(10)
- Capital	4.1	5.4	0.8	2.5	3.2	0.6
	(49)	(53)	(49)	(46)	(44)	(46)
- Land	n/a	n/a	n/a	n/a	n/a	n/a
- TFP	1.2	1.3	2.7	-0.5	0.5	0.0
	(15)	(13)	(15)	(-9)	(7)	(-9)

Source: Bosworth (2005)

APPENDIX D: NET FLOW OF FDI BY ECONOMIC SECTOR

Net flow of FDI by economic sector in percentage

	2008	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Industry	56.45	50.26	39.09	62.99	97.32	67.38	73.47	78.77	70.92	29.93
Manufacturing	45.17	35.80	38.83	52.74	76.39	46.63	54.08	58.64	64.36	35.62
Agriculture	0.09	0.03	-0.02	0.19	0.12	0.55	0.09	-0.08	0.02	0.05
Service	43.46	49.71	60.93	36.81	2.57	32.08	26.44	21.32	29.05	70.02
Total (Industry + Service + Agriculture)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	1998	**1997**	**1996**	**1995**	**1994**	**1993**	**1992**	**1991**	**1990**	**1989**
Industry	50.18	56.49	35.02	32.92	23.31	42.54	51.94	60.03	55.58	58.53
Manufacturing	42.91	50.12	31.22	28.30	38.72	26.09	17.20	46.21	47.87	47.84
Agriculture	0.01	0.02	0.09	0.47	-0.47	0.75	-0.27	1.16	1.18	1.32
Service	49.81	43.48	64.89	66.61	77.16	56.70	48.33	38.80	43.24	40.15
Total (Industry + Service + Agriculture)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Bank of Thailand, (2009)

Net flow of FDI by economic sector in percentage (continued)

	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979
Industry	66.73	69.41	52.08	79.15	72.51	58.02	84.38	71.40	61.75	103.94
Manufacturing	57.79	52.42	30.74	30.86	32.74	31.33	28.41	39.45	26.13	64.22
Agriculture	1.13	3.15	2.92	1.77	0.70	0.58	0.36	0.11	5.42	0.40
Service	32.14	27.43	44.98	19.06	26.78	41.38	15.25	28.48	32.82	-4.38
Total (Industry + Service + Agriculture)	100.00	99.99	99.98	99.98	99.99	99.99	99.99	99.99	99.99	99.96

	1978	1977	1976	1975	1974	1973	1972	1971	1970
Industry	63.71	45.18	43.23	46.58	60.13	48.84	55.69	47.65	62.78
Manufacturing	41.01	30.46	28.42	33.36	26.87	37.91	21.61	13.64	50.18
Agriculture	-1.59	-0.01	0.07	0.11	0.40	0.31	0.34	0.00	0.00
Service	37.84	54.81	56.65	53.26	39.46	50.77	43.95	52.25	37.20
Total (Industry + Service + Agriculture)	99.96	99.98	99.95	99.95	99.98	99.93	99.97	99.90	99.98

Source: Bank of Thailand, (2009)

APPENDIX E: DATA PREPARATION

This appendix presents source of data by series, its completion and the extrapolation of times series data in the case where there are missing observations.

TABLE E1: SUMMARY OF SOURCE OF DATA AND VARIABLES CONSTRUCTIONS

Series	Description/Source	Preparation
gni[1]	Gross National Income (US$ million, current)/ Quarterly International Financial Statistics, IMF, (2010)	See below
gdp[1]	Gross Domestic Product (US$ million, current)/ Quarterly International Financial Statistics, IMF, (2010)	See below
stock_fdi[3]	Inward FDI, approximated by the stock of inward FDI (US$ millions)/ UNCTADstat (2010)	Data comes in annual time-series. It is then transformed into a higher frequency using a method, quadratic-average, by Eviews 6. This method is selected in accordance to how quarterly data of GDP and GNI is distributed.
flow_fdi	Inflow of inward FDI (US$ million, current)/ Quarterly International Financial Statistics, IMF, (2010)	-
import	Import values including cost, insurance, and freight. (US$ million)/ Quarterly International Financial Statistics, IMF, (2010)	-
export	Export values Free on Board (US$ million)/ Quarterly International Financial Statistics, IMF, (2010)	-
deficits[3]	Income deficits calculated from the summation of income debit and income credit then multiply with (-1) to get positive number. (US$ million)/Balance of Payment, IMF, (2010)	Data comes in annual time-series. It is then transformed into a higher frequency using a method, quadratic-average, by Eviews 6. This method is selected in accordance to how quarterly data of GDP and GNI is distributed.
gross fixed capital formation[1]	Gross fixed capital formation (US$ million, current)/ Quarterly International Financial Statistics, IMF, (2010)	-
labour[2]	Labour force (thousand)/ Quarterly International Financial Statistics, IMF, (2010)	See below
dinv[1]	Gross fixed capital formation minus inflow FDI/ Quarterly and annual International Financial Statistics, IMF, (2010)	See below

Table E1 reports the source of data. The superscript found in the first column is associated to the method of data preparation. Series without superscript is taken from the source without making adjustment. It must be noted that this study aimed to intervene the data set the least possible. Those with superscript are involved in data preparation process to the different degree. The details can be found below.

1) Under this category, the quarterly data is available from Q1: 1993 onwards. This means that observations prior to Q1: 1993 are derived by the frequency transformation from annual time-series in accordance with the data distribution in the original series.

2) Labour force time-series data in quarterly basis is also available from Q1: 1993. However, its annual time series is only available from 1980. Thus, this study conducted the extrapolation of this series, during 1977-1979, by assuming its changes in accordance with the changes in population of the same year.

3) Under this category, time series data is not taken from the International Financial Statistics, IMF. Thus, quarterly time series data under this category have been derived from the frequency transformation.

TABLE E2: GRAPHICAL PRESENTATION OF EACH VARIABLE

GNI

GDP

FDI

FDI_GDP

FDI

FDI_GDP

IMP

DINV

LB
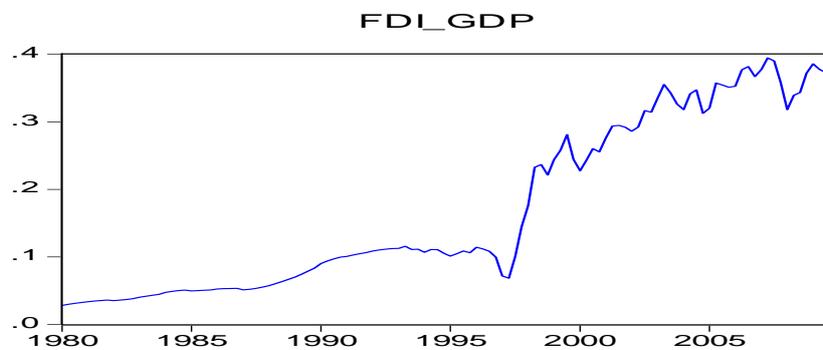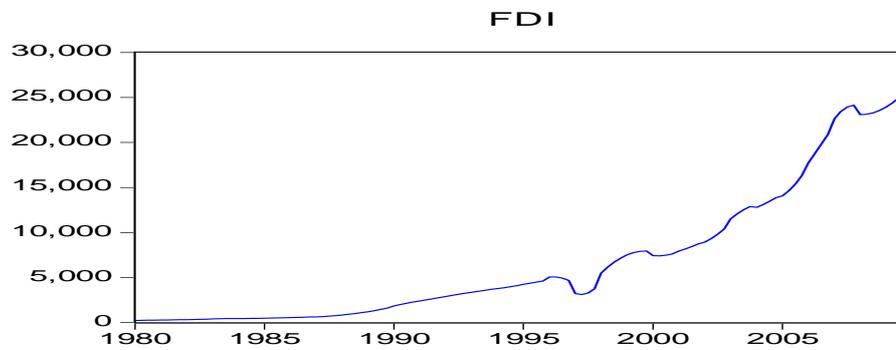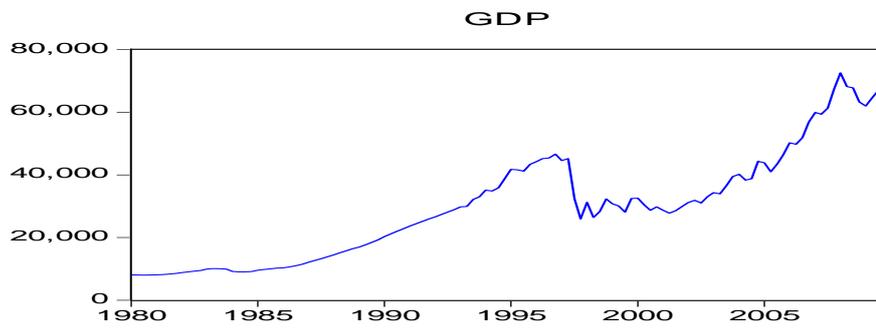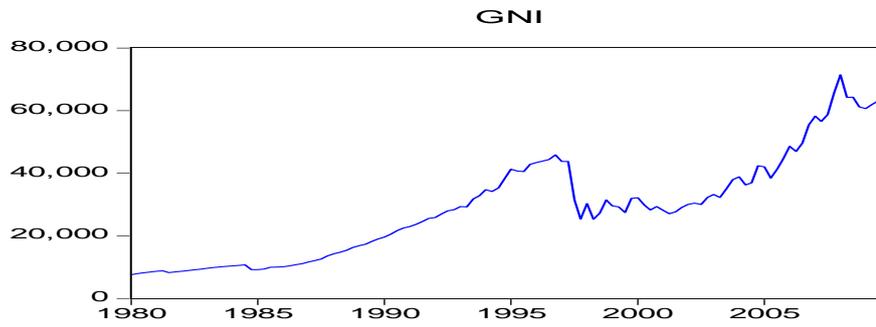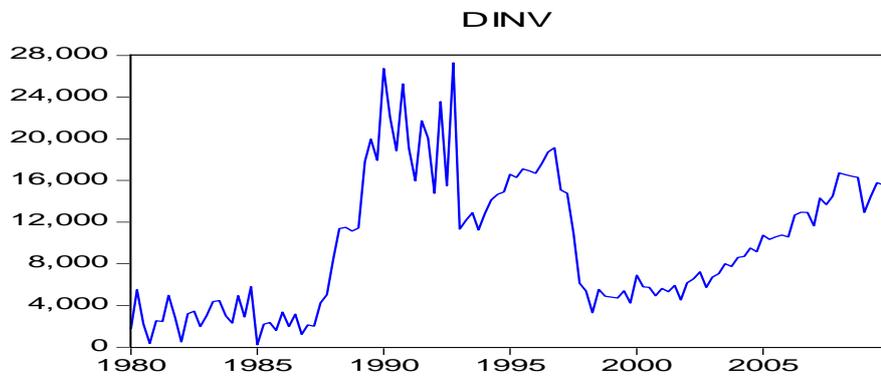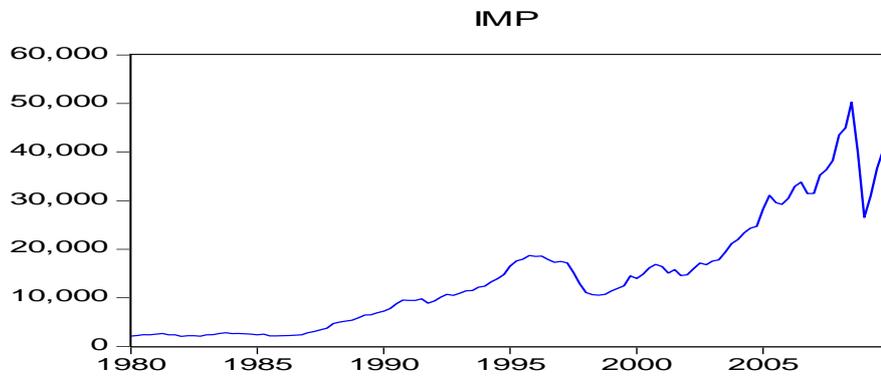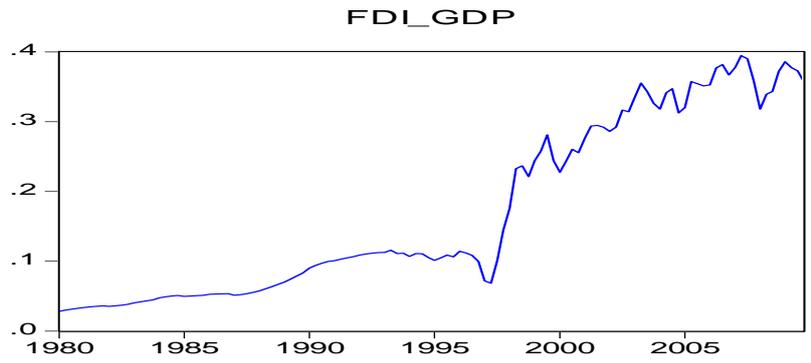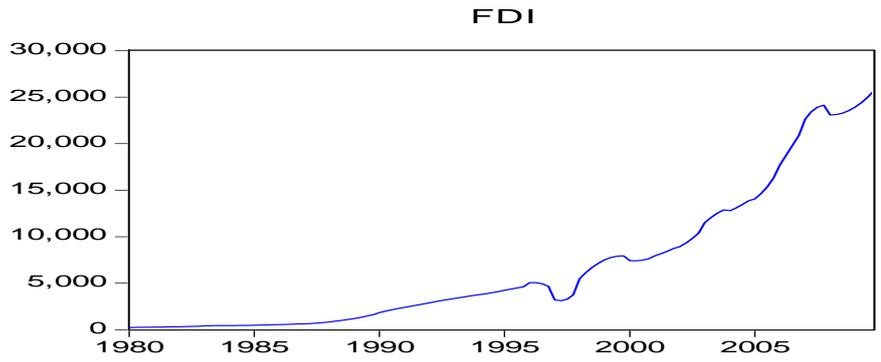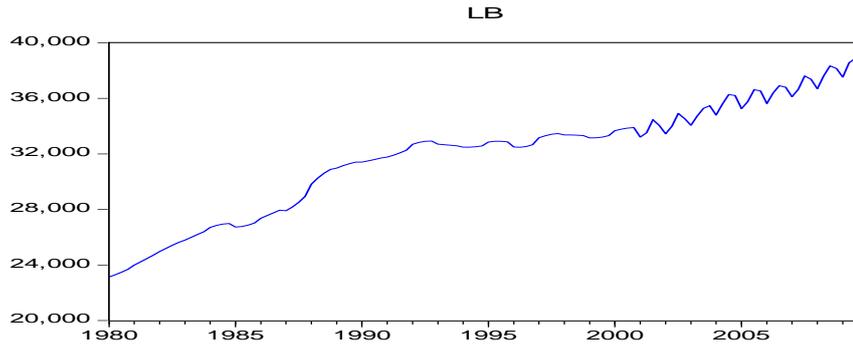
TABLE E3: THE RESULTS OF LAG LENGTH SELECTION

VAR Lag Order Selection Criteria
Endogenous variables: LGNI LDINV FDI_GDP LOG(LB)
Exogenous variables: C CRISIS D_1 D_2 D_3
Date: 06/07/11   Time: 16:10
Sample: 1980Q1 2009Q4
Included observations: 104

Lag	LogL	LR	FPE	AIC	SC	HQ
0	227.8204	NA	2.16e-07	-3.996545	-3.488009	-3.790522
1	783.6485	1015.455	6.71e-12	-14.37786	-13.46249*	-14.00701
2	818.8262	61.56099	4.66e-12	-14.74666	-13.42446	-14.21100
3	854.0048	58.85651	3.24e-12	-15.11548	-13.38645	-14.41500*
4	875.4812	34.27970	2.95e-12	-15.22079	-13.08494	-14.35550
5	891.7197	24.66998	2.98e-12	-15.22538	-12.68270	-14.19526
6	906.7268	21.64490	3.11e-12	-15.20628	-12.25677	-14.01135
7	919.1910	17.01837	3.43e-12	-15.13829	-11.78195	-13.77854
8	929.4151	13.17336	3.98e-12	-15.02721	-11.26404	-13.50264
9	949.2833	24.07111	3.89e-12	-15.10160	-10.93160	-13.41221
10	965.7563	18.69053	4.11e-12	-15.11070	-10.53387	-13.25649
11	988.2419	23.78284	3.92e-12	-15.23542	-10.25176	-13.21639
12	1005.647	17.07056	4.21e-12	-15.26245	-9.871957	-13.07860
13	1043.797	34.48180	3.10e-12	-15.68841	-9.891090	-13.33974
14	1087.516	36.15226*	2.11e-12*	-16.22147	-10.01732	-13.70798
15	1112.200	18.51257	2.13e-12	-16.38846	-9.777478	-13.71015
16	1138.090	17.42591	2.19e-12	-16.57865*	-9.560840	-13.73553

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Note: The above results are computed from the unrestricted VAR with 20 lag.

APPENDIX F. THE ESTIMATION OF UNRESTRICTED VECTOR AUTOREGRESSIONS

This appendix presents the results of unrestricted vector autoregressions from Regressions 3 and 4 whose residuals are found to be stationary in levels. The results are reported in Table F1, found below.

TABLE F1: THE ESTIMATION OF UNRESTRICTED VECTOR AUTOREGRESSIONS

Regression 3		Regression 4	
independent variables	coefficient	independent variables	coefficient
lg_def(-1)	-0.124 (-3.828)	lg_imp(-1)	-0.151 (-2.503)
lg_fdi(-1)	0.063 (2.859)	lg_fdi(-1)	0.128 (2.003)
Δdef(-1)*	0.570 (6.404)	Δimp(-1)*	0.029 (2.648)
Δdef(-2)*	0.205 (2.258)	Δimp(-2)	-0.064 (0.548)
Δdef(-3)	0.049 (0.531)	Δimp(-3)	0.117 (0.996)
Δdef(-4)*	-0.493 (-5.502)	Δimp(-4)	0.140 (1.042)
Δdef(-5)*	0.489 (4.932)	Δimp(-5)*	0.367 (2.708)
Δdef(-6)	0.080 (0.775)	Δimp(-6)	-0.116 (-0.825)
Δdef(-7)	-0.031 (-0.304)	Δimp(-7)	-0.075 (-0.565)
Δdef(-8)	-0.065 (-0.698)	Δimp(-8)	0.005 (0.037)
Δdef(-9)	0.186 (2.200)	Δimp(-9)	0.200 (1.502)
Δdef(-10)	-0.024 (-0.283)	Δimp(-10)	-0.098 (-0.745)
Δdef(-11)	-0.009 (-0.108)	Δimp(-11)	0.198 (1.522)
Δdef(-12)	-0.010 (-0.166)	Δimp(-12)	-0.111 (-0.848)
Δfdi(-1)*	-0.000 (-0.111)	Δfdi(-1)*	-0.000 (-1.168)
Δfdi(-2)	0.000 (0.567)	Δfdi(-2)	-0.000 (-0.694)
Δfdi(-3)	0.000 (0.148)	Δfdi(-3)	0.000 (1.394)
Δfdi(-4)	-0.000 (-0.785)	Δfdi(-4)	0.000 (1.600)
Δfdi(-5)	0.000 (1.113)	Δfdi(-5)	-0.000 (-0.934)
Δfdi(-6)	0.000 (0.478)	Δfdi(-6)	-0.000 (-0.179)

Regression 3			Regression 4	
independent variables	coefficient		independent variables	coefficient
$\Delta fdi(-7)$	0.000 *(0.204)*		$\Delta fdi(-7)$	0.000 *(0.039)*
$\Delta fdi(-8)$	-0.000 *(0.000)*		$\Delta fdi(-8)$	-0.000 *(-0.962)*
$\Delta fdi(-9)$	0.000 *(1.161)*		$\Delta fdi(-9)$	0.000 *(0.213)*
$\Delta fdi(-10)$	0.000 *(0.602)*		$\Delta fdi(-10)$	0.000 *(0.567)*
$\Delta fdi(-11)$	0.000 *(0.053)*		$\Delta fdi(-11)$	0.000 *(0.149)*
$\Delta fdi(-12)^*$	0.000 *(2.115)*		$\Delta fdi(-12)$	-0.000 *(-0.766)*
crisis	0.074 *(1.614)*		crisis	0.007 *(0.110)*
constant	0.231 *(3.398)*		constant	0.429 *(1.755)*
R^2	0.756		R^2	0.446
F-statistic	9.103		F-statistic	2.249
S.E. equation	0.058		S.E. equation	0.072

Note: Numbers reported in parentheses are t-staistic

[*]indicates that the variable is included in the error correction model reported in Table 6.4, p. 192.

APPENDIX G: THAI IMPORT AND EXPORT BY ECONOMIC SECTOR

I. Imports

Import by economic group

	2009	2008	2007	2006	2005	2004	2003	2002
Consumer Goods	12,849.75	13,817.77	10,985.87	9,656.25	8,377.41	7,454.43	6,326.29	5,737.16
Raw Materials and Intermediate Goods	51,550.42	73,484.02	60,028.38	52,183.12	49,390.69	41,822.07	32,972.15	28,622.46
Capital Goods	35,726.95	42,957.08	35,811.97	34,560.45	32,003.34	25,716.66	21,932.01	18,750.88
Other Imports	33,541.02	48,965.86	33,139.46	32,373.34	28,406.14	19,040.85	13,807.88	11,131.51
Total	133,668.14	179,224.73	139,965.68	128,773.16	118,177.58	94,034.01	75,038.33	64,242.01

Import by economic group as a percentage of total import

	2009	2008	2007	2006	2005	2004	2003	2002
Consumer Goods	9.61	7.71	7.85	7.50	7.09	7.93	8.43	8.93
Raw Materials and Intermediate Goods	38.57	41.00	42.89	40.52	41.79	44.48	43.94	44.55
Capital Goods	26.73	23.97	25.59	26.84	27.08	27.35	29.23	29.19
Other Imports	25.09	27.32	23.68	25.14	24.04	20.25	18.40	17.33
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Bank of Thailand, (2009)

I. Imports (continued)

Import by economic group

	2001	2000	1999	1998	1997	1996	1995
Consumer Goods	5,307.00	5,130.45	4,119.99	3,485.52	4,957.00	5,382.01	5,344.87
Raw Materials and Intermediate Goods	26,910.30	29,545.99	24,407.24	20,845.61	26,816.29	30,090.58	30,771.44
Capital Goods	18,779.40	16,914.03	14,131.74	13,046.42	21,647.15	23,719.06	23,393.75
Other Imports	10,755.13	10,589.68	7,260.61	5,024.57	9,865.68	13,056.05	11,207.90
Total	61,751.83	62,180.15	49,919.58	42,402.12	63,286.12	72,247.70	70,717.96

Import by economic group as a percentage of total
import

	2001	2000	1999	1998	1997	1996	1995
Consumer Goods	8.59	8.25	8.25	8.22	7.83	7.45	7.56
Raw Materials and Intermediate Goods	43.58	47.52	48.89	49.16	42.37	41.65	43.51
Capital Goods	30.41	27.20	28.31	30.77	34.21	32.83	33.08
Other Imports	17.42	17.03	14.54	11.85	15.59	18.07	15.85
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Bank of Thailand, (2009)

II. Exports

Export by sector

	2009	2008	2007	2006	2005	2004	2003	2002
Primary	16,859.78	21,297.33	16,531.04	14,886.66	11,857.34	11,163.74	9,432.82	7,613.39
Manufacturing	135,542.66	156,436.07	136,148.27	113,121.75	97,420.48	83,736.07	68,770.68	58,424.80
High-tech products	92,332.06	111,444.20	99,857.36	83,446.77	70,843.76	60,160.33	47,514.65	40,125.11
Samples & other unclassified goods	15.32	26.10	1,026.27	1,525.13	1,466.87	1,441.84	1,704.21	1,973.02
Re-exports	4.44	18.09	161.88	188.15	191.70	160.61	131.68	145.09
Total exports	152,422.24	177,777.61	153,867.49	129,721.71	110,936.42	96,502.29	80,039.42	68,156.32

Percentage share of total export

	2009	2008	2007	2006	2005	2004	2003	2002
Primary	11.06	11.98	10.74	11.48	10.69	11.57	11.79	11.17
Manufacturing	88.93	88.00	88.48	87.20	87.82	86.77	85.92	85.72
High-tech products	60.58	62.69	64.90	64.33	63.86	62.34	59.36	58.87
Samples & other unclassified goods	0.01	0.01	0.67	1.18	1.32	1.49	2.13	2.89
Re-exports	0.00	0.01	0.11	0.15	0.17	0.17	0.16	0.21
Total exports	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Bank of Thailand, (2009)

II. Exports (continued)

Export by sector

	2001	2000	1999	1998	1997	1996	1995
Primary	7,452.14	7,979.40	7,278.83	7,609.45	8,797.67	9,496.28	9,593.02
Manufacturing	55,482.62	59,831.37	49,428.31	44,973.59	48,286.87	45,746.36	46,527.65
High-tech products	37,939.20	42,122.44	33,151.24	29,708.72	30,455.22	27,456.65	26,350.83
Samples & other unclassified goods	2,156.14	1,871.01	1,668.00	1,749.74	1,151.18	638.67	509.41
Re-exports	95.69	93.71	126.09	148.50	195.60	102.66	95.19
Total exports	65,186.62	69,775.51	58,501.26	54,481.31	58,431.34	55,983.99	56,725.30

Percentage share of total export

	2001	2000	1999	1998	1997	1996	1995
Primary	11.43	11.44	12.44	13.97	15.06	16.96	16.91
Manufacturing	85.11	85.75	84.49	82.55	82.64	81.71	82.02
High-tech products	58.20	60.37	56.67	54.53	52.12	49.04	46.45
Samples & other unclassified goods	3.31	2.68	2.85	3.21	1.97	1.14	0.90
Re-exports	0.15	0.13	0.22	0.27	0.33	0.18	0.17
Total exports	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Bank of Thailand, (2009)