

**THAILAND'S OPENNESS AND IMPLICATIONS FOR
ECONOMIC AND TRADE POLICY:
AN ECONOMETRIC STUDY**

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DECLARATION

“I, Thanet Wattanakul, declare that the PhD thesis entitled *Thailand’s Openness and Implications for Economic and Trade Policy: An Econometric Study* is no more than 100,000 words in length including quotes, and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.”

Signature:..... Date:.....

DEDICATION

This work is dedicated to my parents and all of my teachers.

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I would like to offer my sincere appreciation to all those people who provided support, motivation, encouragement, assistance and other help during my PhD study. Undoubtedly, this study would not have been completed without the kind support of my wonderful parents, *Chatchawan Wattanakul* and *Somsong Wattanakul* who always cheered me up and made me enthusiastic in finishing my study.

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- Wattanakul, T. 2009, 'Prospectus and Challenges for ASEAN+3 Integration: Policy Implications for Thailand', refereed and published paper presented at the 17th Annual Conference on PBFEM and 3rd International Conference on Business Asia (iCBA), Value Creation and Management: Vision for 2010s, School of Business, University of the Thai Chamber of Commerce, Bangkok, 1-2 July.
- Wattanakul, T. 2009, 'Impact of openness, economic policy reform and regional shocks on trade and growth of Thailand: An econometric study', *Chinese Business Review*, vol. 8, no. 1, pp. 17-30.
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ABSTRACT

Thailand is currently enhancing and promoting intensive trade and investment liberalisation, and has implemented a long-term growth policy in accordance with current regional economic integration, World Trade Organisation obligations and globalisation. Nevertheless, several recent internal and external factors such as the severe acute respiratory syndrome (SARS) and avian flu outbreaks, the Indian Ocean tsunami devastation, the Asian financial crisis and domestic economic policy reforms and political instability as well as military coups have affected the efficiency and success of this policy. While these issues have been important for Thailand and developing countries in Asia, only limited quantitative or evidence-based research has been undertaken to investigate them. Consequently, it has been very interesting to undertake modelling and policy-based research on this subject. Therefore, this study aims to develop an appropriate econometric model for Thailand to study the impact of openness on the country's trade and growth to provide plausible policy implications and recommendations.

This research conducts a substantive quantitative study to contribute to the investigation of trade and growth policy issues currently faced by Thailand. A new econometric modelling policy method, namely the endogenous gravity theory (EGT) is used to develop a simple flexible simultaneous-equation econometric model of Thailand's openness with its seven major trade partners (ASEAN4 – Indonesia, Malaysia, Philippines and Singapore, Australia, the US, the EU, China, Japan and India). The quantitative data are obtained from the International Centre for the Study of East Asian Development (ICSEAD), the World Development Indicators and the Bank of Thailand databases. The sample size for the estimation of this model is between 1984 and 2004 due to the availability of ICSEAD data in this period. The two estimation techniques, OLS and 2SLS, have been used to obtain the findings and to test for the reliability of the model. In addition, many useful diagnostic statistics such as the t-statistic, F-statistic, R^2 , adjusted R^2 and Durbin-Watson have been used to evaluate the significance and efficiency of the empirical findings.

The study reveals efficient and reliable empirical findings on trade-growth causality, and trade determination including the impact of shocks and policy reform on trade and growth between Thailand and its major trade partners over the past two decades. It also provides evidence on the linkage between trade in goods, foreign direct investment (FDI), services and regional economic integration for more credible policy implications. The implications for Thailand's openness policy in terms of opportunities and challenges under the context of multilateral, regional and bilateral free trade agreements to achieve mutual long-run growth are also discussed. The empirical findings suggest that only openness between Thailand and Japan is positive and statistically significant to Thailand's growth, whereas most of other countries' effects are positive but statistically insignificant. Both FDI and services liberalisation impact is small and negative but statistically insignificant to growth. Furthermore, the Asian financial crisis of 1997 had a massive negative impact that was statistically significant. On the other hand, the financial system and institutions reform as well as the capital flow liberalisation were positive and significant to growth.

More specifically, the most important recommendation suggests that Thailand's trade policy makers need to implement openness policy, and in accordance with multilateral, regional and bilateral free trade agreements (FTAs) to enhance long-run sustainable growth. To reach this goal, it is essential to guarantee that both regional and bilateral trade liberalisation are building blocks towards multilateral trade liberalisation. Furthermore, other appropriate and effective macroeconomic fiscal, monetary and industrial policies are also necessary to support and accelerate long-run growth as a result of trade liberalisation in Thailand. Nevertheless, the current political instability, military coups and violence of anti-government protests have contributed to a decrease in foreign investors' confidence and present an obstacle of comprehensive FTA negotiations due to the changes in trade policy of each government.

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LIST OF ACRONYMS

AD	Anti-dumping Duty
ADB	Asian Development Bank
AEC	ASEAN Economic Community
AEHP	ASEAN Early Harvest Program
AFAS	ASEAN Framework Agreement on Services
AFTA	ASEAN Free Trade Area
AIA	ASEAN Investment Area
AMC	Asset Management Corporation
ANIE	Asian Newly Industrialised Economy
APEC	Asia-Pacific Economic Cooperation
APF	Agricultural Production Fund
ASEAN	Association of South East Asian Nations
BIBF	Bangkok International Banking Facility
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BOI	Board of Investment
BOT	Bank of Thailand
CAMGEM	Chulalongkorn and Monash Universities General Computable Equilibrium Model
CEP	Closer Economic Partnership
CEPT	Common Effective Preferential Tariffs
CET	Common External Tariffs
CER	Closer Economic Relations

CGE	Computable General Equilibrium
CMI	Chiang Mai Initiative
COMECON	Council for Mutual Economic Assistance
CUSTA	Canada-US Free Trade Agreement
CVD	Counter-veiling Duty
DSM	Dispute Settlement Mechanism
EC	European Community
ECSC	European Coal and Steel Community
EFEA	European Free Trade Association
EEC	European Economic Community
EHP	Early Harvest Program
EI	Economic Integration
EGT	Endogenous Gravity Theory
EU	European Union
FDI	Foreign Direct Investment
FIDF	Financial Institution Development Fund
FTAA	Free Trade Area of Americas
FTA	Free Trade Agreement
GATT	General Agreements on Tariff and Trade
GATS	General Agreements on Trade in Services
GDP	Gross Domestic Product
GSP	Generalised System of Preferences
GT	Gravity Theory
GTAP	Global Trade Analysis Project

ICSEAD	International Centre for the Study of East Asian Development
ICT	Information and Communications Technology
IFS	International Financial Statistics
IMF	International Monetary Fund
JTEPA	Japan-Thailand Economic Partnership Agreement
MERCOSUR	Southern Common Market
MFA	Multifiber Agreement
MFN	Most Favoured Nation
MNE	Multinational Enterprise
MPI	Manufacturing Production Index
NAFTA	North American Free Trade Agreement
NESDB	National Economic and Social Development Board
NPL	Non-Performing Loan
NT	National Treatment
PCA	Partnership and Corporation Agreement
PTA	Preferential Trade Agreement
RTAs	Regional Trade Agreements
SEOM	Seniors Economic Official Meeting
SME	Small and Medium Enterprise
SPS	Sanitary and Phyto-sanitary Standard
TAFTA	Thailand-Australia Free Trade Agreement
TAMC	Thai Asset Management Corporation
TDRI	Thailand Development Research Institute
TFP	Total Factor Productivity

TIFA	Trade and Investment Framework Agreement
TIFTA	Thailand-India Free Trade Agreement
TISC	Thailand Investor Centre
TRIM	Trade Related Investment Measure
TRIP	Trade Related Intellectual Property Right
TUSFTA	Thailand-US Free Trade Agreement
RCA	Revealed Comparative Advantage
RMSE	Root Mean Square Error
RTA	Regional Trade Agreement
SARS	Serve Acute Respiratory Syndrome
SMP	Single Market Program
SOE	State Owned Enterprise
US	United States
VAP	Vientiane Action Program
WDI	World Development Indicator
WTO	World Trade Organisation

CHAPTER 1

THESIS CONCEPTUAL FRAMEWORK: AN OVERVIEW

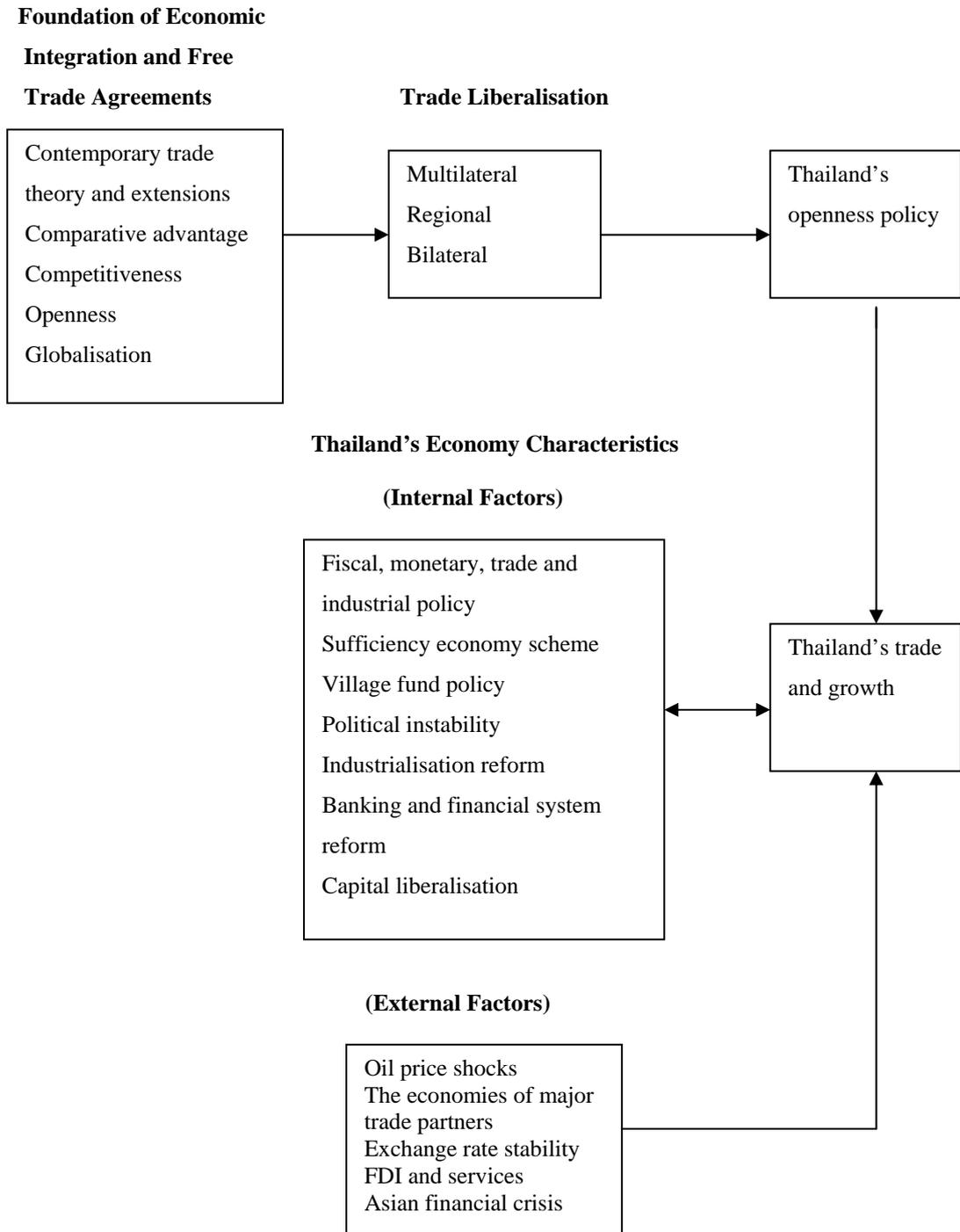
1.1 INTRODUCTION

To begin this study, the conceptual framework is outlined in this chapter. The proposed framework incorporates the research theme, the adopted methodology and expected outcomes, including explaining the linkage of key elements affecting Thailand's trade and growth. Moreover, the framework is also used to provide the guideline supporting the econometric modelling components and estimation in the following chapter. In this framework, two key elements are shown to affect Thailand's trade and growth: trade liberalisation agreements and the characteristics of the Thai economy. Also important are the external factors of oil price shocks and the economies of Thailand's major trade partners. An explanation of this framework is provided in the subsequent sections.

1.2 CONCEPTUAL FRAMEWORK

In order to provide a sound support for this study, it has been crucial to formulate an appropriate conceptual framework at the start. This framework is presented in Figure 1.1 to summarise linkages between the foundation of economic integration, trade liberalisation, Thailand's openness policy, and internal and external factors affecting Thailand's trade and growth.

FIGURE 1.1 CONCEPTUAL FRAMEWORK OF THE STUDY



Source: Developed from the literature by the researcher.

The above conceptual framework contains two dominant factors that have affected Thailand's trade and growth. These factors are: 1) trade liberalisation agreements, and 2) the Thai economy's characteristics including both internal factors and external factors. Trade policy implementation in Thailand needs to comply with multilateral, and regional and bilateral trade liberalisation agreements due to the WTO membership and regional and bilateral free trade agreements' (FTAs) commitments. Therefore, the importance and benefits arising from trade liberalisation can be explained as fundamentally being based on contemporary trade theories and extensions, comparative advantages, competitiveness, openness and globalisation, with nearly every developing country becoming a member of at least one regional trading block, in the case of Thailand, it is the ASEAN Free Trade Area (AFTA).

As Thailand is a small (in relative economic size) developing economy, economic performance and growth are mainly affected by several internal factors. These other factors include fiscal, monetary and industrial policies that are essential in supporting trade policy which accelerates the long-term growth. In addition, Thailand's trade and growth may also affect these internal factors. In the early 1990s, capital flow liberalisation was implemented in Thailand, leading to demand of massive foreign loans because of the huge interest rate differentials to provide credit to domestic investors. Furthermore, these loans were allocated to the non-productive real estate sector resulting in an unstable bubble-economy boom that was a contributing factor in the financial crisis in 1997. In order to assist in resolving this crisis, an intensive financial and banking system reform was implemented via enhancing the efficiency of Thailand's fragile and uncompetitive financial institutions.

In the early 2000s, the village fund project was implemented. This was aimed at stimulating rural growth by distributing one million bahts to each village to foster economy in rural areas. However, this project was not entirely productive due to an inappropriate usage of the funds. The king's sufficiency economy scheme had been suggested and introduced in the early 1990s before the crisis, however, its intensive implementation only commenced in the late 2000s. The core objective of this scheme concentrated on the sufficiency and self-dependency of the rural area population. It is strongly believed that the grass-root economy in the rural areas will lead to the country's overall economic growth; however, it is remaining in debate. Furthermore,

there is another internal factor slowing down growth. This is the current political unrest and instability that began in 2006 and continued to the present has been adding to an economic growth slow down.

An open developing economy like Thailand is also affected by external factors, such as the oil price shocks and the economies of its major trading partners. Since Thailand does not produce sufficient oil to meet its domestic consumption and production demands, the oil price fluctuations greatly affect its industries competitiveness, economic performance and growth. Export revenue is an important engine of growth for Thailand and depends on the economies of its major trade partners. In addition, exchange rate stability is essential for export competitiveness, resulting in sustainable growth. Foreign direct investment (FDI) is another external factor that contributes to employment, technology and knowledge transfer and generates growth particularly in the manufacturing industry. However, the production base movement to China and the Indian sub-continent is an emerging challenge to Thailand in terms of increasing attractiveness of long-term FDI. More importantly, the Asian financial crisis has most adversely affected the Thai economy's growth. This was most obvious in 1997 as a result of the contagion of the regional impact. During the crisis period, Thailand's GDP declined to below 10 per cent.

It can be concluded that both economic integration (EI) and FTAs directly affect trade liberalisation. Developing countries including Thailand have an obligation to liberalise their trade policy and practice openness according to multilateral, regional and bilateral agreements. But the economic and trade policies of its trading partners were also affected by the contagion of the Asian financial crisis. Trade is also one of the determinants of growth especially in developing countries. Therefore, three criteria are used in the proposed conceptual framework of this study: the foundation of EI and FTAs, trade liberalisation (openness) and its impact of trade on growth. These will be explained in full detail in the next chapter.

1.3 PROPOSITIONS OF THE STUDY

The main propositions of the study are outlined in this section. These propositions are compatible with the conceptual framework supporting the econometric

model's construction and will provide research answers to the thesis's objectives. Therefore, the following propositions will be examined in this research.

Proposition 1: Various aspects of international trade theory and practice can be used to explain the foundation of EI and FTAs. These aspects are contemporary trade theory and its extensions, gravity theory, comparative advantages, competitiveness, openness and globalisation. Furthermore, based on these aspects, trade liberalisation benefits the country as an engine of growth.

Proposition 2: It is Thailand's obligation to implement a trade liberalisation scheme subject to multilateral, regional and bilateral agreements. Multilateral commitments are under the WTO. For the regional level, ASEAN trade practices are the most important to Thailand. In the case of bilateral agreements, Thailand has to implement trade liberalisation in diverse procedures and time periods according to agreements with its partners. Therefore, a positive relationship is expected between openness, trade and growth.

Proposition 3: As Thailand is a small (in relation to economic size) developing economy, its economic performance and growth is affected by the impact of both external and internal factors (see Figure 1.1). Internal factors include fiscal, monetary, trade and industrial policy, the King's sufficiency scheme, village fund policy, political instability, industrialisation reform and banking and financial system reform. External factors include oil price shocks, the economies of Thailand's major trade partners, exchange rate stability and FDI.

1.4 KEY RESEARCH QUESTIONS, HYPHOTHESES, NEW

METHODOLOGICAL DEVELOPMENTS, FINDINGS AND POLICY

IMPLICATIONS OF THE STUDY

This section addresses the research questions, hypotheses, new methodological developments, research findings and policy implications including the issues for future research. They are used as the primary guidelines for the subsequent chapters.

1.4.1 Key Research Questions

It is necessary to construct an econometric model covering the key research questions to complete the study. These following key research questions are used as the map to explain the study process.

1. What are the basics of the foundation of EI and FTAs?
2. How does multilateral, regional and bilateral trade liberalisation affect Thailand's openness policy?
3. What is a new and appropriate econometric model of openness-trade-growth causality linkage in Thailand to accommodate recent developments in Asia?
4. Does the openness policy affect Thailand's trade and growth and in which way?
5. What is the role of crisis and policy reforms in Thailand's trade openness and development?
6. What are the appropriate and plausible policy implications and recommendations from the empirical findings on the ASEAN single market and Thailand's bilateral and plurilateral FTAs?

1.4.2 Hypotheses of the Study

After the presentation of the conceptual framework and propositions in the previous sub-section, the hypotheses of the study are described in this sub-section. These hypotheses are constructed to predict the estimation results as reported in the next chapter. The following hypotheses are formulated in accordance with the above three propositions.

Hypothesis 1: The effect of Thailand's trade openness is expected to be positive and significant to its trade and growth.

Hypothesis 2: Each of the *internal* economic and trade factor variables is expected to have a different impact and significance to growth. Some of these variables are qualitative and policy variables, e.g. capital liberalisation, and banking and financial system reform.

- 1) Fiscal, monetary and industrial policy is expected to be positive and significant to trade and growth.
- 2) Policy reform is expected to be positive and significant to trade and growth.

Hypothesis 3: Each of the *external* factor variables (such as FDI, services and the Asian financial crisis in 1997) is predicted to have a different impact and significance to growth. Some of these variables are qualitative and policy variables (see above)

- 1) FDI and services are expected to be positive and significant to trade and growth.
- 2) The Asia financial crisis is expected to be negative and significant to trade and growth.

1.4.3 New Methodological Developments

This study uses recent advances in economic and trade policy modelling theory (see for example Tran Van Hoa, 2004a, 2004b, 2005, 2007, 2008) to develop a new methodological approach to examine the impact of openness measured by the total trade value between Thailand and its partner via the development of a simultaneous equation trade-growth model for Thailand. The model is an endogenous trade-growth model and is estimated for seven different scenarios between Thailand and its major trade blocs. It can be also noted that the incorporation of policy reform, crises and shocks is another new feature of modelling development compared to other major existing studies (Tran Van Hoa, as above). As a consequence, the study is extended to investigate the impact of these factors on growth apart from openness.

1.4.4 Findings and Policy Implications

Based on both the new methodological development of the endogenous gravity theory model incorporating crises, shocks and policy reforms and the major existing literature, it is primarily expected that the impact of openness and policy reform are positive and significant to growth. On the other hand, the effect of the crisis is expected to be negative and significant to growth. The proposed policy implications are plausible in that they are based on international trade theory, economic integration and the empirical findings. It can be stated that for plausible empirical findings, trade liberalisation, particularly bilateral FTAs should be more effective in enhancing and accelerating benefits to Thailand. The scope of FTAs should also be extended to investment, services and other economic cooperation at a later stage. Furthermore,

efficient policy reform is necessary to promote long-run growth supported by sound macroeconomic and trade policy management. Effective crisis management is essential for Thailand's recovery from the Asian financial crisis of 1997 and prevention of adverse effects from the current global financial crisis including the fluctuation of oil prices.

1.4.5 Issues for Further Research

Due to the novel features of our research and its successful and useful applications to practical policy making, it can be used and extended to further research such as the impact of the ASEAN Single Market, and the effects of investment and service liberalisation on the growth of member countries. Moreover, an enlarged ASEAN integration, e.g. the ASEAN+3 (ASEAN plus China, Japan and Korea) FTA and the ASEAN+5 (ASEAN plus China, Japan, Korea, Australia and New Zealand), can be considered interesting future research issues. Other appropriate models include the current global financial crisis as another shock and a variety of single-equation and system estimation techniques can be applied to study these issues.

1.5 OBJECTIVES OF THE STUDY

Two main objectives are explored that include both general and specific objectives. For the descriptive analysis objective, this study reviews and analyses in more detail the economic and trade policies of Thailand during 1980 to 2005. This period has been chosen as the time when the most significant economic and trade policies in Thailand were being adopted. Openness via trade liberalisation was the policy chosen to attain steady economic growth for Thailand. Therefore, the study picks up this issue as the general objective that is analysed using the qualitative approach.

For specific quantitative analysis objectives, a new and appropriate econometric model for economic and trade policies in Thailand is constructed after a survey and review of relevant previous studies is carried out. The independent or exogenous macroeconomic variables are economic policy, trade policy together with crises and shocks whereas the dependent variables are economic growth and trade. Suitable econometric approaches are used to analyse and interpret the results. Furthermore, recommendations are made for economic and trade policy in Thailand

especially in multilateral, regional and bilateral contexts. Thus, both quantitative and qualitative analysis is used to reach these objectives.

1.6 SIGNIFICANCE OF THE STUDY AND EXPECTED OUTCOMES

As a member of the WTO, ASEAN and many bilateral FTAs, Thailand has to reform its economic and trade policy according to the obligations of these bodies. Moreover, Asian regionalism has become the major influence on the economic and trade policy of countries in this region. Asian regionalism can be described in terms of the significant increase in the number of new economic integration and free trade agreements developed in East and South East Asia between 2001 and 2002 (Tran Van Hoa, 2004a, 2004b). There are several examples of plurilateral and bilateral FTAs under Asian regionalism, e.g. the ASEAN+3 FTA, the ASEAN+5 FTA, China+Japan+Korea FTA, the Australia-Japan FTA and the Singapore-New Zealand FTA. The important obligations put on of these bodies are identical in terms of openness. Trade and investment liberalisation, economic development and cooperation for the member countries are included in these obligations. Besides that, Thailand implemented economic and trade policy reform more intensively to solve its economic problems during the crisis period. Thai policy makers believe that trade liberalisation is an efficient alternative way to correct these problems.

As a result, various economic and trade policy reforms were implemented. Thailand's first experience tariff restructuring started in 1990 and was completed in 1997. Limiting export control is the other policy that has been adopted to generate an export-led economy. Some products, such as textiles and clothing are under control due to bilateral agreements between Thailand and its trading partners. Besides that, Thailand also has to continue reforms to tariff and quota schemes in order to comply with WTO and ASEAN requirements.

Furthermore, the various bilateral FTAs are obviously an important part of the trade policy of Thailand. These policies are used to increase export opportunities in potential markets and improve competitiveness. Thailand's bilateral FTAs include the Thailand-US FTA, the Thailand-Australia FTA, the Thailand-China FTA, the Thailand-Japan FTA and the Thailand-India FTA.

Expected outcomes of this study are the construction and estimation of an appropriate model for economic and trade policy in Thailand and the implications of its empirical findings for economic and trade policy, regional relationships and impacts of crises and shocks for Thailand. The implications for impacts of crises and shocks are included in this section because crisis and shocks were main factors affecting Thai's economy during the reform period. In addition, policy implications and recommendations for the ASEAN single market are proposed. Furthermore, policy implications are proposed for Thailand's overall and individual FTAs. These policy implications can be used as the guidelines to achieve more efficient trade policies in the multilateral, regional and bilateral trade liberalisation contexts.

1.7 CONTRIBUTIONS TO KNOWLEDGE

Based on the literature review, previous studies on openness policy in developing Asian focus mainly on the impact of openness and trade on growth. *It can be claimed that only some empirical research studies have explored the impact of crises and shocks and various policy reforms on trade and growth but none focus on Thailand.* This is a significant deficit as crises (e.g. the 1997 Asia crisis); shocks (e.g. the 2004 tsunamis in South East Asia) and policy reforms (e.g. WTO membership in 1994, financial institutional and banking reform of 2002) have played an important role in growth. Moreover, only limited quantitative empirical research has been undertaken within the context of an enlarged ASEAN. Therefore, it is important to construct an appropriate econometric model of openness, trade and growth incorporating the effects of internal or external shocks or other policy reforms in Thailand for our study.

A suitable model of Thailand's openness, trade and growth is constructed by *extending the endogenous gravity theory (EGT)* and via incorporating internal or external shocks or other policy reforms and other economic and non-economic (e.g. social, political or demographic) factors relevant to Thailand (see Tran Van Hoa, 2004a, 2004b, 2007, 2008). Another contribution to knowledge is that external and internal shocks are used in the simultaneous trade growth equation regressions as a dummy variable. Both policy implications and recommendations for the ASEAN single market context are included in this part of the study due to the strong collaboration of the ASEAN to enhance trade, growth and economic cooperation. Furthermore, these

policy implications and recommendations are also extended to cover Thailand's current bilateral FTAs issues. Therefore, it can be said that the study involves both macroeconomic modelling and policy-based research.

1.8 LIMITATIONS OF THE STUDY

This study has some limitations. Firstly, it deals only with a case study of Thailand even though there are several countries in East Asia that have reformed their economic and trade policies. So, there is a lack of comparison of the impacts of economic and trade policy reform between Thailand and other countries in the region experiencing economic crisis. Secondly, the scope of the study covers the period from before to after the crisis resulting in different trade policies of Thailand in the period of the study. In addition, some trade policies have large time lags before they affect the economy.

1.9 STRUCTURE OF THE THESIS

This thesis is divided into eight chapters and the content of each chapter is explained as follows.

Chapter 1 is an overview of the conceptual framework of the study. This conceptual framework describes the internal and external economic and trade variables used to construct the econometric model presented in a subsequent chapter. It also proposes the key research questions of the study.

Chapter 2 explains the theoretical background related to the study and covers multilateral, regional and bilateral trade liberalisation including the openness and trade policy of Thailand. It also discusses recent developments in the WTO, the AFTA and the Thai economy. The objectives, significance, expected outcomes and contribution to knowledge of the study are presented in this chapter.

Chapter 3 reviews the literature related to issues of openness and trade liberalisation, as well as regional economic integration. These issues are reviewed in order to provide the background of their linkage and importance to economic development and growth, particularly for developing countries.

Chapter 4 describes the trade-growth simultaneous-equation econometric model construction procedure. This model is developed by using the endogenous

gravity theory (EGT) and is adapted to the case study of Thailand. The comparison of this model to other models in terms of openness and growth is also included. This content combined with the previous literature review chapter presents the methodology of the estimated econometric model construction. Moreover, the theoretical justification and characteristics of the model are illustrated to support the model usage.

Chapter 5 presents the model estimation process. The estimation techniques of OLS and 2SLS (as an instrumental variable estimator), including the statistics used to interpret empirical findings, are explained. The interpretation of the estimated findings in both statistical and economic perspectives is revealed. Additionally, the explanation of model reliability is incorporated in this chapter.

Chapter 6 proposes the policy implications based on the results of the previous chapter, for Thailand's domestic and bilateral trade with its major trade partners. Additional literature research from both domestic and international sources has been undertaken to facilitate the appropriateness and plausibility of these policy implications

Chapter 7 proposes policy recommendations for Thailand's plurilateral trade with its major partners, based on the findings from Chapter 5 and the policy implications from Chapter 6.

Chapter 8 provides the research conclusions of this study and the suggestions for further studies.

1.10 SUMMARY

In summary, the conceptual framework, propositions, and key research questions including the hypotheses of the study are presented in this chapter. The conceptual framework is constructed using three core elements of international economics and trade policy, namely economic integration and FTAs, trade liberalisation, and internal and external factors. It can be stated that Thailand's openness and growth is mainly affected by trade liberalisation and implementation of multilateral, regional and bilateral FTAs commitments. The internal and external factors are represented by several variables. Six key research questions are developed to process data, obtain plausible estimates, conclusions and complete the study. The propositions and hypotheses of the study are also explained. They support the estimated econometric

modelling construction and empirical findings in the next chapter. Openness is expected to be positive and significant to growth. The Asian financial crisis is expected to be massively negative and significant whereas the banking and financial system reform is expected to be positive and significant to growth.

In addition, a principal objective of this thesis is to test the above conceptual hypotheses against real-life historical data. The final answers will be based on the findings of the empirical study to be undertaken in the following chapters. Policy implications and recommendations will be also based on these findings after having subjected them to various economic efficiency and plausibility tests.

CHAPTER 2

POLICY BACKGROUND

2.1 INTRODUCTION

This chapter discusses the relevant background and theories underlying our research in Section 2.2. It also reflects on the key issue of the study, namely, the theoretical background of international trade and economic integration, multilateral trade liberalisation. The recent economic and trade developments, regional trade liberalisation, bilateral trade liberalisation and openness particularly in Thailand are discussed in Section 2.3. Moreover, the objectives of the study are explained in Section 2.4. The significance of the study and expected outcomes are described in Section 2.5. The contribution to knowledge is explained in Section 2.6. Lastly, the limitations of the study are described in Section 2.7 and conclusions are presented in Section 2.8.

2.2 BACKGROUND ON TRADE LIBERALISATION

The background and relevant theories are explained as follows to support the study and the discussion of regional free trade agreements (RTAs).

2.2.1 Theoretical Background

Trade liberalisation or openness is a direct consequence of economic integration and the concept of economic integration can provide a theoretical rationale for trade liberalisation. A clear distinction between *liberalisation* and *economic integration* has to be described as background and as relevant concepts of the study. Liberalisation includes more open market access, free trade and trade and investment liberalisation in compliance with the goals of WTO. Economic integration includes preferential trade agreements (PTAs) or FTAs in the development process as a consequence of trade and investment and financial liberalisation (Obstfeld and Taylor, 2004).

There are many fundamental concepts included in economic integration. One of the basic concepts is that member countries move to freer trade and further opening of their economies to obtain economic advantages (Appleyard and Field, 1998, p. 353).

Economic integration cannot be measured by other activities such as investment and economic related cooperation.

There are four basic types of economic integration. The degree of economic integration varies according to the type of trade agreement in force (Appleyard and Field, 1998, p. 353). First, under an FTA, all members have to remove the tariffs on the products traded between each other. However, each member can apply its independent tariffs to non-members. Second, in the case of a customs union, member countries remove all tariffs between them. Moreover, it is important that the group acts as a single body in terms of negotiation of trade agreements with non-member countries. The tariff applied to non-member countries is the common external tariff.

Third, a common market is formed by the combination of an FTA and customs union. Within the common market, all the barriers to factor movement have to be removed. This means that labour and capital can freely flow between member countries. The most prominent example of a common market is the European Community (EC) that began in 1958 and has now become the European Union (EU). Fourth, the most complete form of economic integration is an economic union. In an economic union, members have to set up the unification of economic institutions and implement cooperation via uniform economic policy. This is the long-term goal of almost all countries particularly those in a process of forming an economic union, although it is a very difficult procedure and a long road.

2.2.2 Multilateral Trade Liberalisation

The impact of a multilateral trading system, as embodied in the World Trade Organisation (WTO) rules introduced in 1995, has contributed to significant economic growth, development and employment. Non-discrimination, transparency and fair trade are the main principles of the WTO. Developing countries have very different priorities and interests concerning their obligations under regional economic integration and their dependence on trade in agriculture, manufacturing and services (Schott, 2000, p. 15).

The Uruguay Round negotiations which began in November 1982 by the ministerial meeting of the General Agreements on Tariff and Trade (GATT) members in Geneva, Switzerland, took the first steps in reducing barriers in both agriculture and services. Industrial tariffs have decreased significantly over time, but with exceptions.

The agenda for agricultural reform is extensive; many issues such as subsidies, tariff-quotas and other non-tariff barriers remain (Schott, 2000, p. 15). Although it is the obligation of the members to reduce tariffs and other non-tariff barriers, tariffs imposed by developing countries are still generally high.

Trade related investment measures agreement (TRIMs) emerged from the Singapore Ministerial Conference of the WTO in 1996. Under this conference the three working groups on trade and investment, competition policy and transparency in government procurement were set up. This negotiation was weakened due to the conflict between members in terms of the coverage and the characteristics of the new regulations. It can be said that export performance and technology requirements were not covered by the TRIMs agreement under the Uruguay Round (WTO, 2006).

The 1986 goals of TRIMs were to expand and promote world trade liberalisation and facilitate investment across international borders to promote economic growth of all partners, especially the developing countries via the encouraging of free competition. Trade in services was not included in this agreement. Therefore, it can be said that TRIMs have the effect of prescribing domestic content requirements, while enhancing and providing specific means of export performance contributing to foreign investors (Moran, 2000, p. 223). The phase-out period of these measures is two years for developed countries and five years for developing countries. Nevertheless, developing and least-developed countries can extend this period.

The Doha Declaration emerged from the Fourth Ministerial Conference in Doha, Qatar in 2001, and provided important negotiations including the implementation of the current agreement issues. For agriculture, the long-run goal to establish a fair and market oriented trading system was reconfirmed. The governments of member countries are committed to substantial open access to their markets, to reduce export subsidies in all forms and to decrease domestic support that can distort trade. Market access for non-agricultural products was also included in the Doha Declaration and tariff-cutting negotiations on all non-agricultural products have been implemented. The objective of this scheme is to eliminate tariffs and non-tariff barriers especially on export products of developing countries.

Presently, due to the lack of consideration of developed countries, major concern for developing countries under the Doha Declarations still exists and involves

trade related intellectual property rights (TRIPs) (Grimwade, 2004, p. 15). TRIPs were implemented in 1998; nevertheless the agriculture issue remains the crucial barrier to complete the declaration. The developing countries are not reducing their tariffs in agricultural goods enough, despite serious requests from the major economic blocks, e.g. the US and the EU. However, due to multilateral tariff cuts, less developed countries have been granted preference in exporting to the developed countries. Therefore, it can be said that the developing countries' benefits from the Doha Declaration can be attributed to the vigorous enforcement of the WTO provisions for the developing countries

The Doha Declaration also supports the promotion of public health in member countries via both access to existing medicines and the creation of new medicines. Nevertheless, under the Doha Declaration, some countries may experience upfront problems while making and using compulsory licensing if they have too little or no pharmaceutical manufacturing capacity. Thus, the deadline of this issue has been extended to applying the provisions on pharmaceutical patents for least-developed countries until 2016. Trade facilitation will progress continuously under the Doha Declaration on the basis of further expediting the movement, release and clearance of goods that include goods in transit. The negotiation also considered anti-dumping, subsidies and countervailing measures (WTO, 2000).

The Doha Declaration can be regarded as the principle instigation towards multilateral trade liberalisation. However, this negotiation involved some uncertainty. The core challenges concern the potential benefits and costs analysis and assessment of the agreement, particularly for the developing countries. As a result, the necessity for a new round of trade negotiations emerged in 2005.

The Sixth WTO Ministerial Conference was set up in Hong Kong in December 2005. Most of the trade related issues for both developing and developed countries had already been discussed repeatedly in the earlier Doha Declarations. This negotiation includes the important issues concerning the lack of transparency and democracy in the decision-making processes and the unequal power of the developed countries over the developing countries that produce distortion in the trade policies. Consequently, numerous trade aspects were reconsidered in this negotiation. The Doha Declaration was renewed and it was resolved to continue discussions with little success

in 2006 (WTO, 2006). Finally the conference was suspended indefinitely and efforts are now being made to organise another in the future.

2.2.3 Recent Economic and Trade Developments in Asia

Intra-regional trade in East Asia in the 1990s has increased faster than that with other markets. This is due to the pursuing of trade liberalisation and growth promotion under the regional economic integration framework (Kharas and Krumm, 2004, p. 53). Asian economies, especially China has experienced economic miracles in the past decades despite several challenges emerging. These challenges were combined with internal shocks, external shocks, structural and major policy changes that included the US economy slowdown in the second half of 2008, the SARS and avian flu outbreak between 2002 and 2004. The combination of several developing countries implementing unilateral reforms to plurilateral commitments in trade has also emerged from market-led factors. Intra-regional trade has been driven not only by demand growth but also by improving competitiveness. The product comparison of intra-regional trade consists of four major sectors: office machinery, telecommunications equipment, electronics as well as textiles and clothing. The major factor contributing to intra-regional trade has been the increase in international production networks that reflect the rapid growth of trade in components or partly assembled goods. China is a crucial player in this production network. On the other hand, Japan remains an important centre in the region (Kharas and Krumm, 2004).

Market driven regional integration is the primary achievement of East Asian trade (Ariff, 1997, p. 78). A wider free trade agreement is under negotiation and has recently been proposed by Japan for an ASEAN+Japan FTA and bilateral agreement particularly between Japan, Singapore, Korea and Thailand in the early 2000s. If agriculture is included in the ASEAN+China FTA or the ASEAN+3 FTA proposals, the estimated welfare gains for ASEAN countries are expected to approximately double (Low, 2000, p. 81). The motivating factor driving East Asia to propose a regional integration is their disappointment with the pace of multilateral trade liberalisation in agricultural products and labour-intensive manufactures such as textile and clothing in high-income countries (Kharas and Krumm, 2004).

Three factors have contributed to this recent emergence (Tran Van Hoa, 2004a, 2004b). First was the consequence of fast growth, together with the economic and financial restructuring developments of the last decade in North East Asia. Second was the outcome of the Asia financial crisis commencing in Thailand in 1997 and its contagion effects in East and South Asian economies. Finally there was the impact from the inefficient handling of these economic and financial crises by the International Monetary Fund (IMF).

The economy of East Asia is emerging from this financial and currency crisis that occurred during 1997 to 1998, with a new criterion for development policies. Policy makers have developed a set of economic policies designed to stimulate stability, growth and regional integration. These policies focus on the fundamental strategies promoting cross-border trade and the impact of these flows on development and the breadth of distribution of the gains from this trade. The success of these agreements depends on two factors. Firstly, these agreements have to provide a compelling understanding of how integration leads to shared growth and prosperity. Secondly, these agreements should move beyond trade policy to concerns about the second-best issues and trade-offs including sensitive areas (Kharas and Krumm, 2004). Both of these issues are necessary for guaranteeing the enhancement of mutual benefits especially for developing countries.

2.2.4 Regional Trade Liberalisation

This section considers regional trade liberalisation that occurred in South East Asia and commenced in 1991, from an ASEAN perspective. The most important objective of ASEAN is to stimulate intra-ASEAN trade and investment via the ASEAN Preferential Trade Agreement (PTA). Under the PTA, member countries have to implement the common effective preferential tariffs. The member country's total tariff lines consist of two categories, inclusions and exclusions. Exclusions are further divided into three sections called temporary exclusion, sensitive exclusions and general exclusion. It is the obligation of member countries to reduce the tariff rates of these tariff lines (Ariff, 1997). This enhanced PTA was established in the Third ASEAN Summit in Manila in 1991. In addition, the economic cooperation agreement was set up

at the ASEAN Summit in Singapore in 1992. This agreement included the establishing of an ASEAN Free Trade Area (AFTA).

The ASEAN framework agreement for services trade liberalisation was extended and aimed to promoting cooperation by cutting restrictions to trade in services and to liberalising trade in services by expanding the scope of liberalisation of those agreements undertaken by the WTO. In 1998, the six original signatories of the Common Effective Preferential Tariffs (CEPT) agreement committed themselves to binding at least 85 per cent of their tariff lines at rates not exceeding five per cent by 2000. Thailand grants tariff preferences to ASEAN members under agreement for the progressive establishment of the AFTA by 2002.

The most important goal of the AFTA is to encourage the ASEAN economies to form a single production network via tariffs elimination in addition to enhancing further intra-ASEAN economic cooperation, trade and investment in order to sustain economic growth and stimulate the stability and prosperity of the region (ASEAN, 2006). Both tariffs and non-tariffs barrier elimination among members can be viewed as an accelerator for more efficiency in production and long-term competitiveness (ASEAN, 2006). Early in 2002 only 1,683 items excluded from 44,060 items had tariffs of more than five per cent. The current average tariffs applied to traded goods are 3.8 per cent under the AFTA scheme. The harmonisation of customs procedure is the means to facilitate trade under the AFTA. All of the import tariffs have to be lifted by 2010 for the six original members and by 2015 for the new members. The effectiveness of the AFTA can be seen directly from the CEPT implementation. Here enhancement can be attributed to tariffs reduction according to the pre-determined schedule and range of goods list. On the other hand, the difficulties of harmonising rules of origin are the critical CEPT enforcement obstructions. Furthermore, the sector selection to be included in the scheme is not clear. However, the AFTA applies pressure on members to liberalise their trade schemes within the schedule.

In addition, ASEAN has presently established external relations with many countries, for example the ASEAN+3 FTA that is actually three separate ASEAN+1 agreements. The ASEAN+3 FTA was aimed at greater regional economic coordination creating an East Asia Free Trade Area. The ASEAN+3 FTA as a single market would provide larger welfare gains than the three alone (China, Japan and Korea). The

extended ASEAN+3 FTA to include Australia and New Zealand Common Economic Relations (CER) is a new opportunity for economic growth of the ASEAN (Kharas and Krumm, 2004). Therefore, it can be said that the realisation of the AFTA is a major step forward for regional economic integration in ASEAN. Besides that, the enlarged ASEAN FTAs can be considered as important steps towards the building of an economic block bringing together the economies in Asia-Pacific region as well as Northeast Asia (ASEAN, 2006).

2.2.5 Bilateral Trade Liberalisation

Currently Thailand has signed many bilateral FTAs with a number of partners both in Asia and other regions. This alternative trade policy negotiation and implementation coincides with Thailand's new trade strategy. There are many motivations attributed to Thailand's FTAs policy (Chirathivat and Mallikamas, 2004, p. 42). Firstly, the consequences of the financial crisis in 1997 necessitated closer economic cooperation in the East Asian region including Thailand. Secondly, the changing economic environment contributing to the financial crisis of 1997 forced the Thai government to find alternative policies to stabilise foreign exchange revenue in the long run. Finally, the apparent failure of the WTO negotiations and the accession of China in WTO highlight the need for Thailand to reform its trade policy. The objectives of establishing an FTA are to increase bilateral cooperation and regional stability, to enhance trade between two members and to improve their development, growth and welfare. Moreover, negotiating bilateral FTAs is easier than multilateral negotiations. Consequently, bilateral FTAs policy is an important current trade policy of Thailand. The common goal of a bilateral FTA is to reduce both tariffs and non-tariff barriers between members in order to increase their share of the world's export market. Therefore, Thailand can gain benefits for its economic growth and welfare from this closer economic relationship (Chirathivat and Mallikamas, 2004). The Thai government has implemented its FTA as an essential tool of an outward looking trade policy. Furthermore, the Thai government aims to increase trade and investment opportunities and expand export to new potential markets by creating trade partners via FTA agreements.

There are several examples of FTAs between Thailand and other countries that have been signed and implemented such as the Thailand-Japan (2005), the Thailand-China FTA (2003), the Thailand-US FTA (2006), the Thailand-India FTA (2004), Thailand-Bahrain FTA (2005), the Thailand-Australia FTA (2005), the Thailand-Peru FTA (2004), the Thailand-New Zealand FTA (2005), the Thailand-EU FTA under the ASEAN-EU FTA (2004) and Thailand-Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) FTA (2004). Each of these FTAs has different products coverage, implementation periods, procedures and progress.

2.2.6 Openness

There are various methods to capture *the openness* of the country but there are no absolute answers for what is the most accurate, reasonable and reliable approach. According to Baldwin (1989), it is affirmed that both outcome and incidence-based measures can be used for measuring openness. Outcome-based measures refer to the information of policy-induced trade barriers that can be obtained from the data of the variables that presumably affect prices or trade flows. Incidence-based measures are built up from the actual data on trade barriers.

Of the outcome-based measures, the ratio of trade, normally, imports plus exports, to GDP is the simplest. However, this measure can be affected by both the economy's structural characteristics and other external factors that lead to changes in the cost of trading. Leamer (1998) solved this problem by applying the Heckscher-Ohlin factor endowment to forecast the composition of a country's trade without intervention. This method can be applied by using the average deviation of the actual from the predicted values resulting from the measure of openness or intervention. Only the deviation of the country from the cross-country average level can be measured with this approach.

Penetration ratios are another example of outcome-based measures. These ratios are only used to indicate restrictions on imports. Imports to GDP ratio and imports to aggregate consumption ratio are classified as penetration ratios. The latter ratio is a more reliable indicator for trade policy in developing countries because consumption goods are the most restricted goods. In terms of calculating this ratio using

total imports, the proportion of consumer imports to total imports is assumed to be a minimum across countries and time. The supporting reason for this criterion is that higher restrictions can be implied from a lower ratio rather than differences in composition of imports (Leamer, 1998).

The third outcome-based measure is derived from the price comparison of similar products between domestic and border prices. This measure is better than the average tariff rate since it can capture the effects of both tariff and non-tariff barriers. In addition, economic interpretation can be more easily investigated by this measure. The domestic prices and border prices of the same individual goods have to be compared through the adjusting of transport costs, distribution mark-ups and differences in quality. This practice is relatively difficult and takes time and can be done for only a few developing countries (Andriamananjara and Nash, 1997). The World Bank (1991) has measured domestic prices via international prices by using national accounts prices index data. To indicate distortions in trade regimes, differences between the domestic prices relative to international prices of tradable goods have to be taken. Underestimation of trade restrictions in trade policy, particularly in developing countries that impose tariffs on both imports and exports, is normally found. This finding leads to higher prices of importable goods than the world level whereas prices of exportable goods are lower. This index can be small despite large distortions appearing when the average deviation is measured across all tradable goods and negatives offset the positives.

The final category of outcome-based measure uses the exchange rate. An indication of the strength of trade restrictions can be drawn from the black market premium. The black market premium is a reliable proxy of the excess demand for foreign exchange. Capital flight is the key factor that causes higher volatility of the black market premium. Another outcome-based measure is the real exchange rate movement. The real exchange can be appreciated due to trade restrictions. However, estimating the equilibrium real exchange rate is difficult. Nevertheless, it is clear that trade liberalisation will depreciate the real exchange rate. Thus, real depreciation can be used to investigate trade liberalisation schemes.

The incidence-based measure consists of the average tariff rates and indexes of non-tariff barriers measures. The average statutory tariff (non-weighted, weighted,

import shares or production shares) or average collection rate which is the ratio of import duties collected to imports value, has to be measured to obtain the average tariffs. The legal rates do not explain anything when there are widespread exemptions or smuggling. In the same way, misleading collection rates can be misleading when exemptions are made, then the country is unable to compete with domestic production and imported inputs. This is called escalated structure (Andriamananjara and Nash, 1997). Low to moderate collection rates and high effective protection rates emerge from this escalated structure. So, presumably the best tariff-based measure is an average of statutory rates weighted by production shares. But tariff-based measures have a crucial weakness. This weakness can be seen in trade schemes of developing countries that always restrict imports with other non-tariff barriers. As a result, the tariffs are redundant for many products since the domestic producers do not get any additional protection from the tariffs. In this case, the tariff level is not a good indicator of trade policy.

To overcome this obstacle, measures of non-tariff barriers are developed (Laird and Yeats, 1988). These measures are normally combined with the number of products categories that are subjected to the barriers divided by the total product categories in the classification criteria being adopted. The most useful indicator of domestic industry protection by non-tariff barriers is the production weight index. The actual effects of non-tariff barriers vary significantly in different products and different countries.

Anderson and Neary (1994) developed a trade restrictiveness index. The effects of both tariffs and non-tariffs barriers are included in this index. Consequently, it is debatable whether this is the most theoretically accurate. However, based on the absence of domestic price, assumptions about the effects of non-tariff barriers are necessary for empirical works and the results vary depending on the assumptions are made.

2.2.7 Openness and Trade in Thailand

It is useful to first explore the changes in macroeconomic indicators of Thailand before moving to examine the openness and trade in Thailand. These indicators are presented in Table 2.1.

TABLE 2.1 THAILAND'S KEY MACROECONOMIC INDICATORS BETWEEN 1995 AND 2005

Indicators	1995	1997	1999	2001	2003	2005
GDP ¹	2941.74	3,072.61	2,871.98	3,073.6	3,464.70	3,842.53
Inflation ²	5.8	5.6	0.3	0.3	0.2	1.6
Trade Balance ³	-7.6	-4.1	8.9	8.9	3.8	-8.6
Current Account ⁴	-13.2	-3.1	11.3	11.3	8.0	-3.7
Balance of Payment ⁵	7.2	-10.6	4.6	4.6	0.1	5.4
International Reserve ⁶	46.5	23.1	34.8	34.8	42.1	52.1
Total Debt Outstanding ⁷	100,309	109,207	95,237	67,181	51,793	52,040
Exchange Rate ⁸	24.9	31.2	45	44.5	41.5	40.3
Unemployment Rate ⁹	3.8	5.0	4.2	3.2	2.0	1.9

Notes: 1 is in billions of bahts, 2 is in percentage change of consumer price index (2002 = 100), 3, 4, 5 and 6 are in billions of US dollar, 7 is in millions of US dollars, 8 is in baht: US dollar, 9 is in percentage changes.

Sources: www.bot.or.th, www.nso.go.th, www.worldbank.org, www.imf.org and www.adb.org

According to Table 2.1, Thailand's GDP increased gradually from 2,941.74 billion baht in 1995 to 3,072.61 billion baht in 1997. However, this GDP decreased significantly to 2,871.98 billion baht in 1999 due to the Asia economic crisis. On the other hand, the GDP increased remarkably from 3,073.60 billion baht to 3,842.53 billion baht in 2005. The international reserve decreased sharply from US\$46.5 billion in 1995 to US\$23.1 billion in 1997 because of the intensive currency attack that precipitated the Asian financial crisis. Nevertheless, the international reserve increased from US\$34.8 billion to US\$52.1 billion due to the increased balance of payment and the recovery of the economy between 1999 and 2005. However, there was a huge decrease between 1999 and 2001. A huge slowdown in exports resulted in a current account deficit of about US\$13.2 billion in 1995. The current account balance decreased to about US\$3.1 billion in 1997 and then significantly increased to a more surplus of US\$11.3 billion in 1999. On the contrary, there was a current account deficit of US\$3.7 billion again in 2005. The balance of trade deficit was US\$7.6 billion in 1995. There was a gradual decrease of this deficit to US\$4.1 billion in 1997. The balance of trade reversed between 1999 and 2005 from a surplus of US\$8.9 billion to a deficit of US\$8.6 billion. The balance of payment was in surplus at US\$7.2 billion in

1995. There was a considerable reverse in the balance of payment deficit of US\$10.6 billion in 1997. The balance of payment reversed again and then fluctuated from a surplus of US\$4.6 billion in 1999 to a surplus of US\$5.4 billion in 2005.

Thailand's inflation rate decreased slightly from 5.8 per cent in 1995 to 5.65 per cent in 1997. It then fluctuated between 0.2 per cent and 1.6 per cent from 1999 and 2005. In contrast, total debt outstanding increased significantly from US\$100,039 million in 1995 to US\$109,276 million in 1997 due to the Asian financial crisis and baht devaluation. However, the total debt continually decreased to US\$52,040 million in 2005 because of the payment of the IMF loan. The average exchange rate was 24.9 baht per US dollar in 1995 and depreciated to 31.2 baht per US dollar in 1997 due to the Asian financial crisis and the introduction of the managed float system. There was peak depreciation to 45 baht per US dollar in 1999. In 2005, the baht was appreciated to 40.3 baht per US dollar. In response to this crisis was an unemployment rate 3.8 per cent in 1995 that increased considerably to 5 per cent in 1997. There was a gradual decrease to 4.2 per cent and 3.2 per cent in 1999 and 2001 respectively. The rate further decreased to 2 per cent and 1.9 per cent in 2003 and 2005 respectively.

In terms of the trend of Thailand's tariffs, these were downwards. Furthermore, the tariff rates have fluctuated less since December 1994 due to its membership in the WTO. In response Thailand has to confer the most favoured nation (MFN) status to all WTO members. There are good reasons for Thailand to become a member of the WTO such as improving and harmonising the tariff system, and improving and expanding market access in the potential member countries (WTO, 2000). As a result, since 1995 the Thai government has fulfilled several obligations of the WTO to reduce and eliminate market access barriers. However, a few quantitative restrictions exist in the agriculture, textile and clothing sectors. It can be claimed that the trade policy of the Thai government has altered significantly after WTO membership was granted. Thailand has been successful in trade policy reform to promote trade and the economic cooperation required by WTO membership, such as negotiating the elimination of tariff and non-tariff barriers negotiation, regional trade liberalisation and harmonisation in the issues of standards and regulations

In September 1999, Thailand applied its MFN tariffs averaging 18 per cent compared with 23 per cent in 1995. The simple average of bound tariff lines was 26 per

cent for industrial products and 34 per cent for agriculture products, once the Uruguay Round of tariff reduction was fully implemented in 1995. However, 31 per cent of national tariff lines covering industrial tariffs are unbound. Tariffs have increased during the period under review in several cases because the applied MFN tariff rates exceed WTO bound rates, but the authorities noted that in such cases MFN bound rates apply to the WTO members, on condition that a certificate of origin is provided to customs.

The financial crisis created the concern that bank failure would deprive producers of access to export finance. The authorities, therefore, have greatly expanded the numbers and funding of export financing schemes, some of which involve preferential terms. The authorities have also taken advantage of transitional provisions contained in the WTO agreement on subsidy and countervailing measures to introduce additional tax incentives in favor of exports. However, Thailand competes on world agriculture food and other markets without any significant export subsidies. Also, substantial progress has been made to expedite the customs clearance process for exports, as part of an overall strategy. With quantitative restrictions maintained by trading partners, export quotas are in place on textiles and clothing products destined for Canada, the EU, Norway and the US, and on car exports to Taiwan (WTO, 2000).

In 2000, the AFTA tariff slightly exceeded seven per cent, less than half of the applied MFN rate. High tariffs were applied in the domestic meat and dairy, fruit and vegetables, sugar, beverage and tobacco manufacturing industries. Thailand did not apply quantitative restrictions on agriculture food imports. Many of the tariff quotas established under the Uruguay Round were not used in practice to restrict imports; instead, lower or zero duties were frequently applied when imports of the products concerned were needed for domestic processing industries. For the few products whose importation was impeded by high tariffs, partners to the AFTA had unlimited access to the Thai market of as of 2000 at rates not exceeding 20 per cent, thereby generating substantial pressure on certain domestic agriculture food sectors. The textiles and clothing industry provided an example of the recent tariff instability in the manufacturing sector, causing unpredictability for importers. Thailand did not protect its textile and clothing industry with import quotas; however, quantitative restrictions and safeguards in export markets substantially restricted its exports (Nagai, 2004).

2.3 RECENT DEVELOPMENTS IN THE WTO, AFTA AND THAI ECONOMY

This section examines the recent developments in the Thai economy from 1960 to present. Table 2.2 presents summary trade policy developments that are discussed in the sub-sections.

TABLE 2.2 TRADE POLICY DEVELOPMENTS OF THE WTO, AFTA AND THAILAND FROM 1960 TO THE PRESENT

Period	WTO	AFTA	Thailand
1960-1971	GATT (1962)	The ASEAN Declaration (1967)	Import Substitution policy
1972-1979	GATT (1973)	The ASEAN Declaration (1967)	Export Promotion Policy
1980-1989	The First Uruguay Round (1986)	The ASEAN Declaration (1967)	Export Promotion Policy
1990-1996	The Eight Uruguay Round (1995)	The Singapore and Bangkok Declarations, CEPT (1992, 1995)	Export Promotion Policy
1997-2000	The Seattle Debate (1999)	CEPT	Export Promotion Policy
2001-2003	The Doha Declaration (2001)	CEPT	Export Promotion Policy
2004 to the present	The Doha Declaration (2001)	The ASEAN Vision 2020 and CEPT (2004)	Export Promotion Policy by establishing regional and bilateral FTAs

Sources: WTO (2006), ASEAN (2006), www.nesdb.go.th and www.pbs.org

2.3.1 Trade Policy Developments of the WTO and the AFTA

Trade obligations of the WTO emerged when the general agreement on tariffs (GATT) and trade were first drafted in 1962. At that time, the rules were mainly subjected to both the developed and less-developed countries. In the early stages of the implementation of the GATT, the focus in developed countries was only on the tariffs elimination on export industrial goods. In 1986, the first Uruguay Round was negotiated and adopted. It had an agenda that was more concerned with developing countries than the previous GATT. This agenda was committed to substantially

eliminating tariffs on industrial goods. Furthermore, negotiations included the safeguards and anti-dumping issues of interest to developing countries. Agricultural trade liberalisation was added to these negotiations for the first time. However, there was disappointment when the substantial gains expected from agricultural trade liberalisation among developing countries were not realised due to their low negotiating power compared to the developed countries, and the resulting failure of the negotiations. Consequently, reaching an agreement on agricultural trade and trade in services was the most serious issue in the next round of negotiations. Other issues that emerged and were debated included labour standards and competition policy. These issues were discussed and examined in the Third Ministerial Conference at Seattle in 1999. Nevertheless, the main issues causing conflict between developed and developing countries remain. The Fourth Ministerial Conference at Doha, Qatar in November 2001 ushered in a new and highly efficient round of negotiations. The specific issues of interest to developing countries were addressed seriously in this round and resulted in an implementation program consisting of twenty issues. It is apparent that the Doha Round allowed developing countries to bargain more effectively compared to the Uruguay Rounds.

The AFTA trade policy was first drafted by the ASEAN Declaration of 8 August 1967. This declaration aimed to stimulate economic growth in the region via a corporative trade policy and various other economic cooperation schemes. The progress had been very slow in the early stages. The intensive framework to enhance ASEAN economic cooperation was developed in the Fourth ASEAN Summit in Singapore in January 1992 through the AFTA. The CEPT schemes for the AFTA were set up in this summit. In the ASEAN Economic Ministers Meeting (AEM), many additional issues regarding trade liberalisation were mainly advanced by Thailand. These issues were the AFTA tariff reduction schedule, the including of unprocessed agricultural goods in the AFTA list, the common procedures and standards of trade in services and intellectual property rights, and an automobile joint venture production only by Malaysia, the Philippines and Thailand. New issues particularly in services and investment were discussed and negotiated in the Fifth ASEAN Summit in Bangkok in December 1995 under the Bangkok Declaration. In November 2004, the Tenth ASEAN Summit was held in Vientiane, Laos. The implementation period of the resulting Vientiane Action

Program (VAP) is between 2004 and 2010. The ASEAN Investment Area (AIA) is the principle vision of the ASEAN to stimulate investment liberalisation and facilitation. The cooperation policies have been launched to increase efficient trade in goods, services and other aspects.

2.3.2 Trade Policy Developments of Thailand

The development of Thailand's trade policy results from the combination of many transformations. It could be explained clearly starting from when the national economic and social development plan was set up and implemented. During the 1960s and 1970s, the import substitution policy was adopted to accelerate industrialisation. Many schemes were used to reach this goal, such as the establishment of an industrial processing zone in the eastern region to promote industries utilising domestic raw materials.

Since the 1980s, trade policy has shifted to export promotion policy because of the economic recession in an intensely competitive environment. Several regimes have been implemented to enhance growth and increase export competitiveness. The industries producing goods for domestic demand has motivated investment in an industrial processing zone for export markets. An export and import bank had been set up to support, facilitate and finance import and export entrepreneurs.

From the late 1980s to 2000s, the export promotion policy remained dominant. This policy was vigorously adapted to solve the balance of payment crisis leading to the Asian financial crisis in 1997. The structural industrial adjustment was implemented to support the production of high quality goods including processed agricultural and manufactured goods. The Labour Skill Development Institution was established to provide the skilled labour supporting this policy. Severe competition and the increasing formation of trade blocs influenced the implementation of the FTAs regime. As a result, the regional and bilateral FTAs were important policies implemented in 2001, and crucial in expanding high potential markets and increasing trade partners (Chirathivat and Mallikamas, 2004).

2.3.2.1 Thai Economy Before the Mid 1980s

Prior to the mid 1980s, government policy played a limited role in industrialisation. This lack of industrial policy led to a poor quality of credit, along with insufficient and low levels of investment in skill and technology. However, Thailand's economy was successful in other areas, such as high saving rates, growth credit allocation and the abundance of cheap labour supply.

2.3.2.2 The Turning Point of the Mid 1980s

The balance of payments crisis, devaluation and the banking shakedown were consequences of the second oil crisis during 1984 to 1986. In the early 1980s, Thailand accepted the World Bank's structural adjustment program aimed at producing an export-oriented economy. The export-oriented industrialisation plan was implemented after the devaluation despite there being a lack of technical skills for the transit of the economy. The Thai government believed that liberalisation of Thailand could provide opportunities to solve the crisis (Phongpaichit and Baker, 2000, p. 27).

2.3.2.3 Thai Economy from the Early 1990s to Early 2000s

During 1990-1993, financial liberalisation was implemented. Restrictions on convertibility of currencies were eliminated in 1990. An offshore banking facility namely the Bangkok International Banking Facility (BIBF) was set up to allow foreign banks to lend to Thai businesses. The capital account liberalisation opened up an unprepared market to short-term money movements. The rapid growth of domestic credit institutions and the direct access of the domestic borrower to foreign financial market diminished Thai banks. The major form of capital inflows changed from FDI to bank loans and portfolio investment. Consequently, capital was no longer scarce from 1988 to 1996. Currency realignments and policy reforms were the factors transforming Thailand's competitive advantage to that of an industrial exporter. Traditional export sectors, such as agriculture, food processing and textiles suffered. However, the export of technology-based industries products expanded.

Thailand's economic and financial crisis began in July 1997 resulting in negative growth and slow development in the late 1990s. In early 2000s, the government launched a plan to purchase out 1.2 trillion baht of bad loans from both the

state-owned and private banks to restart the economy that suffered declining exports and increasing government debt during the crisis period. Thailand's economic conditions reached their worst period in 1997 when Thai foreign reserves ran out by currency speculators attacks. In 2001, the government adopted new inward-looking economic policies. However, the growth rate of Thailand in 2001 was 1.8 per cent that is lower than the predicted rate by a half. It can be concluded from the economic consequences of these trade agreements that Thailand should adopt and implement outward-looking or openness policies to achieve long-run economic growth (Pongpaichit and Baker, 2000).

Since then trade policy has become the first priority selected by the Thai government and policy makers strongly believed that liberalisation under the WTO commitments and switching to outward-oriented policy is the important engine for economic growth. Also, many efforts have been undertaken to stimulate outward-oriented policy and improve market access through out East Asia countries including Thailand (Tran Van Hoa, 2002, p. 27).

2.4 CONCLUSIONS

In conclusion, the focus of this chapter is explanation of background of the study by discuss about multilateral trade liberalisation, recent economic and trade developments in Asia, regional trade liberalisation including current bilateral trade liberalisation and openness of Thailand. It can be concluded that these factors affect trade policy implementation of Thailand. Developing countries have currently experienced intense competition to get long run benefits under the current global trade arena particularly in form of FTA. The dominant trade policy of Thailand in 2000s is bilateral FTA with various developed and outside region partners. As a result, the objectives of study are divided to qualitative and quantitative analysis. The qualitative analysis objective aims to review, discuss and evaluate analyse trade policy of Thailand. The quantitative analysis objective aims to construct an appropriate and highly performance econometric model to explore the impact of openness on growth of Thailand. Moreover, the contribution to knowledge is the construction of an EGT model of growth incorporated with the policy reform, crises and shocks in the case of

Thailand and the proposal of policy implications and recommendations based on the empirical findings.

CHAPTER 3

REGIONAL FREE TRADE AGREEMENTS

3.1 INTRODUCTION

This chapter reviews the major issues of RTAs. Section 3.2 discusses the foundations of EI and FTAs. Section 3.3 presents the international experiences of EI and FTAs e.g. NAFTA, the EU, COMECON, MERCOSUR and AFTA. Section 3.4 examines Thailand's current trade policy and the development of various trade policy implementations. Section 3.5 discusses primary policy implications for Thailand. The conclusions are presented in the last section.

An investigation into the foundation of EI and FTAs can be made using the concepts of contemporary trade theory, competitive advantages, globalisation and openness (Dunkley, 2004; Baldwin, 1989; Leamer, 1998; Laird and Yeats, 1988; Anderson and Nearly, 1990; Porter, 1990). The basic concept of globalisation involves both free trade and free movement of factors of production across borders. Currently, it is believed that globalisation is the most important, accurate and reasonable explanation of the continual proliferation of EI and FTAs (Kellner, 1998). Most developing countries are often disadvantaged when negotiating trade issues with developed countries. It is worth emphasising that the ultimate goal of regional EI and FTAs is to increase trade and investment relationships to enhance the competitiveness of a region and to boost the negotiation power with large and powerful trading entities such as the US and the EU. One of the well-known examples is an ASEAN FTA or AFTA.

3.2 THEORETICAL FOUNDATIONS OF EI AND FTAs

The foundation of EI and FTAs can be examined from contemporary trade theories including the Heckscher-Ohlin theorem, the factor price equalisation theorem and the Stolper-Samuelson theorem, Porter's competitive advantage, the gravity theory, globalisation and openness.

3.2.1 Heckscher-Ohlin Theorem

This theory was explored and proposed by Heckscher (1919) and Ohlin (1933). This theorem is regarded as belonging to the supply side of trade theorems because it

explains the effects of factor endowment on international trade. It uses many assumptions to simplify its application. The basic of this theorem can be briefly described as follows. There are only two countries and two homogenous factors of production e.g. labour and capital. The physical definition and the price definition are used to define the relative factor abundance. The same technology exists in the same production processes in both countries as well as a constant return to scale. These two goods differ in factor intensity. Perfect competition holds in both countries resulting in the perfect mobility of factors within each country but immobility between countries. Transport costs are neglected and the market determines prices and output. Tastes and preferences are homothetic in both countries. There are neither tariffs nor other non-tariff barriers.

The basis and pattern of trade are the important conclusions given by this theorem. It states that a country will produce and export the product that uses its relatively most abundant factor. Because this good can be produced cheaply, its production will increase. In contrast, a country will not produce and will import the product that uses its relatively scarce factor because it will be costly to produce domestically. This theorem believes that if countries have the above pattern of trade, they will gain maximum benefit from trade between themselves. These benefits arise from the contributions of the comparative advantage of the export good, free trade and the absence of transport costs between these countries.

3.2.2 Factor Price Equalisation Theorem

This theory is the crucial extension of the Hecksher-Ohlin theorem. From this theorem trade causes an increase in the price of the product that is produced from the relatively abundant factor and a decrease in the price of the product that is produced from the relatively scarce factor. Samuelson (1949) affirms that the change in final goods prices has connections and implications for the factor prices in both trading countries.

According to this theorem, the expansion of trade having the pattern of the Hecksher-Ohlin theorem can contribute to the equality of the relative factor prices. Under equilibrium, the absolute and relative factor prices will equalise due to the products having the same absolute and relative prices, the same technology and

constant returns to scale. Factor movement between countries is the main requirement for final products trade. Trade leads to the increasing price of the abundant factor and the falling price of the scarce factor within trading countries until these prices are equalised. Factor price equalisation competition will not occur because trade can not equalise the product prices. Mundell (1957) believes that in the case of mobility of factors and immobility of final goods between countries, the same result of commodity and factor prices can be obtained. Consequently, the relatively abundant factor will move from the relatively low-price country to high-price countries until both factor and commodity prices are equalised unless the movement is costless.

3.2.3 Stolper-Samuelson Theorem

This theory has another implication for the Heckscher-Ohlin theorem in terms of the income distribution from trade. The price of the abundant factor increases and the price of the scarce factor falls as full employment before and after trade occurs. This is due to the implication that the owners of the abundant factor realise the rising of their income and the owners of the scarce factor realise the falling of their income because of expanding production. There were many debates about this theorem when Stolper and Samuelson published in 1941. Their argument is about the assumption of no linkages between production and perfect competition that leads to the equalisation of the product price and the total input costs. The average change in factor price will equal the product price. This can be considered as the cause of the magnification effect. This effect occurs because the percentage change in the price of goods intensive in a factor is less than the percentage change in the price of that factor. Therefore, trade will cause the direction of income distribution to move to the owners of the abundant factor because of expanding production.

3.2.4 Competitive Advantage

The competitive advantage of nations can also be regarded as a foundation of EI and FTA. An important objective of EI and FTAs is to stimulate the competitiveness of the members to achieve economic growth. Porter (1990) believes that comparative advantage theory is not sufficient to explain competitiveness. Based on this model, it is believed that the competitive advantage of nations is the direct outcome of their firms'

competitiveness (Porter, 1990). More clearly, innovation can contribute to firms' competitiveness. Technical improvements to the product and the production process are considered as innovation. There are four elements attributing to the national competitive advantage; factor conditions, demand conditions, related conditions and firm strategy; and structure and rivalry.

Factor conditions include inputs that are used as factors of production, i.e. labour, land, natural resources, capital and infrastructure. These factors are attributed to sustained competitive advantage due to sustained investment that is difficult to maintain. Furthermore, it is affirmed that the complexity of the domestic market is another factor contributing to competitiveness (Porter, 1990). If firms compete in a sophisticated market, then they have to offer high quality products to customers. Besides that, firms must be able to understand the exact demands of their customers by maintaining a close relationship with them. The more a nation values discrimination compared to other countries the more competitive the local firm becomes in the global market.

Related conditions and supporting industries including suppliers also contribute to the competitive advantage of nations model. It is noted that the strength and vigour of supporting industries enhance competitiveness of firms (Porter, 1990). This situation normally occurs at the regional level. In addition, upstream and downstream competitors in industries that are located in the same area also stimulate the competitiveness of a firm.

The characteristics of capital markets affect firm strategy, structure and rivalry (Porter, 1990). Industries in countries with a short-run (long-run) outlook on capital markets are possibly more competitive than industries in countries where investment is short-run (long-run). Different industries also have different management practices and the industries of countries focused on a particular management style may be more competitive than another. In terms of rivalry, more intense competition creates more innovation. This is obviously seen in Japan where many firms compete intensively in most industries. The role of government is also important in ensuring the competitive advantage of nations model is valid. The government has several channels available to bolster all four factors in this model such as direct subsidy via money and indirect

subsidy via infrastructure; the tax and property ownership channel; and the education of unskilled workers.

All the above theories possibly underlie, but do not necessarily encourage EI or FTA; the core rationale of the theory simply implies trade direction or patterns through factor abundance (Leamer, 1998).

3.2.5 Imperfect Competition and Trade Externalities

Perfect competition is one of the important assumptions of the Heckscher-Ohlin theory that violates the real situation of imperfect competition. This assumption is necessary to guarantee that product prices and factor prices will be equalised with trade. Nevertheless, in the real world, imperfect information, barriers to entry both natural and contrived and so on, lead to imperfect competition in many different forms. The effects of imperfect competition contribute to trade externalities as explained following.

The monopolist maintains the monopoly position at home and chooses to export at world prices. Similarly, the monopolist continues to act as a price setter at home and becomes a price taker in the world markets. Other examples of trade externality are pure monopolistic price discrimination. In this case, a single world supplier determines how to allocate output to several countries and how much to charge if the markets in different countries can be separated. As a result, arbitrage cannot happen between markets, and demand elasticity will be different.

3.2.6 Increasing Returns to Scale

The comparative advantage theory presents a constant return to scale assumption. In practice, many industries are characterised by increasing economies of scale. Increasing returns to scale are associated with trade. Trade plays a crucial role because it is possible for each country to produce a limited range of goods and to take advantage of economies of scale without sacrificing variety in consumption. Mutual benefits from trade can emerge as a consequence of increasing returns of scale. Each country specialises in producing a limited range of products that enables the country to produce these goods more efficiently. After that, the countries trade these goods with each other to be able to consume the full range of goods. However, the explicit model of

trade based on economies of scale usually leads to a market structure other than that of perfect competition.

3.2.7 Technology Transfer

Trade can also be associated with technology transfer under the product cycle theory. Product cycle theory is concerned with the imitation lag hypothesis of delay treatment in technology diffusion. It can be postulated that this theory relaxes several assumptions of traditional trade theories to describe the real pattern of trade. This theory explains the new product life cycle and its impact on trade.

There are three stages of new product life cycles. The first stage is the new product stage where production processes take place domestically to detect consumers' demand. The second stage is the maturing product stage where the product's general standards emerge, therefore, mass production begins. In this stage, economies of scale arise because of a more standardisation production process. The demand for the product from foreign countries increases because of exports of standardised products. This trade pattern reflects exports from developed or high income country to other high income country.

The final stage is the standardised product stage where the products are well known and the producers in other high income countries know the production process. As a consequence, these producers are able to produce the same products by using the same technology. It can be summarised that technology transfer accelerates dynamic comparative advantage due to the export countries shift to different countries during the product life cycle (Appleyard and Field, 1998). It can be obviously seen that Japan has been currently threatened by South Korea and other Asian producers as high technology product exporters.

3.2.8 Gravity Theory

This theory can be used to explain the increased trade share between members resulting from EI and FTAs. This model proposes that the bilateral trade between two countries is proportional to their GDP and inversely proportional to the distance between them (Frankel et al., 1996). Other explanatory variables are included in the theory such as population or per capita GDP, areas or sizes, and dummy variables

representing landlockedness, common borders, common languages and common membership in regional trading arrangements. It can be said that this model is the most common and powerful instrument used to explain the bilateral trade pattern (Guttman and Richards, 2004). It can be employed to examine various hypotheses such as common currency and common free trade agreement effects.

There are three reasons that justify Guttman's claim (Frankel et al., 1996). Firstly, there are many empirical studies successfully predicting bilateral trade flows. Secondly, this model revises the theoretical background emerging from modern trade theories based on imperfect substitutions. However, there are many debates for the robustness of the gravity theory to explain the insignificant estimation results using different countries and region models. Finally, there is recent interest by economists in the correlation between geography and trade that leads to the treatment of countries or regions. The variables of distance, populations, common borders and common languages can be claimed to be exogenous variables and have high correlation with trade. The criterion determining the appropriateness of implementing this model is to use the values predicted by the model as an instrument of trade variable in the growth equation. Then, it can be concluded that this effect is causal if trade appears to be a significant determinant of growth (Frankel et al., 1996).

3.2.9 Globalisation

The final aspect that relates to the foundation of EI and FTAs is *globalisation* (Dunkley, 2004, p. 5). The key concept of globalisation is free-market capitalism where economies are opened to free trade and competition. It is believed that globalisation will bring more efficiency and enhancement to economies. Many economic reforms are necessary for globalisation readiness such as opening, deregulating and privatising the market. Globalisation can be more generally defined as the closer, more immediate contact between nations worldwide and market integration due to comparative advantage and competitiveness. Free trade requires the absence of government restrictions on the flows of goods or services with minor regulation.

The definition of globalisation can also be considered from the classical economic point of view that refers to more integration of national economies. National economies can be integrated via trade, finance, technology and labour flows. The

existence of this integration mainly depends on the elimination of government-induced barriers. Thus, it can be claimed that international economic integration and globalisation are identical in terms of both meaning and processes (Dunkley, 2004). The amount of growth of cross-border flows of goods, services, capital, technology and labour determines the depth of integration. Globalisation processes are sophisticated and multidimensional in terms of economy, politics and culture. As a result, globalisation associates with the new linkages of the economy and culture into a single world system. Furthermore, globalisation is the distinctive factor that encourages competitiveness, as it becomes the common goal of the countries.

According to Dunkley (2004), globalisation is stimulating more areas of many countries to participate in the world market system. However, it can be seen that there is more exploitation by the wealthier countries of the people and resources in the poorer countries. The globalisation concept will be more effective if market forces are not directed and regulated by the state. However, in some cases, it can be argued that changing global economic flow has significant effects on a local economy (Gavin, 2001, p. 10). An example supporting this claim can be seen in the closing down of local industrial production because of the shift to lower wages and less government intervention. An obvious obstacle in the analysis of the correlation between global and local industries is the influences of globalisation on local structure and situations.

The consequences of globalisation can be clearly seen in most developing countries. These countries started to implement economic reforms particularly concerning export-oriented strategies, the opening up of more markets and initialising integration with the global economy, especially in the 1990s. Investment began flowing into developing countries due to attractive foreign investment policies. A few developing countries with emerging economies in East Asia and Latin America have become the recipients of inward foreign direct investment from western countries. The globalisation effect on developing countries depends heavily on their capacity to attract foreign investment.

The increasing pressure of globalisation in the international economy leads to more interdependencies between countries. The resulting increase in trade in goods and services, capital and money remittance on a global scale through advance technologies, communication and data processing also activates both the uptake of international

technology and the quality of standards. Therefore, it can be concluded that globalisation is an important foundation of multinational EI, regional EI, closer economic relations and bilateral FTAs (Kellner, 1998, p. 39). Based on the above explanation and review of the literature, it can be said that globalisation has a possible two-way causality impact on trade and growth.

3.2.10 Openness

There are various methods to capture *the openness* of the country but there are no absolute answers for what is the most accurate, reasonable and reliable approach. According to Baldwin (1989), it is affirmed that both outcome and incidence-based measures can be used for measuring openness. Outcome-based measures refer to the information of policy-induced trade barriers that can be obtained from the data of the variables that presumably affect prices or trade flows. Incidence-based measures are built up from the actual data on trade barriers.

Of the outcome-based measures, the ratio of trade, normally, imports plus exports, to GDP is the simplest. However, this measure can be affected by both the economy's structural characteristics and other external factors that lead to changes in the cost of trading. Leamer (1998) solved this problem by applying the Heckscher-Ohlin factor endowment to forecast the composition of a country's trade without intervention. This method can be applied by using the average deviation of the actual from the predicted values resulting from the measure of openness or intervention. Only the deviation of the country from the cross-country average level can be measured with this approach.

Penetration ratios are another example of outcome-based measures. These ratios are only used to indicate restrictions on imports. Imports to GDP ratio and imports to aggregate consumption ratio are classified as penetration ratios. The latter ratio is a more reliable indicator for trade policy in developing countries because consumption goods are the most restricted goods. In terms of calculating this ratio using total imports, the proportion of consumer imports to total imports is assumed to be a minimum across countries and time. The supporting reason for this criterion is that higher restrictions can be implied from a lower ratio rather than differences in composition of imports (Leamer, 1998).

The third outcome-based measure is derived from the price comparison of similar products between domestic and border prices. This measure is better than the average tariff rate since it can capture the effects of both tariff and non-tariff barriers. In addition, economic interpretation can be more easily investigated by this measure. The domestic prices and border prices of the same individual goods have to be compared through the adjusting of transport costs, distribution mark-ups and differences in quality. This practice is relatively difficult and takes time and can be done for only a few developing countries (Andriamananjara and Nash, 1997). The World Bank (1991) has measured domestic prices via international prices by using national accounts prices index data. To indicate distortions in trade regimes, differences between the domestic prices relative to international prices of tradable goods have to be taken. Underestimation of trade restrictions in trade policy, particularly in developing countries that impose tariffs on both imports and exports, is normally found. This finding leads to higher prices of importable goods than the world level whereas prices of exportable goods are lower. This index can be small despite large distortions appearing when the average deviation is measured across all tradable goods and negatives offset the positives.

The final category of outcome-based measure uses the exchange rate. An indication of the strength of trade restrictions can be drawn from the black market premium. The black market premium is a reliable proxy of the excess demand for foreign exchange. Capital flight is the key factor that causes higher volatility of the black market premium. Another outcome-based measure is the real exchange rate movement. The real exchange can be appreciated due to trade restrictions. However, estimating the equilibrium real exchange rate is difficult. Nevertheless, it is clear that trade liberalisation will depreciate the real exchange rate. Thus, real depreciation can be used to investigate trade liberalisation schemes.

The incidence-based measure consists of the average tariff rates and indexes of non-tariff barriers measures. The average statutory tariff (non-weighted, weighted, import shares or production shares) or average collection rate which is the ratio of import duties collected to imports value, has to be measured to obtain the average tariffs. The legal rates do not explain anything when there are widespread exemptions or smuggling. In the same way, misleading collection rates can be misleading when

exemptions are made, then the country is unable to compete with domestic production and imported inputs. This is called escalated structure (Andriamananjara and Nash, 1997). Low to moderate collection rates and high effective protection rates emerge from this escalated structure. So, presumably the best tariff-based measure is an average of statutory rates weighted by production shares. But tariff-based measures have a crucial weakness. This weakness can be seen in trade schemes of developing countries that always restrict imports with other non-tariff barriers. As a result, the tariffs are redundant for many products since the domestic producers do not get any additional protection from the tariffs. In this case, the tariff level is not a good indicator of trade policy.

To overcome this obstacle, measures of non-tariff barriers are developed (Laird and Yeats, 1988). These measures are normally combined with the number of products categories that are subjected to the barriers divided by the total product categories in the classification criteria being adopted. The most useful indicator of domestic industry protection by non-tariff barriers is the production weight index. The actual effects of non-tariff barriers vary significantly in different products and different countries.

Anderson and Neary (1994) developed a trade restrictiveness index. The effects of both tariffs and non-tariffs barriers are included in this index. Consequently, it is debatable whether this is the most theoretically accurate. However, based on the absence of domestic price, assumptions about the effects of non-tariff barriers are necessary for empirical works and the results vary depending on the assumptions are made.

3.3 INTERNATIONAL EXPERIENCE OF EI AND FTAs

Five important international experiences of EI and FTAs are discussed in this section including the North American Free Trade Agreement (NAFTA), the EU, COMECON, MERCOSUR and AFTA.

3.3.1 North American Free Trade Agreement (NAFTA)

Canada, Mexico and the US are close neighbours and their governments where attempting trade cooperation despite having different economic systems. However,

Canada and Mexico have different relations with the US. Canada's objective in NAFTA was to keep the gains made in 1989 under the Canada-US Free Trade Agreement (CUSFTA) while Mexico viewed NAFTA as a means to deliver domestic economic reforms and to attract foreign investment. The integration of the three North American countries can be reviewed from the point of view of the economic turmoil of the early 1980s. At that time, Mexico decided to abolish inward-oriented policies whereas the next step forward for Canada's economy was to strengthen relations with the US. In April 1990, the US-Mexico Free Trade Agreement was first negotiated and in August the agreement was settled. Canada also desired to participate in this agreement to protect the gains obtained from the CUSTA negotiations. As a result, the NAFTA negotiations advanced quickly over the next 15 months. The principal negotiations covered market access, trade rules, services, investment, intellectual property and dispute settlement. The signing of the formal agreement took place in December 1992 (Cushing et al., 1993, p. 6).

NAFTA has many important goals including eliminating trade barriers and facilitating the cross-border movement of goods and services, promoting fair competition conditions under the free trade area context, substantially enhancing investment opportunities, and adequately and effectively providing intellectual property rights protection and enforcement (Cushing et al., 1993). In addition, the implementations of efficient administration and dispute settlement procedures are included in the objectives of NAFTA. This agreement also covers the establishment of a framework for advanced regional and multilateral integration to increase the benefits of the agreement. There were many initial complexities and difficulties when NAFTA began in 1993. NAFTA now consists of many liberalisation provisions in sectors such as agriculture, automotive industry, energy, financial services and foreign investment, textiles and government procurement. The objectives of NAFTA were complementary to the WTO with respect to the lowering of trade barriers. It also has a strong common interest in increasing economic interdependence. The tariffs of nearly 10,000 items have been abolished despite an implementation period of only 15 years. Because the tariffs of these products in both Canada and the US were quite low, the most significant alterations were the tariffs elimination in Mexico that recently only covered 20 per cent of goods. The Mexican automotive industry is more open under NAFTA. The US has

also opened more of its apparel and textile industry to other members. NAFTA is truly a liberalisation agreement when considering investment and intellectual property, and services and dispute settlement. It can be regarded as the key factor in stimulating global competitiveness in Europe and the Asia-Pacific countries (Cushing et al., 1993).

It has been questioned whether NAFTA actually liberalised trade (Ready, 1993, p. 23). The most important obligation of NAFTA is to create deep integration among members especially in trade and investment. It is considered that NAFTA is a necessary and desirable advancement of a multilateral, regional and bilateral trade strategy based on the WTO rules and consideration of other non-trade issues. NAFTA can be a threat to other regions if it instigates harmful conflicts and retaliations. It is recognised that the regional strength of NAFTA, the EU and ASEAN is the outcome of a mix of economic, political and security considerations. The success of these agreements can be seen in the growth of interregional trade during 1980s resulting in a more integrated global economy.

For NAFTA to achieve more success would require the implementation of numerous criteria such as stimulating tariff elimination effectiveness, increasing investment and intense protection of intellectual property rights (Ready, 1993). In addition, NAFTA failures in cooperation can be reconsidered from different viewpoints such as non-harmonisation of environmental standards, violations of labour law and lack of effective trade adjustment assistance policies and instruments. Other suggestions to promote include the construction of a compensatory investment scheme; the serious enforcement of trade-linked fair labour practices is necessary; and finally, more investment should be provided to improve the infrastructure in border areas (Ready, 1993).

3.3.2 EU

France and Germany were the motivating force behind European integration in 1950s. Their plan set up the first European integration instruments. These instruments combined with the European Coal and Steel Community (ECSC) established in 1951, the European Atomic Energy Community (Euratom) established in 1957 and the European Economic Community (EEC) established in 1957 under the Treaty of Rome and became effective in 1958. These communities worked and cooperated closely with

other European organisations such as the European Commission, the Ministers Council, the European Parliament, the European Court and the European Council. These bodies have different duties and responsibilities. The EEC became a common market after the success of the customs union negotiations in 1968. The community undertook a huge reorganisation in 1993 and changed its name to the European Union (EU). Recently, the EU makes has attempted to enhance a deeper and wider cooperation. The aims of the EU associate with many mechanisms to motivate member countries to participate in closer economic, political, administrative and security alliances (Costello, 1999, p. 340).

Initially, the EU had only six members, Belgium, France, Germany, Italy, Luxembourg and the Netherlands. Many Eastern and Central European countries also were interested in joining the EU at the time. However, these countries had to fulfil three important criteria (Costello, 1999). The first is a political criterion whereby their institutions have to be able to guarantee domestic practice. The second is an economic criterion whereby a functioning market economy not only has to exist but also be able to compete under union competitive pressure. Finally is an administrative capacity criterion that the instruments have to support the community legislation implementation. Several factors have contributed to the slowdown of the enlargement process in the first stage of the EU integration. The most crucial was the failure of the candidature membership acceptance examination due to the below average development level of the Eastern and Central Europe countries.

Trade and investment are liberalised in the EU in many aspects. Industrial policy is targeted at increasing the competitiveness of the internal market. This policy benefits the non-EU countries by allowing access to investment opportunities particularly in the research and development areas. The competition rules are subjected to intellectual property rights to block the holder from restrictive practices or free trade distortion in the market. The most important competition policy is the merger control regulation that does not allow mergers that would lead to competition impediment within the EU market. As for taxation, the tax restrictions removal progress is slow especially in corporate and value-added taxes.

After 1988 the capital flow barriers were eliminated resulting in free capital movement within the single market and between members under safeguard conditions. It can be seen that the EU financial market is the most integrated, open and transparent

in the world (Danta and Hall, 2000, p. 8). European financial liberalisation started in 1958 when it turned back the current account convertibility. Because unilateral liberalisation actually commenced in the late 1970s, financial liberalisation was implemented before the single market regime was established.

The regulation of the EU financial sector is supported by three rules. First is the rule that affects the structure of the financial services industry. The second rule affects the conduct of financial institutions. Lastly is the rule addressing prudential concerns. Under the Treaty of Rome, capital liberalization is considered as necessary for appropriate common market functioning. However, the safeguard measures allow members to adopt barriers if capital market disturbances emerge from intra-union capital mobility. One example is the lifting of temporary short-term capital movement restrictions in some areas. The capital liberalisation rules have been included in the Treaty of Rome and have been directly implemented since 1993 (Danta and Hall, 2000).

From the late 1990s, the EU can be considered as a highly complex organisation with a single market, economic and monetary union, as well as a wide range of both internal and external policies (Atkinson, 2000, p. 311). To enlarge the EU, many issues must be considered including the impact of EU's institution and decision-making procedures and the implications for financial, economic, security and political issues. Furthermore, it can be said that further the enlargement issues are related to two determinants, namely, the EU size and the balance of small and large members (Atkinson, 2000, p. 311). Nevertheless, the EU trade liberalisation includes an intensive effort to stimulate internal trade via a common market strategy. The single market program (SMP) firstly covered a narrow scope to achieve trade liberalisation under the Treaty of Rome. This program concerns a market access scheme that deals with many obligations. First, it is the national quantitative barriers and customs controls removal. Second, it is the mutual recognition and harmonisation of the national regulations to improve market access and competition. Third, it is the trade in services issue. Fourth is the intellectual property rights and taxation law harmonisation to create an attractive investment environment. Finally, it is the regulated industries restrictions elimination especially in telecommunications. It can be noted that the single market program has led to the of improvement market access in the EU. Consequently, the EU internal liberalisation complements the WTO context.

The EU remains a powerful economic block due to full economic integration and significant internal economic coherence (Mann, 1998, p. 194). The transfer of multinational enterprises located in different countries is the principle source of trade in the EU that avoids tariffs. Deeper economic integration in terms of a customs union along with common policies particularly in agriculture is the key area of development in the EU. On the other hand, the unexpected collapse of Communism that led to the shift from planned to market-oriented economies in the 1990s, substantially affected the policies of the EU. The main success of the EU comes from the gains from trade creation (Pomfret, 2000, p. 227). In the EU, many sensitive products are still designated to the large and more powerful countries; however, it is difficult to solve this problem by using sectoral policy interventions because the costs of agriculture subsidies are massive (Pomfret, 2000).

The EU consists of 25 members from across the European region in 2004. It can be considered as a highly powerful economic bloc. Besides that, the EU has strong and collusive institutions to support the integration. Sectoral cooperation is the dominant policy. Consequently, many policies have been implemented to promote and achieve the single market goal. Also, a unified EU has emerged and developed relationships with the rest of the world especially two large blocs of the world economy, the USA and Japan, balancing global trade power (Heiskala, 2001, p. 118).

The important basic question confronting the EU is about the future direction of the union. There is no doubt that the future enlargement of the EU will significantly impact the structure and policies of the union more so than in the past (Gower and Redmond, 2000a, p. 182). Institutionalisation reform is still necessary in the EU to enhance the efficiency of policy implementation and create balanced negotiation power among individual members. An attempt to enlarge EU with 25 members after the first in 1951 converts the enlargement costs into opportunities by enhancing wider and deeper cooperation in eliminating the economic gap and political issues between the original and the new members (Gower and Redmond, 2000b, p. 182).

3.3.3 COMECON

The Council for Mutual Economic Assistance (COMECON) was an economic institution of communist nations and Eastern European economic bloc countries

between 1949 and 1991. This institution was established by the Soviet Union, Bulgaria, Czechoslovakia, Hungary, Poland and Romania. The formation motivation was that the Soviet Union desired to dominate the small nations in Central Europe of interest in the Marshall Plan. Official cooperation progressed in the late 1960s. Further cooperation extension and implementation began in 1971. Later in 1985, the Comprehensive Program for Scientific and Technical Progress was implemented to enhance and improve economic cooperation via an efficient and interconnected scientific and technical base development. There were 10 members in the late 1980s consisting of the Soviet Union, six East European countries and three extra-regional states.

The COMECON structure is divided into the Session of the Mutual Economic Assistance Council, the Executive Committee Council and the Council Secretariat. COMECON cooperation has existed for four decades. Both cooperation scope and experience has extended during this period. The original aims of exchanging experiences and providing technical assistance and mutual aid were broadening to a combined set of economies under a cooperating international pattern of production and investment. The organisation's evolution in terms of multilateral trade and cooperation was affected by the significant difference of development level among members. It can be said that not only the planned economies but also the effective market-price mechanisms shortage were further integration obstacles (Wikipedia, 2005). The basic nature of the operation of COMECON is the working of the interstate organisations whereby members agree to harmonise mutual interest of economic activities and the cooperation of economic, scientific and technical development. This cooperation characteristic can also be applied to bilateral relationships among members.

COMECON has grown steadily in scope and experience from the early 1960s. However, many obstacles block its success. To enhance its success, many considerations have to be taken into account. The exchange experience, providing technical assistance including other forms of mutual aid, has to be broadened to develop production and investment cooperation. Currently, the development level gap is the most crucial factor blocking its success. In addition, the nature of planned economies and inadequate effectiveness of the market mechanism to facilitate integration are some of the other difficulties existing in COMECON.

3.3.4 MERCOSUR

The economic block of MERCOSUR was created by Argentina, Brazil, Paraguay and Uruguay in March 1991 under the Treaty of Asuncion. The absolute aim of this integration was to create a common market and custom union between the member countries through a variety of forms of economic cooperation. The transition period was scheduled to commence in 1995 until 2006 to establish a common market. MERCOSUR signed an FTA with Chile and Bolivia in 1996.

Under MERCOSUR, goods, services and factors can be transferred freely between members. Customs rights, and non-tariff restrictions and other similar measures have been eliminated. Moreover, the common external tariffs (CET) are also fixed. Members implement the common trade policy with respect to non-member countries. There is macroeconomic and sectoral policies coordination between members to enhance the competitiveness via free competition. Reciprocal rights are important doctrines of the Treaty of Asuncion. MERCOSUR planned to set up free-trade zones first and then customs harmonisation followed by a common market. Nevertheless, the differences in implementation of trade liberalisation among members are the crucial factor leading to the slow progress of integration.

The elimination of tariffs and non-tariffs restrictions is allowed for sensitive products. The production of these products must be clearly seen in the important sectors of each country. Different systems of tariffs are applied to different goods; for example, capital goods complied with the CET to January 1, 2005 and telecommunication goods and computers to January 2006. On the other hand, goods in sugar cane and textile and footwear sectors are still non-exception goods to December 1995. The automotive component goods are proposed to be included in the exception lists. The tariff duties elimination of imports not targeted in the free-trade zone had to be complete by December 1994. However, the members were allowed to adopt their exception lists to April 30, 1995 and this period was to expire in four years.

There are many important areas challenging MERCOSUR's success. First of all, there is the requirement of internal market completion to reach the desired objective of a custom union. Secondly, stronger institutionalisation within the region is necessary. Finally, more integration both in the regional and international context is another important aspect to succeed. To overcome these challenges, a regional indicative

program was set up. This program consisted of three criteria. More integral cooperation between the member's governments and their small and medium size enterprises is required to consolidate the market. Sectoral policies of harmonisation and institutionalisation are the tools to strengthen and stimulate further integration progress of MERSOCUR. The roles of social and economic partners and the NGOs are a crucial consideration in recent negotiations.

3.3.5 AFTA

The Association of Southeast Asian Nations (ASEAN) was established in January 1984. The founding members were Indonesia, Malaysia, the Philippines, Singapore and Thailand. Vietnam joined ASEAN in July 1995. The most important goal of ASEAN is to enhance sustainable growth in the region throughout the ASEAN community. A functional mechanism to create the ASEAN community had to be established. As a result, the AFTA was first requested at the ASEAN Seniors Economic Official Meeting (SEOM) that was held in Kuala Lumpur, Malaysia, on 4-5 October 1991 by the Thai Government to establish an FTA in ASEAN within 15 years.

The common effective preferential tariff (CEPT) scheme is the most crucial in uniting the ASEAN economies into the ASEAN Free Trade Area (AFTA). The Lao PDR and Myanmar had to complete their tariff deductions in 2008 while Vietnam had to reach the same objective in 2006. It can be said that AFTA is the key instrument to compel ASEAN to reach the goals of free trade and investment. There are many significant differences within the members such as industrialisation level and economic development (Chirathivat, 1996, p. 32). Trade and economic opportunities can be derived from the enlargement of the region but the growth rate of ASEAN's GDP has been relatively high compared with other developing countries. In the past two decades, the dominant comparative advantage of the ASEAN is agriculture.

The ASEAN6 (Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand) is an important market and supplier for the new members (Cambodia, Lao PDR, Myanmar and Vietnam). Even though the intra-ASEAN trade has increased rapidly, machinery and materials imports of the ASEAN rely on the production of industrialised countries. However, the new members depend heavily on the ASEAN market. The border trade value between Thailand and the new members is enormous.

Considering the revealed comparative advantage (RCA), it is clear that the new members possess the revealed comparative advantage in resource-based industries and some labour-intensive industries, particularly garments (Thongpakde, 2001, p. 56). Thailand, the Philippines and Indonesia have the same comparative advantage in agriculture, resource-based and labour-intensive products while the older members have comparative advantage in manufactured products. Indonesia and Vietnam also have the same high competitiveness in resources-based products such as crude rubber, minerals and coal and petroleum products. Thus, it can be said that the comparative advantage among the ASEAN members is not unique.

The increasing of the intra-ASEAN trade has enlarged its market size due to the consequences of trade creation (Thongpakde, 2001). Resource diversification is the other factor stimulating intra-ASEAN trade. The difference of factor endowment and production patterns between AFTA members has made the scope of exchange wider and so intra-ASEAN trade has increased. The new members have little effect on this trade because their trade volume is small. Nevertheless, in the 1990s the new members have had stronger links with ASEAN compared with the old members. Trade diversion can emerge from the creation of free trade. This happens when country imports from a member that imported from an outsider earlier due to the shifts of tariffs or other trade barriers. Trade can be diverted from the new members to the old members when their inclusion in AFTA implemented. In ASEAN, it is clear that the effects of trade diversion are small because the share of trade between the old members is large (Anwar, 2001, p. 32).

The CEPT is the key mechanism of the AFTA. Under this agreement, the reduction of the fast-track tariffs had to be completed by 2000 and for the normal-track tariffs in 2003. However, the sensitive products are allowed to exclude from these two tracks. The temporary exclusion list was transferred to the inclusion list in 1996 for a sufficient tariff adjustment period. The tariffs of old members had to be reduced to zero to five per cent by 2003. Vietnam had to reduce its tariffs by the same amount by 2006 and the Lao PDR and Myanmar by 2008. Regional trade can increase if the tariff reduction is based on the comparative advantage. To get higher benefits from tariff reduction, ASEAN members have to minimise the tariff reduction period. Thus, to

provide more market access to new members, the scope of agricultural products tariff reductions has to be extended (Thongpakde, 2001).

The Tenth ASEAN Summit in Vientiane, Laos in 2004 dealt with many crucial aspects under the ASEAN Vision 2020. The vision combined being outward looking with living in peace, stability and prosperity and, bonding together in a partnership in dynamic development (ASEAN, 2006). The ASEAN Framework Agreement on Services (AFAS) and ASEAN Investment Area (AIA) were also set up to reach the ASEAN Vision 2020. To make this vision successful, ASEAN has to enforce the necessary policies. In the Tenth ASEAN Summit, the implementation to narrow the development gap within the region was considered. The institutional framework of ASEAN in terms of both its structure and process will be strengthened. Intensive outward-looking strategies with partners should be adopted. Moreover, working closely among members on the concepts of equality, non-discrimination and mutual benefit has to be implemented effectively to increase the strength of ASEAN both socially and economically. These strategies are embodied in the Vientiane Action Plan (VAP) and its implementation period is between 2004 and 2010.

Recently, ASEAN has adopted FTAs and closer economic partnerships (CEP) with other countries and regions to expand its opportunities for trade in these markets. Examples of this integration are the ASEAN plus Three (China, Korea and Japan) free trade areas within a 10-year implementation period that was established in October 2001. At first, Japan was astonished to participate in this FTA. China is the most active among these three partners because of its desire to attract the private sectors to invest in the huge and emerging Chinese market. The more openness of the Chinese market is the direct result of the WTO membership in the end of 2001. The ASEAN plus Three plus Australia plus New Zealand free trade areas are another example. These closer economic partnerships will enhance trade with the East Asia and the Pacific Rim and then stimulate long-run economic growth and development for this region (Lincoln, 2004, p. 57). Nevertheless, these agreements are still under negotiation because there are many dimensions and details to address.

Many obstacles limit the success of the AFTA. First are the tariff revenues and current account deficits of the new member countries. These members rely heavily on import taxes and have high current account deficits and the CEPT agreement will

reduce their import and export tariffs. Second are the rules of origin that could possibly decrease intra-ASEAN trade if they lack unionisation details. The ASEAN Investment Area (AIA) is targeted to full implement by 2010 and the integrated ASEAN Economic Region by 2020 advocated by ASEAN's Vision 2020 are not easy to implement or achieve because the liberalisation of investment and trade in services is necessary. It can be said that this framework is the GATT-plus, with its process limited under several constraints. Moreover, tariff reduction under the CEPT is easier to implement and more practical than the liberalisation of investment and trade in services (Dowling and Rao, 1996, p. 142).

Unilateral liberalisation through AFTA is a crucial and necessary strategy for ASEAN's economic development. The success of AFTA stimulates international competitiveness and promotes foreign direct investment. However, to reach the aims of ASEAN's Vision 2020, the CEPT is not sufficient because there are lags of trade in services and investment liberalisation behind the other regional agreements (Lim and Teh, 1996, p. 195). Market deregulation and institutional adjustment delays in new members will slow down the ASEAN cooperation process.

The success of ASEAN can be assessed in terms of promoting intra-regional harmony, providing the effective stimulation of economic growth and the resolution of conflicts in the Indochina region (Anwar, 2001). Other successes of ASEAN are derived from its international bargaining power. The increased importance of ASEAN can be seen from the attention of other powerful countries in the Asia-Pacific region, USA, China and Japan. Besides that, it can be claimed that the ASEAN economies are market-driven, and this combined with an outward orientation results in high competitiveness in the globalisation era (Chirathivat, 1996). Nevertheless, the most important body of the ASEAN Secretariat is not able to implement its role in shaping and advancing the agendas in regional economic cooperation effectively.

Presently, allowing Myanmar to become a member reveals the broader members' interaction and increased benefits of cooperation in the region despite the intensive efforts of members to enforce massive political change in this country. It is believed that collusive policy intervention by other ASEAN members under the ASEAN Vision 2020 can foster both political and economic reform in Myanmar. Furthermore, the ASEAN membership of Myanmar contributes not only to its economic

development but also to the region’s development in the long run (Tin Maung Than and Mya Than, 2001, p. 252). It is important for Myanmar to gain the benefits of joining AFTA in terms of both trade and foreign investment. Many obstacles have to be overcome to reach this goal (Khin Ohn Thant, 2001, p. 271). First, closer cooperation between the government and private sector needs to be established. Second, the legal framework has to be set up to stimulate investment. Third, political and economic policy reform issues have to be addressed.

3.3.6 Comparison between International EI and FTAs

It can be seen that under the international experiences of EI and FTAs, there are many different obligations and commitments about trade in goods (GATT), trade in services (GATS), trade related intellectual property rights (TRIPs), and trade related investment measures (TRIMs) and other FTAs.

Table 3.1 shows there are four different scopes contributing to the difference of these international EI and FTAs including trade in goods, trade in services, trade related investment measures and trade related intellectual property rights. The last row on the table indicates the different economic relations.

TABLE 3.1 INTERNATIONAL COMPARISONS OF EI AND FTA FEATURES AND OBLIGATIONS, 2006

Scope	WTO	NAFTA	EU	MERCOSUR	AFTA
Goods	GATT	GATT	GATT	CET	CEPT
Services	GATS	GATS	GATS	CET	AFAS
TRIMs	NT & MFN rules	AIA			
TRIPs	NT & MFN rules	Non-harmonisation of laws			
ER	n.a.	Common Market	Customs Union	Common Market and Customs Union	FTA

Note: NT is national treatment, MFN is most favoured nation and ER is economic relations.

Sources: WTO (2000), ASEAN (2006), www.itcilo.it and Cushing et al. (1993).

The WTO is the most important organisation to enhance global trade efficiency. Many obligations have to be established for member countries to equally gain the benefits from trade and eliminate trade conflicts. These obligations consist of the general agreement on tariffs and trade (GATT), the general agreement on trade in

services (GATS), the agreement on trade related investment measures (TRIMs) and the agreement on trade related intellectual property rights (TRIPs). Prior to the Uruguay Round, the linkage between trade and investment received little attention in the framework of the GATT. The Singapore Ministerial Conference in 1996 set up three working groups on trade and investment, competition policy and government procurement transparency concerning TRIMs. The multilateral WTO's agreement on TRIPs was first negotiated in the Uruguay Round in 1994. The agreement addressed the protection of intellectual property rights, the implementation of the agreement, the dispute settlement mechanism and special arrangements during the transition period.

Within NAFTA, trade in goods and services are free. The national treatment and the most favoured nation (MFN) rules are applied on TRIMs and TRIPs. The factors move freely among members. Consequently, the economic relations of the NAFTA are that of a common market. In the case of the EU, trade in goods and services are applied to the GATT and GATS of the WTO. On the other hand, the national treatment and MFN rules are levied on TRIMs and TRIPs. These dominant features characterise economic relations of the EU as a customs union. Similarly, trade in goods and services of MERCOSUR are subjected to the common external tariffs agreement (CET). Currently, there are no conclusive obligations regarding TRIMs and TRIPs in MERCOSUR. The members agreed to apply the national treatment and MFN rules according to the WTO. Moreover, factors also transfer freely among members. The economic relations in MERCOSUR can be considered as a common market.

In terms of AFTA, the CEPT is applied to trade in goods. The ASEAN Framework Agreement on Services (AFAS) is established under the ASEAN Vision 2020 to create a framework and implementation plan for trade in services. Furthermore, under the ASEAN Vision 2020, members collusively agree to establish the ASEAN Investment Area (AIA) in 2020. The AIA aims to promote investment within the region and also make TRIMs free. The obligations of TRIPs are still non-harmonised and under negotiation. The economic relations of AFTA can be classified as an FTA.

3.4 THAILAND'S TRADE POLICY AND FTAs

Thailand's trade policy has evolved over the last decade. Policies import-substitution were implemented from the mid 1970s and then switched to an export

orientation that generated economic growth of seven per cent per year. Thus, in the early 1990s, Thailand tried to shift its economy into an outward orientation (Tulyanond, 2005). Thailand became a member of the WTO in 1995, ASEAN in 1984 and APEC in 1989. As a result, it has to tie its trade policy to these institutional agreements.

Tariff reform in Thailand started in 1990. Due to the Uruguay Round agreements, Thailand had to complete the implementation of the industrial and agricultural tariffs reduction by 2004. In the services area, the commitment schedule for Thailand was the end of July 1995. By 1992, Thailand had intended to promote exports and mitigate the trade balance by setting the minimum amount that state enterprises had to have to apply the counter trade measures. With regards to trade related investment, although Thailand was obliged to reduce the inconsistent performance requirement with the Agreement on TRIMs, the local content requirement scheme of Thailand remained until the elimination deadline by the end of 1999. In addition, Thailand accepted the Agreement on TRIPs.

Import tariffs in Thailand in 1995 were between zero and 100 per cent depending on the products, but on average were about 23 per cent. Tariff escalation was dominant in some sectors including textiles, paper and rubber products and basic and fabricated metals. The tariffs on agricultural raw materials were about 50 per cent and about 30 per cent on industry materials. Thailand's import licensing decreased sharply in this period. Thailand also implemented many tenders of government procurement. The negotiation of Thailand's exports of textile and clothing rolled over under the Multifiber Agreement (MFA) as a 10-year phase-out starting point. The voluntary export restraint of Thai tapioca products was abolished and then followed by imports tariffication by the EU. There are many sectors that are defined as having international competitive advantage by the Thai government e.g. agro-industry and food processing, textiles and garments, electronics, petrochemicals and iron and steel. More specifically, recent policies are directed to stimulate productivity and create more value added, as well as shift development to the rural sector including promoting local industries.

Thailand's exports remain substantial despite a lag in the growth of agricultural. Even though the agriculture sector attributes to 60 per cent of total GDP and 11 per cent of employment share, it can be regarded as a low-productivity sector (WTO, 2000). The recent tariffs imposed on agricultural raw materials are bounded

between 0 and 65 per cent, with an average of 38 per cent. Between 1995 and 2004, the export subsidies of Thailand decreased significantly due to the Uruguay Round commitments. However, the agricultural products subsidies still exist, as in other developing countries because they have no commitments under the Uruguay Round. Textiles and clothing still have a dominant advantage for Thailand. Manufacturing output expanded substantially with increased value added in the 1990s. The imports and exports of manufactured goods increased rapidly over the same period. Export competitiveness increased in some manufactured labour-intensive products via quality upgrades. The increase of exports in new manufactured items reflected more production efficiency resulting in the largest share of both imports and exports in the assembly industries in 1994. Nevertheless, manufacturing growth was limited by poor infrastructure and shortage of skilled labour (Tulyanond, 2005). The government implemented various policies to solve these problems such as increasing expenditure, privatising state enterprises and attracted foreign joint ventures to the private sector especially in infrastructure sectors.

Under the AFTA regime, Thailand had to implement trade liberalisation from 1995. At the Pacific Economic Council Conference in 1994, Thailand was enthusiastically active in calling for the realization of the AFTA (Chirathivat and Mallikamas, 2004, p. 42). Five goals of the AFTA were proposed in the meeting. First was to accelerate AFTA tariff cutting by reducing the schedule from 15 to 10 years. Second was to establish the final tariff rate under the AFTA from zero to five per cent to zero per cent. Third was to put agricultural goods and petrochemicals on the AFTA tariff list. Fourth was to reduce the eliminating tariff schedule on the Temporary Exclusion List from eight to five years. Lastly was to establish the AFTA Adjustment Fund. Thailand also encouraged members to cooperate and liberalised trade in services and unprocessed agricultural products. Furthermore, Thailand led in advocating the Closer Economic Relationship between the AFTA and Australia and New Zealand to create economic linkage with these regions in 1994 (Lim and Teh, 1996).

Chirathivat and Mallikamas (2004) state that Thailand has been active in establishing, enhancing and strengthening free trade via the multilateral frameworks under AFTA and AFTA Plus. The FTA makes it easier to eliminate internal tariffs between the participating countries, and then increases the possibility of reaching

further integration levels. Moreover, other trade-related areas are not blocked by the FTAs. This is the reason behind Thailand's promotion of trade facilitation, investment liberalization and freer labour movement within the region (Chirathivat and Mallikamas, 2004). However, under this integration approach, it is difficult to identify exactly when Thailand's bilateral FTA approach began. Some believe that Thailand began to seriously considering about bilateral FTAs after 1999 because at that time Singapore started the plan to set up feasibility study groups for FTAs with Japan and Australia. Thailand's bilateral FTA strategy can be divided into two sessions: Session I (December 1997-January 2001) and Session II (February 2001 to present). During session I, Thailand's FTAs with Australia, Chile, the Czech Republic, Croatia and South Korea were initiated. Thailand's FTAs with India, Japan and the US were initiated during Session II. The Thailand-US FTA commenced in 2001 when the Commerce Minister of the US stated their interest in conducting joint research on the possibility of forming a bilateral FTA between the US and Thailand. The core of the Thailand-US FTA negotiation is on the issue of which sector has inadequate public and private participation including trade, investment, services, intellectual property rights as well as overall benefits (Chirathivat and Mallikamas, 2004, p. 49). The Thailand-US FTA was first formed via the signing of a Trade and Investment Framework Agreement (TIFA) in 2002. Other details are under negotiation and the countries have not reached an absolute agreement.

Presently, it can be said that Thailand is the most ambitious country in the region due to its intensive efforts to increase its world export market share through the establishment of both regional and bilateral free trade agreements (Tulyanond, 2005). Five basic free trade agreements were completed with Bahrain, India, China, Peru and the BIMSTEC (Bangladesh, India, Malaysia, Burma, Sri Lanka, Bhutan and Nepal). The free trade agreement with India encompasses only 83 products while the one with Australia consists of more than 5,500 items. This agreement became effective on January 2005. The deadline of tariffs reduction of different products is different in both countries. The free trade agreement with Australia is the most comprehensive. The key of its success was achievement of the extensive market access that each country will have via intensive tariff reductions.

On the other hand, free trade agreements with New Zealand, the US and Japan are still under negotiation. The agreement structure with New Zealand resembles that of the Thailand-Australia FTA. The agreement with the US has encountered many difficulties relating to non-trade related issues, such as corruption, competition policy and government procurement that impede the negotiation process. Lastly, the inclusion of many agricultural products in the agreement with Japan has been refused. This is a key obstacle for Thailand because its major export commodities are agricultural products. Finally, there are additional bilateral free trade agreements to be negotiated in the future including these with Canada, Taiwan and Hong Kong.

The above review and discussion of Thailand's current FTAs show that the country has signed a number of FTAs with inside and outside regional partners, that are being implemented or under negotiation. These FTAs are related to chapters 4 and 5 as the essential conceptual framework to construct and estimate the models and to evaluate the reliability and accuracy, as well as the most efficient empirical results to propose policy recommendations in chapters 6 and 7.

3.5 WTO AND AFTA OBLIGATIONS AND POLICY IMPLICATIONS FOR THAILAND

Thailand has to comply and implement trade policies following multilateral, regional and bilateral agreements. It is obvious that Thailand is very enthusiastic in trade liberalisation at all levels (Nagai, 2002). These processes are operated in parallel. From the Thai government perspective, the WTO is the superior global trade organisation, whereas AFTA is the crucial engine of the regional FTA. After the Asian financial and currency crisis of 1997, Thailand quickly gained the maximum advantage at minimum cost through progress with the WTO and with intensive deepening and widening of ASEAN integration and cooperation. Although, small developing Asian countries such as Thailand do not only receive benefits from the WTO, but also on the contrary can easily gain the benefits from the AFTA (Nagai, 2002).

There is inconsistency in terms of interpreting and implementing the WTO and FTA obligations. The explanation of this issue can be divided into two parts (Nagai, 2002). First, it has been suggested that FTAs could be an obstacle to the WTO process in the long run. Second, it has been suggested that Thailand should follow the top

leaders. Despite Dr. Supachai Panitchapakdi becoming the Director-General of the WTO in September 2002, inconsistencies between the WTO and FTAs still exist due to the parallel operation of these agreements. The WTO is viewed as both the binding and supreme organism of global trade, whereas FTAs can be considered as creators of cluster trade blocs in the long run. As a result, regional FTAs and bilateral FTAs are positioned as the most important international economic policy of Thailand to gain the maximum benefits and minimum losses emerging from the WTO process.

The Thai government believes in establishing bilateral FTAs with wealthier neighbouring economies such as India, Japan and the US. To develop Thailand as a regional trade hub and potentially huge market for FDI, the bilateral FTA is seen as an important policy tool that provides great advantages in terms of not only an efficient raw material supply but also an efficient production network. Moreover, the Thai government places high value on the potential of these economies to attract their FDI into Thailand particularly to compete with the booming information technology sector in India and the automobile component FDI from Japan. It may seem that the Thai government neglects the different prohibitions of sectoral agreements under the WTO and FTAs resulting in double standards (Nagai, 2002). However, the Thai government focuses on long run growth and uses FTAs as the dominant policy to attract foreign investment and upgrade Thailand as a regional manufacturing network and transportation hub. This goal drives the Thai government's attitude and is the reason it supports building FTAs to access bigger potential markets in Asia, the EU and the FTAA (Free Trade Areas of Americas). It is most important that the Thai government must carefully consider the view that argues for caution in terms of developing and implementing bilateral FTAs.

3.6 CONCLUSIONS

In summary, it can be noted that the foundations of EI and FTAs can be reviewed using contemporary trade theory, competitive advantage, globalisation and openness. The Heckscher-Ohlin theorem is the most important fundamental trade theory underlining this issue. This theorem assumes there are no restricting policies on trade flows or free trade. It proposes that if countries have comparative advantage patterns of trade and free trade exists, then they will gain the benefits from trade. Globalisation is

the other theme backing up this issue. Globalisation means elimination of not only the tariff and non-tariff barriers but also opening up markets to freer trade and more competition. Most FTAs also cover trade in services and trade related investment issues adding to their importance as engines of growth. Economic cooperation under FTAs is extended and deepened more than ever before. Presently, it can be said that globalisation is a powerful force resulting in economic reform in most developing countries. Countries in different regions have different experiences in EI and FTAs in terms of the frameworks, processes and obligations. It can be seen that AFTA has most of the main obligations similar to NAFTA. With regards to ASEAN, it desires to advance its cooperation and increase its negotiation power with developed countries especially the US. In the case of Thailand, it is found that many different trade policies were implemented from the 1960s to the present because of the changing economy and various crises and shocks. The main policy chosen by the Thai government is an intensive outward-oriented policy through the EI and FTAs.

CHAPTER 4

AN ECONOMETRIC MODEL TO STUDY THE IMPACT OF THAILAND'S OPENNESS, ECONOMIC AND TRADE POLICY ON ITS GROWTH

4.1 INTRODUCTION

This chapter uses the findings from Chapter 3, previous related studies, and the researcher's own perspective to construct a new and appropriate econometric model of Thailand's openness. The model will be used to empirically study the impact of regional FTAs and Thailand's openness on its economic and trade policies. It is necessary to review and examine earlier related studies on openness policy in developing Asia as the guideline to construct this model (Section 4.2). The desirable features of an openness policy model are described along with recent trends in Thailand's key developments (Section 4.3 and 4.4). The endogenous gravity theory (see Tran Van Hoa, 2004a and 2004b) and two simultaneous implicit functions linking trade and growth are adopted and extended to meet our objectives and estimated as the model of Thailand's openness for policy analysis (Section 4.5). It is also important that the estimated model can be supported by theoretical justification using both trade and macroeconomic theories. Furthermore, the overall developments in the agriculture and manufacturing sectors, two major sectors in the Thai economy, including the trade openness are explained in the Section 4.6 to provide a background for the interpretation of estimation results. This chapter also includes a summary of recent trends in Thailand's development and trade and the roles played by the AFTA and WTO, the important bodies influencing Thailand's openness policy (Section 4.7). The conclusions are presented in the last section.

4.2 PREVIOUS RELATED STUDIES ON OPENNESS POLICY IN DEVELOPING ASIA

This section briefly reviews and examines relevant earlier studies on openness policy in developing Asia to construct a model of Thailand's openness. Many surveys and empirical studies have been undertaken to examine the impact of openness policy or trade liberalisation on the developing Asian economies and growth.

Lloyd (1992) reviews several empirical studies to examine the changes of net effect induced by the reforms in trade policies that led to greater regionalisation of world trade between 1961 and 1989. This study used trade policy reforms and protection as the definition of openness to examine the impact of openness on growth. It is concluded that the multilateral trade system can be affected by RTAs. Large countries commonly win trade wars at the expense of small countries; however, multilateral trade barrier reductions enhance global free trade (Lloyd, 1992).

Frankel et al. (1996) assemble an empirical study to find the causes and effects of trade and growth among East Asian rapid growth countries. The role of openness is estimated by the growth equation and the simultaneous causality between growth and trade is discussed. The exogenous instrumental variables from the bilateral gravity model are constructed. It is proved that the effect of openness on growth can be predicted from the gravity model (Frankel et al., 1996). The ratio of trade over GDP was regarded as the variable for openness to investigate its effect on growth. This study also mentions that other factors play an important role in terms of East Asian growth including investment and education.

Ocampo and Taylor (1998) study the distributional effects of trade liberalisation in developing economies by using microeconomic and macroeconomic models. Trade liberalisation is defined as the combination of more free trade, removal of capital movement control and other supporting macroeconomic policy. It is noted that trade liberalisation in these economies is often accompanied with the macroeconomic stabilisation policy packages and capital movement control removal. They also explained that the benefits from trade liberalisation are modest and the good productivity performance in the Asian economies resulted from outward-oriented regimes. In addition, it is proposed that the combination of capital market liberalisation, exchange rate stability, together with output and productivity growth is an important mix that leads to higher gains from trade liberalisation (Ocampo and Taylor, 1998).

Edwards (1998) analyses the robustness of the openness and total factor productivity relationship. This study elaborates nine indices of trade policy for the comparative analysis of 93 countries. These different indices are constructed in terms of trade liberalisation, trade protection and trade over GDP to explore the impact of openness on growth. The research question examines whether the total productivity

growth is faster in more open economies. The results in this study are robust to many factors including the use of an openness indicator, estimation methods, the functional form and the time period. It is suggested that more open economies bring about faster productivity growth (Edwards, 1998).

Karunaratne (1998) reviews the emergence of Thailand as the Fifth Tiger of Asia after switching to an export oriented industrialisation policy. The computable general equilibrium (CGE) model is constructed to analyse the macroeconomic and sectoral implications of trade liberalisation policies in Thailand over the decade ending in 2000. The across-the-board non-distortionary tariff cut as trade protection is formulated to be the proxy of the trade liberalisation or openness policy. Other policy shocks measures are included to examine the macroeconomic effects. It is suggested that import price reduction leads to the import competition between importing industries via import penetration. Consequently, the reduction in import price effect is regarded as the pass-through effect. Import price reduction also leads to import substitution industries that use import inputs intensively to become internationally competitive and expand their export volumes (Karunaratne, 1998).

Robinson (1999) investigates the impact of RTAs on world welfare on two dimensions. The net trade creation or trade diversion is examined and used as the proxy for trade liberalisation. It is revealed that theoretical models including the CGE models show that trade creation dominates trade diversion and the welfare for all members is increased when RTAs expand. Furthermore, when the aspects of the new trade theory such as increasing returns, technology transfer, trade externalities and dynamic effects are combined, bigger welfare gains are indicated (Robinson, 1999).

Vamvakidis (1999) estimates and compares the growth performance of countries that implement broad liberalisation with those participating in RTAs including developing Asia. Both trade protection and openness measurement by trade over GDP are elaborated to explore the impact of openness on growth. The fixed effect growth model and data set between 1950 and 1992 are used in this study. The comparisons based on the estimated results suggested that economies grow faster and have higher investment after implementing broad liberalisation. On the contrary, these economies grow slower and have lower investment after participating in RTAs. As a result, the support of broad liberalisation is proposed (Vamvakidis, 1999).

Ekanayake (1999) analyses the casual relationship between export and economic growth of eight Asian developing countries from 1960 to 1997. The co-integration and error correction models are used to examine the casual relationship in this study. The total value of exports is defined as openness. The empirical findings support the export-led hypothesis. It is shown that bi-directional causality exists in most of the selected countries including India, Indonesia, Korea, Pakistan, the Philippines, Sri Lanka and Thailand.

Gilbert (2000) studies the relationship between trade policy and economic performance measured by growth and income level. The endogenous growth model with a panel data of 102 countries is used to reveal the effect of trade policy on growth. The trade policy indicator is constructed in this study by using trade openness as trade over GDP. It is found that trade openness has quite a strong effect on economic performance, achieving high productivity and income according to the estimation results particularly for developing countries (Gilbert, 2000).

Nowak et al. (2000) explore the impact of trade policy on economic growth in developing countries in different regions. This study aims to answer the question whether openness accelerates output growth resulting in economic growth in the long run. In this study, the impact of trade under both trade and growth theory is reviewed. The dynamic impact of trade policy based on many empirical studies is also revealed. The linkage between trade openness, capital accumulation and output growth is tested through extension of the production function. Besides that, the linkage between trade openness, total factor productivity (TFP) growth and output growth is included in the analysis via the endogenous technical progress. It is concluded that trade openness is an important engine for output and TFP growth in almost all developing countries in this study (Nowak et al., 2000).

Mattoo et al. (2001) illustrate the measurement of trade in services liberalisation and its impact on growth. The difference of the impact of trade in goods and trade in services liberalisation is explained by using the different trade-growth models. The service openness regime is constructed to serve the objectives. Based on the empirical results, it is revealed that the service sector liberalisation particularly the financial service sector influences long run growth (Mattoo et al., 2001). Similarly, Rajan and Bird (2002) conduct a study to assess the state of services liberalisation and

policy environment of the financial and telecommunication sectors in five Asian countries (China, Indonesia, Korea, Malaysia and Thailand). The impact of two-sector trade in services liberalisation on growth is examined via trade protection that is measured by market access barriers elimination. The theoretical evidence confirms that the beneficial impact of these two sectors liberalisation can be attributed to the appropriate time and outcome. The effects of protection and the benefits of liberalisation are formulated. It is concluded that both complete liberalisation and elimination of impediments to market access lead to the largest gains (Rajan and Bird, 2002).

Hertel et al. (2002) explore and summarise the results and findings focusing on the ongoing World Bank research and the capacity-building project of the WTO negotiating agenda from the developing country perspective. It is noted that the current and future negotiations should primarily highlight the progress of removal barriers to trade and services liberalisation on a non-discriminatory basis (Hertel et al., 2002). Furthermore, the priority should be to guarantee that there is consistency of rules and that developing countries' receive assistance with implementing WTO obligations more efficiency (Hertel et al., 2002).

Similarly, Ozden and Reinhardt (2002) conduct an empirical examination to address how the generalised system of preferences (GSP) of developed countries affects the recipient countries' trade policies. A panel model of 154 countries and the US generalised system of preferences (GSP) of the period between 1976 and 2000 are used. Trade over GDP is used to be the proxy for openness. It is found that the countries eliminated from the GSP implement more liberal trade policies compared to the remaining countries (Ozden and Reinhardt, 2002). In addition, it is also suggested that developing countries can receive more benefit through full integration into the reciprocity-based world trade regime compared to continued involvement in the GSP preferences (Ozden and Reinhardt, 2002).

McGuire (2002) explores and measures the gain from market access opportunities and the benefits of trade in services liberalisation for developing economies by using the general equilibrium model. Trade protection is measured to explain market access level. It is pointed out that the benefits from liberalising services are similar to those from agricultural and manufacturing liberalisation. Nevertheless,

these benefits depend on the linkage between the services and other sectors resulting in an economy's trade and performance. In addition, it is believed that a rushed liberalisation causes short-run structural adjustment costs (McGuire, 2002).

Kohpaiboon (2003) examines the role of trade policy schemes in controlling the impact of foreign direct investment (FDI) on growth performance in the receiving (host) country, specifically Thailand. The trade-growth equation model attributes to the effect of FDI combined with economic openness on growth are estimated. Both export promotion and import substitution are used to define trade openness. The period of study is between 1970 and 1999. The goal of this study is to test the hypothesis that the impact of FDI on growth is likely to be greater under an export promotion trade policy compared to an import substitution trade policy. It is noted that the findings supported the hypothesis (Kohpaiboon, 2003). As a result, it is suggested that the consistent application of trade liberalisation and investment policy is suitable for Thailand during this period. On the other hand, the implementation of foreign investment liberalisation while conducting a protective trade policy is possible generates only immiserising growth.

Baldwin (2003) examines the literature about an interaction between trade policies and growth. It is found that most of countries or country blocs along with lower trade associated with a stable exchange rate system, appropriate monetary and fiscal policies and incorruptible administration policy stimulates growth is valid and statistically acceptance. Anderson (2003) assesses both the opportunities and challenges of the WTO's Doha agenda especially in the case of agricultural trade liberalisation for low income and developing countries in South Asia and sub-Saharan Africa. The linkage between poverty, trade and economic growth is constructed and estimated by trade-growth simultaneous model. It is believed that the domestic product and factor markets of these countries have to be further opened so their farmers can take advantage of the benefits of the market opportunities abroad (Anderson, 2003).

Similarly, Winters et al. (2004) address three issues related to the correlation between trade liberalisation, growth and poverty. Their study explores the existing literature and empirical study of many different econometric models to investigate whether trade liberalisation can enhance growth and reduce poverty, and whether trade liberalisation can foster productivity. According to this study, the impact of trade

liberalisation on poverty depends on its harmonisation with other relevant policies. Moreover, it is suggested that trade liberalisation is not the strongest mechanism for alleviating poverty but it is the most convenient to change. Therefore, trade liberalisation can be regarded as the poor nation's crucial development policy (Winters et al., 2004).

In Krishna et al. (2003), the causation pattern between exports, imports, income, investment and growth in 39 industrial and developing countries including Asia is examined via the best predictive model by using selection techniques based on ex ante forecast ability criteria for each country. In addition, both the incidence and reverse causations between various economic variables, basically believed to promote growth, are empirically explored between 1951 and 1998. In the case of Malaysia, the period covers 1970 to 1997. These various economic data are obtained from the International Financial Statistics (IFS). The conclusions are that countries associated with a high trade ratio are contributed to investment and growth rates supported by the high predictive results including China and India.

Santos-Paulino and Thirlwall (2004) investigate the impact of trade liberalisation on exports, imports and the balance of payments of 22 developing countries that have implemented trade liberalisation policies since the mid 1970s. The panel data, time series and cross-section data model are used to estimate the growth of imports and exports, trade balance and balance of payments. It is found that liberalisation fosters export growth as well as a faster growth in imports resulting in a constraint on output growth and living standards (Santos-Paulino and Thirlwall, 2004). However, these sequences depend on the degree of liberalisation

Jayanthakumaran (2004) also examines the relationship between trade reforms and performance in the manufacturing sector for several developing countries in different regions. Many performance measurements such as productivity growth, export growth and price-cost margin changes are used as the instruments to estimate performance. These performance indicators are constructed to measure both trade liberalisation and protection. This study is undertaken by surveys and reviews the related existing literature. It is concluded that stronger trade liberalisation contributes to output and export growth in the manufacturing sector in these countries.

Tran Van Hoa (2004a) provides empirical evidence from an endogenous gravity theory (EGT) model to support the claim that trade, crises and policy reform affect growth. The growth rate of trade over GDP is used as openness. A simultaneous-equation econometric model of growth and trade of China and its five major partners was constructed to examine this relationship supported by the EGT. In addition, Tran Van Hoa (2004b) also elaborates on the analysis of the Thailand-Australia FTA and concludes that a bilateral trade policy and closer economic relations are beneficial. In this study, a number of bilateral trade-growth and growth of trade models are constructed and estimated. It is found that exports of Thailand to Australia can be regarded as an important engine of Thai growth, and imports of Thailand from Australia are the other important contribution in terms of know-how and technology transfer. Furthermore, the main external shocks especially the Asian financial crisis of 1997 and policy reform can be attributed as major factors affecting Thailand's growth and development

Rose (2004) estimates the effects of multilateral trade agreements and the GSP granted by developed countries to developing countries. The panel data is used and covers 175 countries and 50 years. The standard bilateral gravity model is constructed and sensitivity analysis is used as the research technique. The total trade value is used as openness. It is suggested that the pattern of trade of developing countries that are members of the WTO, is different from non-members. As a result, it is difficult to conclude that the GATT and the WTO can enhance trade because most countries adopt the most favoured nation (MFN) status since they are allowed to and the WTO fails to force developing countries to alter their trade policy substantially. On the other hand, the GSP has economically and statistically significant effects (Rose, 2004).

Lloyd and Maclaren (2004) provide a survey of aspects of the theory of RTAs and of empirical studies that contribute to the estimates of RTA gains and losses. The empirical evidence is based on CGE models. Trade protection is used to indicate the trade liberalisation level. It is shown that the proliferation of RTAs under the multilateral trade system in the last 15 years contributed to the significant increase in world trade discrimination. The failure of WTO rules related to RTAs is the most important issue. Consequently, it is necessary to implement the solutions of trade discrimination effects due to the RTAs liberalisation (Lloyd and Maclaren, 2004).

Romalis (2005) suggests that trade liberalisation carried out by large trading partners leads to trade expansion in other countries induced by providing greater market access. This claim was supported by an empirical analysis using tariff barriers of the US as an instrument of the developing countries' openness.

In an empirical study, Naito (2006) characterises the optimal combination of an import tariff and consumption tax under the revenue neutrality constraint, particularly of an endogenously growing small opening with a capital good and consumption good. Two important results can be obtained based on the economy importing capital goods (Naito, 2006). First, the consumption of imported capital goods is distorted more than the consumption of goods at the optimal level. Second, free trade is not optimal even for a small economy with no market failure. This study is useful for the implementation of a free trade policy that may be considered appropriate for many developing countries in Asia due to their characteristics of having small economies with market failure.

Kose et al. (2006) explore the cross-section correlation between output volatility and growth since the mid 1980s in the context of intensive trade and financial integration over the period between 1960 and 2000. The sample consists of 21 industrial countries and 64 developing countries. The data is obtained from both the World Bank and IMF. The output volatility is defined as the total output deviation and the output volatility model is estimated. Using the comprehensive data set a negative relationship can be observed during the 1990s. However, both trade and financial integration are weakening this relationship significantly. It is found that the interaction coefficient between output volatility and trade integration is significantly positive which is the same as the interaction of financial integration with output volatility (Kose et al., 2006).

Bhattacharya and Bhattacharyay (2007) study the empirical analysis of the prospects and challenges of the BIMSTEC-Japan trade integration. The Seven-nation Bay of Bengal Initiative for Multisectoral and Economic Cooperation (BIMSTEC) comprises Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand. The double log gravity model and tariff reductions comparative static analysis are used to examine whether this economic integration and cooperation will increase intra-regional trade covering the period between 1968 and 1991. Therefore, trade protection is used to

investigate its impact on growth. It is found that the intra-regional trade will be increased and this is attributed to the BIMSTEC-Japan trade integration and cooperation, but the increase is not uniformly for all countries. However, the gains in other areas e.g. transfer of resources and technology, FDI flows and more market access to services will compensate for these potential losses on trade. It is concluded that the link between South and Southeast Asia will be strengthened via this integration and will be the mechanism producing a pan-Asian integration (Bhattacharya and Bhattacharyay, 2007).

Baharumshah et al. (2007) examine whether a regional trade bloc can be a prelude to multilateral trade liberalisation by using the ASEAN5 (Malaysia, Indonesia, the Philippines, Singapore and Thailand) as a case study. The regional and multilateral terms of trade are constructed covering the period between 1967 and 2000 to investigate the direction of movement of the terms of trade of these countries. Time series data and co-integration methods are used to explore the long-run correlation of these terms of trade. It is illustrated that the ASEAN5 countries are moving towards multilateral liberalisation and this regional trade bloc contributes to the building and advancement of liberalisation (Baharumshah et al., 2007).

Lee and Shin (2008) estimate the effect of financial liberalisation on economic growth by combining the results of a panel model with those of a probit model. They find a positive net effect from financial liberalisation to growth. It is found that the net effect on growth is larger in the crisis-experienced country group than in the overall sample group. The crisis-experienced countries are mostly developing countries that usually enjoy higher growth rates than the developed countries because of the catching-up phenomenon. This research also studies the link between financial liberalisation and nominal interest rates, and finds, contrary to expectations, that the direct liberalisation effect is positive. The result reflects the overshooting of interest rates after crises.

From the above brief review, it can be seen that the issue of openness or trade liberalisation policy in developing Asia has been explored and investigated in many empirical studies. Different aspects of the relationship between openness policy and growth, productivity and poverty are also analysed by researchers. These studies employ various econometric techniques. Besides that, the time period, the sample size and the models are different among these studies. Developing countries in Asia are the

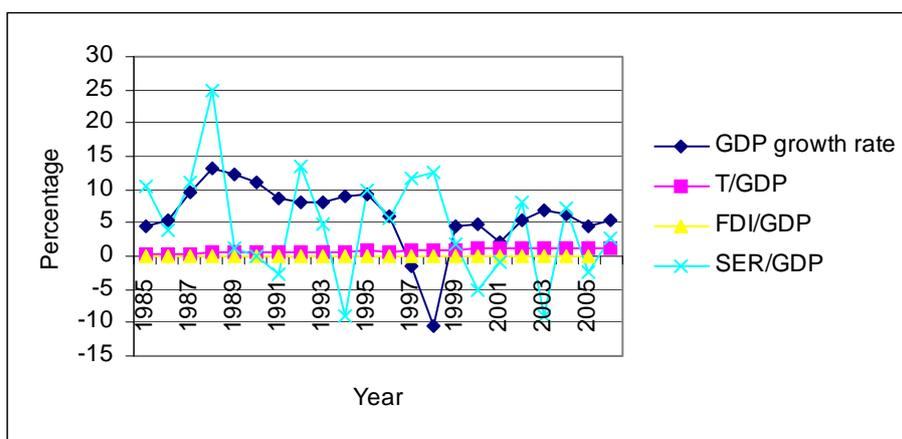
important sample in these studies due to the implementation of intensive trade liberalisation policies since 1980. It is found that different results and policy implications can be drawn from these studies. Most of these previous studies suggest that the developing countries gain benefits from trade liberalisation. However, the developing countries' benefits depend heavily on the level of protection before liberalisation. Therefore, it can be concluded that based on the literature review, previous studies on openness policy in developing Asia focus mainly on the impact of openness and trade on growth. Only a few empirical research studies have explored the impact of growth on trade and the effects of crises and shocks and other policy reforms on trade and growth. It is also important to describe the relation to hypotheses of the study in Chapter 1 and the contribution of the thesis that the empirical work in this thesis fills in the gap of the last mentioned effects of external shocks and policy reforms on trade. These are two important omissions especially as the 1997 Asian financial crisis and other subsequent policy reforms have played a critical role in growth, especially in Thailand. Moreover, only limited quantitative empirical research has been undertaken within the context of an enlarged ASEAN. Therefore, one main contributing objective of our study in this respect is to construct an appropriate econometric model of openness, trade and growth incorporating an internal or external shock or other policy reforms in Thailand.

Additionally, the above studies are related to this study in terms of the estimated model and estimation techniques, as well as the context of the impact of openness on growth. The model used in this study is based on models used in the above studies that included selected trade and trade-related variables to explore the impact of trade openness between Thailand and its major partners. The conclusions of this study are related to most of the above studies and are that openness has a small positive and statistically significant impact on Thailand's growth only for the most important trade partner, namely Japan. On the other hand, openness has a small positive but statistically insignificant impact on Thailand's growth for other models. More importantly, a crisis has remarkable negative and statistically significant impact, while policy reform has positive and statistically significant impact on Thailand's growth.

4.3 RECENT TRENDS IN THAILAND'S DEVELOPMENT AND TRADE

It is useful to describe the recent trends in Thailand's development and trade, and how these will be considered and incorporated into our models of Thailand's openness before moving to the estimation procedures, and explanation and interpretation of results. Therefore, this section explains these recent trends and development of Thailand's key economic indicators. These key indicators are GDP, openness and FDI.

FIGURE 4.1 THAILAND GROWTH IN GDP, TRADE/GDP, FDI/GDP AND SERVICES/GDP, FROM 1985 TO 2006



Note: T/GDP, FDI/GDP and SER/GDP are respectively total trade/GDP, FDI/GDP and Services/GDP respectively.
Source: ICSEAD Database, 2006.

As can be seen from Figure 4.1, the growth rate of GDP rose steadily to nearly 15 per cent between 1985 and 1988 due to the international capital flows liberalisation policy implementation resulting in a massive amount of portfolio investment inflows including bank loans to the private sector (ICSEAD, 2002). However, there was a gradual decline from 1989 to below 10 per cent in 1991. This unfavourable trend can be attributed to several factors (ICSEAD, 2002). One important factor was the huge level of foreign debt to GDP of the lower offshore loans because of the lower interest rate. Another factor was the accumulated trade balance deficit from early to mid 1990s. There was only a small increase from 1992 to 1995. Between 1996 and 1998, the GDP growth rate declined significantly due to the Asian financial crisis of 1997 as well as the accumulated trade balance deficit. There was a rebound to almost five per cent in 2000 that decreased slightly in 2001. Finally, there was a recovery reached to above five per cent in 2003 and a decline to less than five per cent until 2006.

After the Asian financial crisis in 1998, the Thai economy recovered in the latter half of 1999. This recovery was attributed to the increase in bank loans as well as the boom of inward FDI of 3.6 times the level of 1998 (BOT, 2000). Besides that, the export share of manufactured goods was increased considerably. The baht was relatively stable in 1999, therefore, this favourable transition expected to continue in 2000. This recovery can also be attributed to the implementation of the IMF stimulus policy package. The growth rate of real GDP increased from 0.9 per cent in the first quarter to 3.3 per cent in the second quarter and then 7.7 per cent in the third quarter. Furthermore, combining the growth rate of the first three quarters yields 3.9 per cent, implying a relatively strong fourth quarter.

The Thai economy slowed down significantly again in 2001 after experiencing recovery from the crisis in 1998. The growth rate of real GDP rebounded again to above 5 per cent in 2002. The Thai economy continued to grow in 2003 in line with the 6.5 per cent real GDP growth rate compared to 5.4 per cent in 2002. The growth rate of the first three quarters in 2002 reached higher than 6 per cent. Nevertheless, the real GDP growth rate decreased to 6 and 5.3 per cent in the second and third quarter of 2004 respectively mainly due to the Indian Ocean tsunamis of 26 December resulting in diminished tourism. This devastation caused a contraction in GDP because the total tourism revenues amounted to 600 billions baht that is a high up to nine per cent share of GDP in 2003 (ICSEAD, 2004). Furthermore, the downturn in the economy can be attributed to exchange rate fluctuations and declining income. Consequently, many policies were implemented to promote key sectors growth such as agriculture and tourism. In addition, focusing on bilateral FTAs and regional cooperation policies were the dominant trade policies (ICSEAD, 2004).

In 2005, Thailand's economic growth rate slowed down again to 4.4 per cent in the first three quarters. This deceleration in growth can be attributed to numerous factors (ISECD, 2006). First, the higher price of crude oil and other raw materials was a major cause. Second, Thailand's chicken farming industry was affected severely by avian influenza and the agriculture sector was also damaged by drought particularly in the first half of the year. Third, the tourism sector was adversely affected by the Indian Ocean tsunamis in the end of the year 2004. Consequently, in 2005, the growth rate was lowest in the first quarter with 3.2 per cent, but recovered up to 4.6 and 5.3 per cent in

the second and third quarters respectively. Nevertheless, in 2006, the growth rate of real GDP was more than 5 per cent in the first quarter and continued to decrease in the subsequent quarters.

Based on Figure 4.1, the obvious different trend in trade/GDP and FDI/GDP between 1985 and 2006 can be seen. The trade/GDP share continually increased from 0.40 per cent to nearly 0.65 per cent during this period reflecting the intense outward-oriented trade policy implementation. It rose at an increasing rate in the late 1980s. Nonetheless, the rate remained nearly the same during the beginning of 1990s until 1994 but declined slightly in 1995. On the other hand, there was a steady increase from 1996 to 2000 from 0.70 per cent to 1.06 per cent despite the Asian financial crisis of 1997. It rose moderately in 2001 and remained at nearly the same rate until 2002, while decreasing slightly in 2003. There was a steady increase between 2004 and 2006. Generally, it can be seen that trade/GDP ratio was more than one in the 2000s. This implies that trade has been an important engine boosting growth in the Thai economy (ICSEAD, 2006).

In terms of the FDI/GDP ratio, there was no significant fluctuation over the entire period, with the ratio being less than 0.5 per cent between 1985 and 2006. A reason may be due to the attraction of relocation to other neighbours due to their lower wages and skilled labour, and the financial crisis of 1997. However, this FDI came mainly into the export-oriented industries and is attributed to the growth of trade/GDP ratio. Japan has the highest share of FDI in Thailand and is the most important source of inward FDI. The disbursement of inward FDI from Japan to Thailand between 1980 and 1997 was US\$18 billion accounting for 58 per cent (ICSEAD, 2002). The implementation of trade liberalisation policies can be regarded as an important motivation of inward FDI (ICSEAD, 2004).

The inward FDI rose considerably after of the crisis of 1997. This high level of inward FDI can be attributed to several factors (ICSEAD, 2004). First was the recapitalisation of foreign investors including joint ventures and multinational enterprises. Second was the investment of Thai firms taken over by foreign companies to take advantage of low wages and asset costs, as well as the more attractive, stable investment policies and environment. In the first three quarters of 2000, the inward FDI reached to US\$22 billion compared to US\$26 billion in the first three quarters of 2001.

Japan remained the largest source of inward FDI to Thailand in the 1990s and continued to be seen in the 2000s (ICSEAD, 2006). However, the large Japanese direct investment declined slightly between 1999 and 2000 due to lower income, in spite of the Thai economy recovering mildly during this period.

There was a huge decline in inward FDI to only US\$4 billion in the first three quarters of 2000 compared to US\$26 billion for the same period in 2001. It can be said that the major portion of this amount was used to finance increased equity to keep joint ventures in business after the crisis of 1997 (ICSEAD, 2005). Moreover, the inward FDI flows got more benefits in terms of both lower wage and more attractive stimulus policies, particularly in China. The declining trend in inward FDI (apart from the peak between 1998 and 1999) matched that of the ASEAN neighbouring countries of Malaysia and Indonesia (ICSEAD, 2006).

In the same way, inward FDI continued to decrease to US\$9 billion in 2002. However, there was a considerably increase to US\$15 billion in the first three quarters of 2003. The largest portion of this increase in FDI was probably used to rebuild the capital structure of multinational enterprises (MNEs) rather than to finance the purchasing of new fixed or other assets (ICSEAD, 2006). The similar pattern of increasing inward FDI also continued throughout 2005 and 2006 at a steady rate.

The recovery of trading partners and the expansion of intra-ASEAN4 regional trade between Indonesia, Malaysia, the Philippines and Singapore can be attributed to the export value increasing by 5.8 per cent in 2002. The import value grew by 4.6 per cent according to the increase in import value and domestic demand for imports. The main stimulus driving domestic demand was the growth of private spending because of the low inflation and employment expansion (BOT, 2002). Besides that, the packing credit expansion for trade distributed by the Export-Import Bank of Thailand (EXIM Bank) in late 2002 was the additional force boosting demand for imported of raw materials and machinery to produce export goods (BOT, 2002). As a result, the trade balance accounted for US\$3.4 billion in 2002 higher than the previous year and contributing to the faster expanding of exports (BOT, 2002).

In 2003, the export value grew considerably along with the growth of major trading partners and the higher world agricultural prices (BOT, 2003). The import value increased due to the domestic demand of raw materials for export production. The total

export value was US\$78.4 billion increasing by 18.6 per cent. The export volume accelerated by 10 per cent while export prices rose by 7.9 per cent

The dominant factor attributed to the massive growth of Thai exports was the expanding economies of major trading partners especially the ASEAN countries and China (BOT, 2003). Consequently, the combined exports to the ASEAN countries and China grew by 30 per cent to be 27.7 per cent of exports in 2003. Similarly, the increase demand for agricultural products led to higher agricultural export volumes and prices (BOT, 2003). The import value reached US\$74.2 billion after increasing by 17.1 per cent.

Moving to 2004, the higher demand of major trading partners contributed to the significant growth of export value. Nevertheless, the trade surplus was smaller due to both the sharp growth of imports and the rising oil price (BOT, 2003). Exports reached the sum of US\$96.1 billion. The growth of major trading partners particularly the USA, ASEAN and Japan underpinned this accelerating of export volume. The exports to these markets summed up to 66 per cent of export value. Import value recorded a huge US\$94.4 billion and the import volume grew 12 per cent in line with the increased in domestic demand and raw materials imports for export production.

By 2005, export value reached US\$109.2 billion after rising 15 per cent compared to the previous year. The export value increased in all major markets including the US, ASEAN, the EU and Japan totalling 64.4 per cent of export share. Besides that, the export growth was higher in new potential markets such as China, India, Australia and New Zealand due to the relevant bilateral FTAs (BOT, 2005). The import value amounted to a considerable high of US\$117.8 billion increasing by 26 per cent in term of growth rate, while the import volume grew by 8.6 per cent mainly attributed to the acceleration of capital goods imports. The large amount of machinery and electronics imports from Taiwan and Japan as well as the huge quantity of imports of crude oil were the main causes of the deficit (BOT, 2005).

Based on Figure 4.1, it can be seen that the services shares over GDP had a higher proportion of changes compared with the other two shares over almost the entire mentioned period of 1985 to 2006. This can be explained by the significant increase in the revenue of the service sector in the balance of payments (ICSEAD, 2003). This

sector grew massively in the late 1980s and declined slightly in the early 1990s. Moreover, it decreased significantly in some years between 2000 and 2005.

Tourism is the most important component of Thailand's service sector creating huge revenue to the economy (BOT, 2002). The tourism sector revealed recovery signs after the slow down due to the terrorist attack in the US in September 2001. This recovery led to the increase of tourism revenue to about seven per cent of GDP in 2002. In 2003, several adverse factors (e.g. the US-Iraq War and the outbreak of SARS in Asia) strongly affected the tourism industry. The number of foreign tourists declined massively by 40.3 per cent resulting in tourism revenue of 323.4 billion baht (BOT, 2003).

The tourism industry expanded favourably despite the wide spread of avian flu in 2004. This can be attributed to the many promotion schemes implemented by the government and the flourishing of low-cost airlines (BOT, 2004). In 2004, the tourism revenue was 386.1 billion baht up by 18.9 per cent compared to the previous year. However, the Indian Ocean tsunami in December 2004 was the major factor damages to the tourism industry especially the favourite Andaman Southern coast provinces at the end of the year. In 2005, the tourism revenue amounted to 406.5 billion baht an increase of only 0.7 per cent due to the number of foreign tourists dropping by 2.5 per cent. Other important sector in the Thai economy includes service sector of financial services and telecommunications (BOT, 2005).

In conclusion, to construct an appropriate model to study the openness of Thailand, it needs to consider some of the above-mentioned features of the Thai economy, in addition to other trade-theoretic considerations that impacted on the economy's performance. The explanation for incorporating these considerations or desirable features in the model is given in the next sections.

4.4 DESIRABLE FEATURES OF OPENNESS POLICY IMPACT MODELS

The impact of openness and trade on growth is the main focus in most surveyed studies. On the other hand, only a few empirical studies have investigated the impact of growth, external shocks and policy reform on trade especially in Thailand. As a result, in setting up the models of economic and trade policy analysis appropriate for

our study, and as a contribution to the literature and policy findings in this field, the desirable features of these models become very important considerations.

These considerations can be discussed as follows:

- simultaneous trade-growth equation models;
- flexible implicit functional form and its derived estimable explicit equations;
- economic and trade theoretic justifications and their plausibility or suitability in the case of Thailand;
- incorporation of government policy variables, external crises and shocks;
- reliability of the data used, accuracy and reliability of the model (e.g. statistical significance); and
- reasonable economic explanation and plausibility.

The appropriate explainable proxy variables for economic and trade policy have to be combined into the model. These variables are regarded as appropriate explainable proxies because they are relevant to the macro economy and trade and the recent policy implementation. In the case of a small open economy like Thailand and other countries in ASEAN, government policy variables and external crises and shock variables have to be taken into account, because these variables affect Thailand's trade and growth. The forms of this model are simultaneous trade-growth model and explicit functions. Furthermore, the models are constructed by including the major relevant variables and estimated and tested to obtain the final preferred models. The appropriate form of variables is the other aspect to focus on because it deals directly with the results and their interpretation. More importantly, the established models must have clearly explainable theoretical justification and support, especially for Thailand.

4.5 MODEL TO STUDY THE IMPACT OF OPENNESS POLICY FOR THAILAND

As a novel methodology for our study and also based on related previous studies and the expected projected contributions of this study, the impact of openness on trade and growth using and the EGT (see Tran Van Hoa, 2002, 2004a, 2004b) can be described by two simultaneous implicit functions for trade and growth to be estimated. As a result, the model of Thailand's openness can be described as follows.

4.5.1 The Model's Equations

The estimated model consists generically of two normalised implicit functions. The first function can be written in mathematically arbitrary form as follows:

$$\begin{array}{l} \text{Trade-Growth} \\ Y = f(T, CS) \end{array} \quad (1)$$

where Y is defined as GDP, $f(\cdot)$ an implicit function, T is defined as the degree of trade participation or density which is measured from the exports plus imports value of goods excluding services, and CS is defined as internal or external crises and shocks or policy reform. Based on this equation, the relationship between openness, trade and growth is examined through the operation of the variable T according to the traditional trade theory. Under this aspect, the specialisation and competitiveness of production of goods that possess the comparative advantages leads to growth (Appleyard and Field, 1998, p. 38).

The second function for trade determination can be written mathematically arbitrarily as:

$$T = f(Y, X, TH, Z, CS) \quad (2)$$

where T is defined as the exports plus imports value of goods. X is defined as other economic variables (fiscal, monetary, trade and industry policy) and Z is defined as a non-economic variable. In this study, the conventional trade equation is extended in the case of Thailand by including other variables that likely affect Thailand's trade and growth (TH). These variables are FDI and trade in services. These economic and non-economic variables are associated with the country's development and growth (see justification in Johansen, 1982; Romer, 1993; Frankel and Romer, 1999; Rose, 2000; Otto et al., 2002; Tran Van Hoa, 2004a, 2004b).

The two-equation model above essentially assumes that Thailand's multilateral, regional and bilateral trade (T) with its trading partners causes Thailand's GDP (Y). However, this trade (T) is also affected by Thailand's GDP, its partner's GDP and other economic and trade-related activities (Cope and Helpman, 1993) and internal

and external shocks and policy reform in Thailand and in its trading partners (Tran Van Hoa, 2004a, 2004b). Therefore, these variables are expected to be significant and should be included in the model to be estimated and tested.

As (1) and (2) are not estimable, this two-equation model can be written mathematically equivalently in the rate of change (Δ) and stochastic (with error terms ε_1 and ε_2) forms (see Tran Van Hoa, 2004a, 2004b, for the proof of the derivation) for empirical implementation as:

$$\Delta Y = \chi_1 + \chi_2 \Delta T + \chi_3 CS + \varepsilon_1 \quad (3)$$

$$\Delta T = \eta_1 + \eta_2 \Delta Y + \eta_3 \Delta X + \eta_4 \Delta Z + \eta_5 CS + \varepsilon_2 \quad (4)$$

It can be seen that (3) and (4) are growth and trade equations respectively. They are also linear and interdependent. Both circular and instantaneous causality can be observed in these equations. The circular and instantaneous causality can be explained as the bi-directional relationship.

In order to estimate and implement the model (equations (3) and (4)), to explore the trade and growth causal relationship between Thailand and selected partners, population can be the proxy for economic size (a gravity factor) and conventional economic determinants and other associated factors can be used e.g. inflation rate, interest rate, unemployment rate, exchange rate, policy reforms, crises and shocks (see Johansen, 1982; Frankel and Rose, 1998; Frankel and Romer, 1999; Rose, 2000; Tran Van Hoa, 2004a and 2004b).

The endogenous gravity model (that is the EGT model with Thailand's special structural and developmental characteristics) is used to examine the impact on Thailand's growth of trade liberalisation with Thailand's selected ASEAN and other partners that can be expressed in more details for empirical implementation both in the structural equation (5) and the reduced form (6) (see Johansen, 1982; Barro and Helpman, 1991; Coe and Helpman, 1993; Romer, 1993; Frankel and Romer, 1993; Rose, 2000; Otto et al., 2002; Tran Van Hoa, 2004a, 2004b) as:

$$\Delta Y = \alpha_1 + \alpha_2 \Delta T + \alpha_3 \Delta FDI + \alpha_4 \Delta SER + \alpha_5 CS + \varepsilon_1 \quad (5)$$

$$\Delta T = \beta_1 + \beta_2 \Delta Y_T + \beta_3 \Delta F_P + \beta_4 \Delta M_P + \beta_5 \Delta I_N + \beta_6 \Delta T_E + \beta_7 \Delta I_S + \beta_8 \Delta P_O_P + \beta_9 C_S + \varepsilon_2 \quad (6)$$

From (5) and (6), it can be said that Thailand's trade (T) with its multilateral, regional and selected bilateral FTA countries, coupled with external crises and shocks and FDI and trade in services (SER), are assumed to cause Thailand's growth. However, this trade (T) is also affected by Thailand's partner GDP and other economic and trade-related activities (Cope and Helpman, 1993) or internal or external shocks or policy reform in Thailand and in its trading partners (Tran Van Hoa, 2004a, 2004b).

As a result, it can be implied from the reduced form of equation (6) that the trade of Thailand's partners is affected by various exogenous factors such as GDP (YT), inflation (IN) (see Romer, 1993), fiscal policy (FP), monetary policy (MP), trade policy and exchange rate (TE) (see Rose, 2000), industry structure (IS) (see Otto et al., 2002), population (POP) (a gravity factor, see Frankel and Romer 1999) and internal or external shocks or policy reform in Thailand (see Johansen 1982 and Tran Van Hoa 2004a, 2004b). CS is defined as the qualitative time-series data dealing with external shocks and policy reforms resulting in both temporary and permanent effects on trade and growth. All these variables are included in the models to produce empirically the most acceptable accurate and reliable models to answer the quantitative empirical objectives of the study.

The estimated model used in this study for multilateral, intra-ASEAN regional and bilateral trade-growth for Thailand's trading partners can be obtained from the two equations, (5) and (6). Consequently, these equations can be rewritten in full to estimate and for impact analysis between Thailand and say ASEAN4 as:

$$\Delta Y_{TH} = \alpha_1 + \alpha_2 \Delta T_{ASY} + \alpha_3 \Delta F_{DIY} + \alpha_4 \Delta S_{ERY} + \alpha_5 C_{S97} + \alpha_6 C_{S88} + \alpha_7 C_{S02} + \varepsilon_1 \quad (7)$$

$$\Delta T_{ASY} = \beta_1 + \beta_2 \Delta Y_{AS} + \beta_3 \Delta G_{BY} + \beta_4 \Delta M_{SY} + \beta_5 \Delta R_T + \beta_6 \Delta I_N + \beta_7 \Delta E_X + \beta_8 \Delta U_N + \beta_9 \Delta P_O_P + \beta_{10} C_{S88} + \beta_{11} C_{S97} + \beta_{12} C_{S02} + \varepsilon_2 \quad (8)$$

In deriving equations (7) and (8) for two trading countries or blocs, it is assumed that country one's trade affects its growth and this trade itself is essentially a demand equation for either imports from country two or exports to country two or vice versa and both are testable hypotheses. Equations (5), (6), (7) and (8) are explicit equations. Where in terms of the rate of change, YTH is Thailand's real GDP, TASY is the selected ASEAN4's (Indonesia, Malaysia, Philippines and Singapore) total trade (imports plus exports) to Thailand divided by Thailand's GDP, GBY is government budget divided by GDP, YAS is ASEAN4's GDP. The other two ASEAN economies (Brunei and Vietnam) are excluded from the model due to their minor trade share with Thailand. FDI is total inward FDI and SER is total services. These variables are also divided by Thailand's GDP. All variables in the model excluding dummy variables are expressed in the rates of change so the measurement units for trading countries' variables are irrelevant. The variable GBY is used to examine the impact of the government budget as a proportion of GDP on growth. Government finance in terms of budgetary balance, non-budgetary balances as well as cash balances, can be considered as contractionary or expansionary fiscal policy. Nevertheless, this consideration is not the focus of this study.

Equation (8) can be regarded as a derived demand equation for tradable goods or trade in services and investment reflecting its supply or its trading partner and its demand components. This property is postulated in standard microeconomic and trade theory. All equations are in linearity form.

The variables GBY, MSY, RT, IN, EX, UN and POP denote respectively fiscal and monetary policy, interest rates, inflation, exchange rates, industry policy and Thailand's population. The ε 's are the disturbances representing other unknown factors but with effects on YTH and TASY respectively (see Frankel and Romer, 1999). CS is a qualitative time-series variable representing internal or external shocks having either temporary or permanent effects on trade and growth with discrete values. The total trade of all these partners divided by Thailand's GDP is used in the multilateral trade model. The other selected Thailand's FTAs under study consist of Thailand-US, the Thailand-EU FTA, the Thailand-China FTA, the Thailand-Japan FTA, the Thailand-India FTA and the Thailand-Australia FTA. The trade-growth models for these multilateral and selected bilateral trades are constructed similarly.

All the data obtained are annual and ratio transformed. Trade (imports plus exports), government budget and money supply (M2) are divided by GDP. Unemployment rates are defined as open unemployment divided by the labour force. All trade and economic data used in the study are at current prices in US dollars. The reason for using GDP in US dollars is its availability on the ICSEAD databases, but this use would not exclude any other contributing factors to growth. More importantly, in terms of policy implications, the remaining ultimate goal of Thailand's macroeconomic policies implementation is long-term growth in this decade. Besides that, three internal and external crises and shocks are determined which include the capital flow liberalisation of 1988 (CS88), the Asian currency and financial crisis of 1997 (CS97) and the financial institutions policy reforms of 2002 (CS02). The SARS and bird flu outbreak in 2003 and 2004 and the Indian Ocean tsunami in 2004 are ignored because of the unavailability of data. All quantitative macroeconomic and trade data are obtained for the ICSEAD, World Bank, and BOT databases and cover the estimation period between 1985 and 2004.

The main characteristics of the model can be summarised as follows. First, the model's equations are constructed under the trade-growth causality assumptions and EGT concepts where endogeneity and, in addition, implicit nonlinearity are introduced in the relationships. Second, Thailand's government policy variables of fiscal, monetary, trade and industry policy are applied. Third, the internal and external crises and shock variables, such as the Asian currency and financial crisis, capital flow liberalisation and financial institution reforms are included in the model. Fourth, the estimation results with economic-theoretic plausibility and acceptable econometric properties are used to study the linkage mechanisms between Thailand's openness and its economic and trade policy implications extending to the multilateral, regional and bilateral trade liberalisation context.

The incorporation of several macroeconomic variables that affect Thailand's trade and growth can be considered as another important characteristic of the model. The fluctuation of these variables reflects the economic performance of Thailand. Standard macroeconomic indicators show a stable environment for most of late 1980s until late 1990s except for the oil crisis in the mid 1980s and the Asian financial crisis in 1997. The growth rate of GDP declined remarkably by more than 10 per cent during the

financial crisis period and the inflation rate increased by more than 5 per cent (ICSEAD, 2005). Besides that, the unemployment rate rose massively during this period. Both the interest rate and money supply were stable. On the fiscal perspective, there was a large government budget deficit in the early to mid 1980s. These deficits turned to surplus due to the economic recovery from 1987 to the early 1990s, which then turned to a massive deficit again during the financial crisis period. The exchange rate was stable after the devaluation of 1984 and continued to appreciate until the financial crisis forced a huge devaluation in 1997 (ICSEAD, 2005).

Both FDI and services are also added into the model because these variables have increased their proportion in Thailand's GDP and influenced the economy of Thailand since the late 1980s. The international capital flow liberalisation scheme was implemented in 1988 (CS88) is included into the model because at that time it resulted in massive bank loans and portfolio investment inflows. It is reasonable to add the Asian financial crisis of 1997 (CS97) in the model since Thailand was the first country in the region to face this crisis before the contagion spreading to others in the region. The banking and financial institutions policy reforms of 2002 (CS02) is also incorporated in the model because during that time the government implemented various policy reforms and established the necessary organisations to solve this sector's problems. The most obvious problems were those of insufficient prudential regulation and lack of institutional arrangements to deal with and manage the failure of financial institutions. Besides that, most of the developing countries in Asia experienced the contagion effect of the financial and currency crisis that commenced in Thailand in 1997. This crisis emerged from the fragile and inefficient financial and banking system, the baht currency's attack and devaluation, the shortage of international reserves, the sharp decline of exports and the high accumulation of non-performing loans (NPLs) in Thai financial sector. Therefore, the variables representing these crises are expected to have an impact on Thailand's trade and economic growth.

4.5.2 Theoretical Justification of the Model

This section describes the model's theoretical justification. These theories combine the mercantilism concept, the impact of trade policy according to traditional as

well as new trade theory, and the perceived impact of FDI on growth, the EGT, the macroeconomic policy approach and the open economy.

4.5.2.1 Mercantilism Concept

Mercantilism was the principal economic thought between 1500 and 1750. Under this concept, the wealth of a nation can be determined by its precious metal holdings. Mercantilists strongly believe that in order to increase wealth, the government must control trade by using policies designed to maximise trade balance. Consequently, exports can be subsidised whereas high quotas and tariffs are applied to imports. This relationship between Thailand's trade and growth can be seen in equation (7) by including the trade variable.

Mercantilism generally supports protectionism as opposed to Smith's *laissez faire*. Mercantilism can be applied consistently with the overall theme of the thesis, as well as the policy recommendations in Chapter 7 by the following rationale. Although the government must exert trade policies to achieve a favourable trade balance, it should be conditional to the obligated free trade requirement, as is the world's trend today.

4.5.2.2 Impact of Trade Policy According to Traditional Trade Theory

Based on traditional trade theory, trade liberalisation through decreasing import and export barriers is the best policy in term of welfare. This welfare can be improved via gains from specialisation (Ricardo, 1817). However, this point of view is valid only in the case where perfect competition exists. Moreover, the related markets must not have any other distortions. If this situation occurs, then restricting trade policy will become the second best policy. This traditional relationship between trade and Thailand's growth can be seen in equation (7) by including a trade variable.

4.5.2.3 Impact of Trade Policy According to New Trade Theory

The new trade theory relaxes the assumptions of perfect competition and the absence of market failure. This theory states that even though perfect competition conditions emerge, trade restrictions still lead to welfare improvement (Brander and Spencer, 1983; Krugman, 1986; Dixit, 1986; Grossman, 1992; Klodt, 1992). This theory

describes the channel of growth through trade in three dimensions. First, trade exploits specialisation via comparative advantage. Second, the impacts of knowledge and technology flows can accelerate growth. Third, the early stages of industrialisation can be fostered by capital accumulation via lower costs of capital goods and technologies. This new trade theory relationship between trade and Thailand's growth can be seen in equation (7) by including a trade variable.

4.5.2.4 Impact of FDI on Growth

The impact of FDI on growth can be explained from various perspectives. In view of the new growth theory, the technology generating process, to be cutting edge, causes growth by its specific characteristics (Grossman and Helpman, 1991). So, it can be called the endogenous growth theory. In contrast, the neoclassical growth theory explains that as capital accumulation proceeds, growth will slow down due to the diminishing returns to capital. This is the reality paradox because new technologies are accompanied by new capital goods. Therefore, capital accumulation in newly industrialising countries can be regarded as the exogenous technological diffusion process. The growth performance in much of developing Asia is the consequence of this process.

Solow's growth model attributes economic growth to capital accumulation, labour force growth and technological change (Bhagwati, 1994). For the developing economies, capital accumulation can be generated by FDI via the lower costs of capital supplies. The impacts of knowledge and technology spillovers and diffusion can improve the technology transformation. Bhagwati presented the effect of trade policy regarding to gains from FDI in the host country in 1978. This theory was also extended to an immiserising growth theory (Bhagwati, 1994). It is described that FDI flows to a country with import substitution but restrictive trade policy can slow growth. Because FDI mostly moves into high capital intensity production, these countries lack a comparative advantage. On the other hand, the export promotion regime is superior to the import substitution regime in reaping gains from FDI. Beyond this regime, low labour cost and an abundance of raw materials in the host countries attracts FDI. Consequently, the internationally competitive export output production expands.

FDI is considered an important channel of knowledge and technology spillover from developed to developing countries through research and development including human capital development (Grossman and Helpman, 1991). This can be created by multinational enterprises (MNEs) subsidiaries in many ways such as local staff training, increasing managerial skills, and stimulating backward and forward related industries production, enhancing the competitive environment and technological transformation. However, these benefits need a conducive investment and trade policy. The correlation between FDI and growth can be seen in equations (5) and (7) by including the FDI variable.

4.5.2.5 Endogenous Gravity Theory (EGT)

The gravity theory is the most commonly used to describe the pattern of trade. The main concept of the gravity theory is that bilateral trade between countries is determined by the geographic distance separating these countries that is used to construct a proxy for transportation and other transaction costs, and the addition of economic size of these countries measured by their GDPs. It can be seen that this theory comprises only the geographic and economic size aspects.

The EGT, an endogeneity extension of the standard gravity theory, has been developed to link trade and growth between say two trading partners, by not only concerns about geographic and economic size (or population for economy size) attributes, but also by comprehensive macro-economic and micro-economic theoretic factors (Tran Van Hoa, 2004a and 2004b) and in the time domain. The relationship among the variables of the EGT model can be seen from equations (7) and (8) by including trade between Thailand and its partners and contributing variables.

4.2.5.6 Macroeconomic Policy Approach

The classical macroeconomic policy approach of Adam Smith believed in the market mechanism adjustment or invisible hand, that is the economy could adjust automatically to the equilibrium without government intervention (Keynes, 1936). On the other hand, the Keynesian macroeconomic approach disagreed with the classical thought. This approach strongly believed that government interventions are necessary to equilibrate the economy. There are many intervening policies that can be implemented

by government for example fiscal, monetary, and industrial and trade policy. The impact of applying government intervention using fiscal, monetary, exchange rates and trade and industrial policies on growth can be seen in equation (8) by including the government budget, interest rate and unemployment rate variables.

4.5.2.7 Open Economy

The small open economy can be affected by not only internal factors but also external factors (Mundell, 1960; Flemming, 1960). There are many examples of these external factors, e.g. world economy, world interest rates, global crises and regional shocks (see Figure 1.1). Because Thailand is a small open economy, it is necessary to incorporate the external crises and shocks variables into the model. Furthermore, there is considerable evidence supporting the fact that the Thai's economy is affected by these factors. The effect of these external crises and shocks can be seen in equations (7) and (8) by including both the external crises and shocks as dummy variables.

4.6 RELEVANCE OF THE MODEL TO THAILAND'S DEVELOPMENT AND OPENNESS

Thailand's economic development and openness are interrelated via the macroeconomic policy to achieve growth sustainability. Regarding the context and scope of sustainable growth, focusing only on the finance and manufacturing sectors is inadequate. As a result, focusing only on these two sectors could also be unsustainable for some countries in terms of issues such as food security, poverty or income distribution. The explanation in this section and the next two sub-sections is based on the most recent years' data and is used as the background for the explanation of the estimation results and findings and interpretation in the next chapter.

The Thai economy grew by 6.1 per cent in 2004 compared to 6.9 per cent in 2003 due to the domestic demand slowdown particularly in private consumption and investment (BOT, 2004). Exports increased by 23 per cent in 2004 compared to 18.2 per cent in the previous year. The exports prospects were favourable because of the increase in the number of Thailand's trading partners mainly the US, ASEAN, the EU and Japan. The deceleration of investment slowed down imports. Therefore, the trade and current account surpluses increased in 2004 due to both the increasing price and growth rate of

exports of agricultural and high technology products. Government expenditure grew by 17.8 per cent in terms of both current expenditure and investment while government revenue expanded by 17.1 per cent in the fiscal year of 2004. The liquidity in the financial sector was still high resulting in the deposits and loans interest rates of large commercial banks remaining unchanged from last year. Besides that, core inflation together with unemployment was relatively low. It can be said that there was an upturn in the economy was upturn this year (BOT, 2004).

In 2005, Thailand's economic growth slowed down from the previous year. The slower growth was due to several negative factors (BOT, 2005). Adverse domestic factors included the tsunami at the end of 2004, drought, the violence in three southern provinces and the return of the avian influenza outbreak. Meanwhile, external pressure came from high oil prices and the tightening monetary conditions in the US. Nevertheless, overall growth and stability was the consequence of strong economic fundamentals and the ability to adjust to those disturbances (BOT, 2005). The export value rose by 15 per cent in 2005, decelerating from 21.6 per cent in the last year. The import value continued to expand at 26 per cent, similar to the previous year. On the other hand, services, income and transfer accounts went to surplus gradually in 2005 and balanced budget was pursued in the fiscal year 2005 and the government revenue increased at a higher rate than estimated (BOT, 2005).

In terms of monetary conditions, most commercial banks increased both the deposit and lending interest rates. The mergers and upgrades to commercial bank status required by the Financial Sector Master Plan resulted in the expansion of commercial banks' private deposits and claims on the private sector (BOT, 2005). The economic stability in 2005, as indicated by measuring the relevant internal and external factors was produced a satisfactory outcome (BOT, 2005). The average headline inflation was 4.5 per cent whereas average core inflation was 1.6 per cent appearing within the target range. The unemployment rate and public debts remained at low percentages of GDP.

It was expected that the Thai economy would continue grow in 2006 (BOT, 2005). There were four key conditions underlying this forecast. First was the comparison with world economic growth in the previous year. Second was the moderate increase of the price of crude oil in the previous year. Third was the supply side risks contributing to the drought and avian flu outbreak. Fourth was investment of mega-

projects with well-worked plans schedule. The export volume was expected to rise progressively along with the expansion of the trading partners' economies. Contrariwise, the import volume was expected to decrease from the significant high of 2005. The export value of goods was forecast to slow down in 2006, while the value of export of services, especially tourism revenue, was anticipated to turn around after of the tsunami devastation impact (BOT, 2005). Nevertheless, it can be said that the Thai economy was affected by both internal and external risk factors (BOT, 2005). The internal risk factors were weak consumer confidence, business confidence and natural disasters. The external risk factors are trading partners' economic performance, increases in oil prices and the global tightening monetary policy. As the Thai economy is dominated by the agriculture and manufacturing sectors, it is therefore important to review developments in these sectors as well as in the following sections.

4.6.1 Thailand's Development and Trade in the Agricultural Sector

In 2004, the farm income of major crops increased by 15.4 per cent; lower than the growth of the previous year of 28.7 per cent. Favourable increases were observed in the prices of many products, e.g. rice, rubber, sugar cane and cassava, due to higher world demand (BOT, 2004). However, the lack of rainfall caused the major crop production index to decrease by 1.2 per cent. The price of livestock rose by 19.3 per cent in response to the substitution demand of poultry consumers due to avian flu. However, the price of shrimp continued to decline from 2003 after the anti-dumping (AD) duty was implemented by the US (BOT, 2004).

The massive domestic production of rice resulted in the growth in exports of rice to expand by 36.1 per cent in 2004. The rice export value reached 108 billions baht in 2004 increasing by 43.1 per cent. The natural rubber production rose by five per cent due to an increase in planting area. Besides that, the higher world demand particularly from China's expanding automobile industry boosted this product's price. Poultry production was affected severely by the avian flu outbreak that resulted in a ban on the exports of frozen fresh chicken from several major markets.

The export value of agricultural products grew by 20.5 per cent, as prices increased by 22.7 per cent while export volume dropped by 1.8 per cent from the previous year. The export volume of rubber to major markets, namely ASEAN, China

and Japan, decreased. The export volume of frozen fowl also decreased by 92.8 per cent as a result of the avian flu, however, the world supply reduction pushed up the price slightly. On the contrary, the export of rice increased substantially by 36 per cent because other major exporting countries (China and India) experienced drought leading to the decline of stocks and higher prices. The export value of tapioca rose by 36.5 per cent because of both a 31.1 per cent increase in export volume and higher demand from China and the EU. The export value of fishery products increased by 1.3 per cent particularly fresh and frozen fish and cuttlefish benefited from the increasing price. Both the AD implemented by the US and the continuing decline in export prices caused the export value of frozen shrimp to drop by 6.5 per cent.

For the year 2005, farm income of major crops increased by 20.2 per cent, slightly accelerating from 17 per cent of the previous year. Many agricultural products prices increased (e.g. rubber, cassava, paddy and sugar cane) due to high domestic and world demand as well as decreased supply. Similarly, both farm income and the price of livestock increased. The price of shrimp increased gradually because of the temporary tariff reduction of the EU in August 2005 resulting in a huge surge in shrimp exports to the EU (BOT, 2005). The export volume of rice mounted to 7.5 million metric tonnes and 93,548 millions baht, declining by 24.5 and 13.7 per cent respectively. The production of natural rubber decreased by 1.3 per cent caused by the drought and floods in 2005. The export value of major agricultural products of rice, rubber and tapioca all declined in 2005.

4.6.2 Thailand's Development and Trade in the Manufacturing Sector

In 2004, the manufacturing sector expanded at a slower rate compared to the previous year. This slowdown was particularly seen in export-oriented industries (BOT, 2004). The manufacturing production index (MPI) grew by 8.1 per cent lower than the 12.3 per cent in the previous year and is attributed to the higher costs and shortages of raw materials. The main export-oriented industry producing electronics and electrical appliances decelerated considerably. The production of food especially frozen and canned seafood also declined because of the shortage of raw materials. Vehicles and equipment production rose by 20.9 per cent through exports and strong domestic demand. Similarly, the production of steel products and construction materials increased

because of the higher domestic demand. The production of petroleum expanded by 8.2 per cent from increasing domestic demand. Therefore, the average manufacturing capacity utilisation rate was 72.7 per cent, higher than 66.3 per cent in 2003 (BOT, 2004).

The export value of manufactured products rose by 23.4 per cent. Electronics products in the form of computers and parts were the major cause of the increase of the export value by 12.4 per cent due to the demand of trading partners' for re-export production. The major export markets were ASEAN, the USA, the EU and China. The growth of trading partners contributed to the expanding export value of base metal, petroleum, chemical and plastic products by 46.5, 75.3, 32.3 and 36.2 per cent, respectively. The export value of vehicles and parts soared by 44.9 per cent. The labour intensive products export value increased by 11.2 per cent for garments and 18 per cent for precious stones and jewellery. The export value of resource based products increased by 8.6 per cent.

On the import side, the import value of consumer goods grew by 15.5 per cent mainly due to durable goods imports. The import value of intermediate goods and raw materials reached a significant growth of 32.5 per cent due to the surge in iron and steel imports in line with continuing expansion of construction, investment in industries and export demand. The import value of capital goods increased by 20.8 per cent, whereas the import of vehicles and parts rose by 17.5 per cent. The import value of crude oil rose sharply by 50.8 per cent due to a massive price increase.

Manufacturing production in 2005 expanded at a declining rate compared to the previous year and the MPI grew by 9.2 per cent (BOT, 2005). Leather and leather products production decreased because the quality raw materials shortage and market share loss to China. Tobacco production declined due to the anti-smoking campaign and the increase in excise tax. Iron and steel products as well as petroleum production decreased slightly from the previous year. The production of vehicles expanded moderately by 6.3 per cent while the production of electronic appliances declined compared to textile production that increased slightly by 2.4 per cent. The food and rubber products production grew considerably because of a reduction of the import tariff on fishery products for the EU and the higher rubber price.

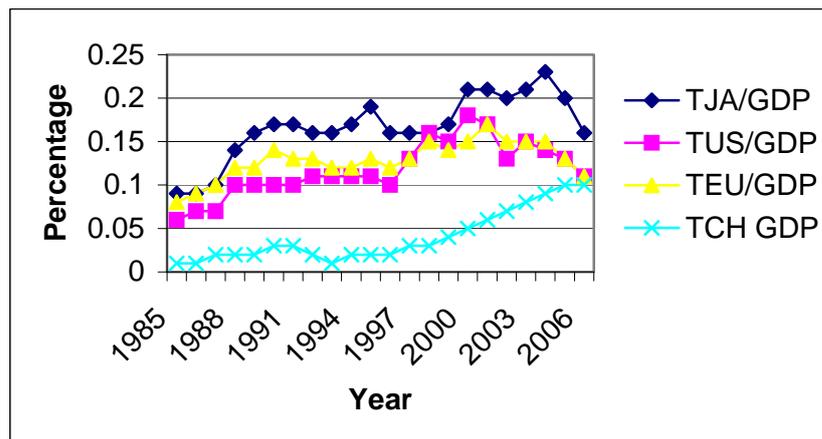
The export value of high-technology products remained the highest share at 63.7 per cent of total exports in 2005. This huge growth was the outcome of the increase of vehicles and parts to ASEAN and the FTAs with Australia and New Zealand (BOT, 2005). The production of labour intensive products grew for precious stone and jewellery exports while garment exports declined due to the quota restriction policy implemented by the US and the EU.

The import value of capital goods increased by 24.7 per cent mainly due to electrical machinery and parts that were used as inputs for export production. The import value of consumer goods rose by 12.4 per cent due to the import of durable goods. The import value of vehicles and parts increased by 9.1 per cent due to growth of domestic and export demand. The crude oil import value rose sharply by 60.7 per cent because of the increase in both the import price and volume.

4.6.3 Thailand's Openness and Its Major Trading Partners

This section provides an explanation of Thailand's openness policy between its selected trading partners to support the estimation results of the openness variables. The total trade divided by Thailand's GDP charts between 1985 and 2006 supports the explanation (see Figure 4.2).

FIGURE 4.2 TRADE BETWEEN THAILAND AND JAPAN, THE US, THE EU AND CHINA, BETWEEN 1985 AND 2006



Note: TJA/GDP is trade with Japan/GDP, TUS/GDP is trade with the US/GDP, TEU/GDP is trade with the EU/GDP and TCH/GDP is trade with China/GDP.
Source: ICSEAD Database, 2006.

Japan is one of the major developed economies which whom Thailand openness conducts transactions (ICSEAD, 2006). The heavily dominant exports of

Japan to Thailand include machinery and are followed by manufactures. Japan is a huge importer of Thailand's agricultural products, reflecting Thailand's comparative advantage.

From Figure 4.2, in 1995 before the Asia financial crisis, total trade with Japan was nearly 20 per cent of GDP. Between 1996 and 1998, this trade declined to 16 per cent of GDP. In contrast, from 1999 to 2004 total trade with Japan increased to above 20 per cent of GDP. From 2003 onwards, exports continued to increase slightly while imports remained higher resulting in a trade deficit for Thailand.

The openness of Thailand is also linked with another developed country namely the US (ICSEAD, 2006). Based on Figure 4.2, the total trade with US was 11 per cent and 10 per cent of GDP in 1995 and 1996 respectively. This ratio increased suddenly to 13 per cent in 1997. There was a slight gradual fluctuating trend during 1998 until 2001. From 2002 and onwards, the total trade with US decreased slightly to 14 per cent of GDP in 2004.

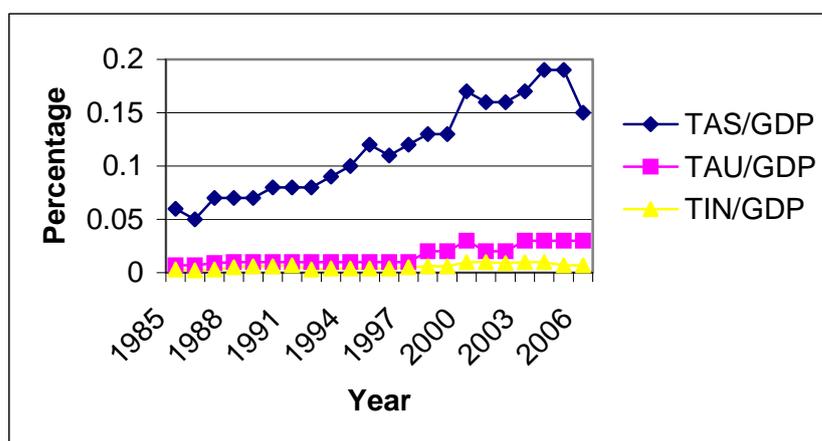
Industrial Europe is regarded as the other major developed economy accounting for a large portion of Thailand's openness transactions (ICSEAD, 2006). The total trade with the EU has a similar trend as trade with the US between 1995 and 2004. It was about 13 per cent of GDP during 1995 until 1997. It increased gradually to 15 per cent of GDP in 2000, reaching 17 per cent in 2001. It decreased slightly to 15 percent and remained at the same rate between 2002 and 2004.

The growth of China has been particularly high compared to Thailand's other East Asian trade partners (ICSEAD, 2006). The total trade with China has an obvious trend between 1995 and 2004. It was two per cent of GDP in 1995 and 1996. Moving to 1997 and 1998, it rose to three per cent of GDP. From 1999 and onwards, there was a steady increase and reaching up to seven per cent of GDP in 2004. This trend can be attributed to the implementation of Thailand-China FTA in 2002 and China's tariff reduction due to its membership in the WTO (ICSEAD, 2006).

The ASEAN4 consists of Indonesia, Malaysia, the Philippines and Singapore. Based on Figure 4.3, the total trade with the ASEAN4 was about 12 per cent of GDP between 1995 and 1997. It rose gradually to 13 percent in 1998 and 1999. From 2000 to 2003, this ratio increased to 17 percent of GDP. In 2004, it increased gradually reaching 19 per cent of GDP. There was a significant decline between 2005 and 2006. The

largest proportions of these shares are traded between Singapore and Malaysia because of lower tariff rates and the liberalisation policy implementation complying with the AFTA schemes (ICSEAD, 2006).

FIGURE 4.3 TRADE BETWEEN THAILAND AND THE ASEAN4, AUSTRALIA AND INDIA, BETWEEN 1985 AND 2006



Note: TAS/GDP is trade with ASEAN-4/GDP, TAU/GDP is trade with Australia/GDP and TIN/GDP is trade with India/GDP.

Source: ICSEAD Database, 2006.

Australia is another important trade partner of Thailand. Between 1995 and 1997, the total trade with Australia was stable at one per cent of GDP. It grew slightly to two per cent in 1998 and 1999. There was an increase to three per cent of GDP in 2000 followed by a decrease to two per cent of GDP in 2002. From 2003 to 2004, it increased gradually and remained the same at two per cent of GDP.

India is also a trade partner of countries in Asia. The total trade share of Thailand with India is quite low compared to the other selected partners, being less than five per cent of GDP from 1985 to 2006. Nevertheless, there was a gradual increase in the early 2000s until 2005.

Recent trends in Thailand's development and trade are also play important role by AFTA and WTO commitments. Almost all key indicators of the Thai economy exhibited in favourable trend before the crisis period between 1995 and 1996. However, only real national GDP continued to decline prior to the crisis period until 2000. The trade value and FDI also decreased at a lower rate compared to the real national GDP in the same period. The largest source of FDI in Thailand is Japan followed by the US, EU and Korea. From 2001 until 2006, all of these indicators changed in a positive way,

particularly trade and FDI, signalling an economic recovery. The economic recovery after 2000 can be attributed to both the implementation of the IMF stimulus policy package and other complementary policies of the Thai government.

The economic development and openness of Thailand received a boost from the recovery of the economy especially after the year of 2003. Nevertheless, the economy then slowed down but remained stable because of many internal and external factors including the Indian Ocean tsunami at the end of 2004, prolonged drought, the return outbreak of avian influenza, higher oil prices and the recession of the US economy. In 2006, the Thai economy grew only gradually due to the continual impact of the above negative factors in the previous year.

Economic development and trade in the agricultural sector experienced the appreciated changes. The higher world demand led to increasing prices of agricultural products in 2004. However, the lack of rainfall caused major crops production to decrease slightly. Moreover, the anti-dumping policy implemented by the US led to a steady fall in the price of shrimp from 2003. The export of rice increased considerably because of expanding domestic production in 2004. Moreover, the export value of agricultural products to major markets increased including the ASEAN, the US, the EU and Japan. In 2005, agricultural products prices continued to rise because of both higher world demand and decreased supply. Higher prices led to declining rice exports from 24.5 per cent in 2004 to 13.7 per cent in 2005.

The production of main export manufactured products decreased because of higher costs and lack of raw materials that resulted in a declining growth rate in 2004. The export value of computer parts increased considerably in terms of manufactured products. Important markets are the ASEAN, the US, the EU and China. On the other hand, the import value of intermediate and capital goods including crude oil grew significantly due to increased prices. The decrease in production can be attributed to the loss of market share to a vigorous competitor, namely China. The quota restriction imposed by the US and the EU caused exports of garments and jewellery to decline. There was a massive import value of crude oil due to an increase in price and volume.

Among the developed countries, Thailand's major trading partners are Japan, the US and the EU. The import share from Japan is higher than the export share during this period resulting in Thailand running a trade deficit. However, the trade deficit

became smaller after 2002 because of lower imports and exports of machinery. The export share to the US market rose with a decelerating rate between 1995 and 1999. But both of these shares started to decline steadily from 2000 until 2006. Similarly for the Industrial Europe between 1996 and 1997 that there was the same rate of these shares that decreased steadily between 1998 and 2000. The import share rose slightly in 2001 but the same trend could be seen in 2001 and subsequent years.

Moving to China, the import and export share reached nearly the same rate between 1995 and 2001. The growth of trade share to China increased continually and considerably after 2002 compared to the other East Asian trade partners namely Japan and Korea. In the case of the ASEAN4 consisting of Indonesia, Malaysia, the Philippines and Singapore, there is no significant change during the discussion period. There was only the decline of these shares that reached nearly the same rate in 1996 compared to the previous year. These shares rose gradually between 1997 and 2005 and reported nearly the same rate again in 2006. For the openness to Australia, these shares continued to increase in terms of a higher import share between 1995 and 1999. Reaching nearly the same level in 2002 and owing steadily after 2003. Japan and the US are still important partners because of their relatively high total trade ratios with Thailand. However, it can be noted that the trend of trade share between China and Thailand is the most favourable and positive compare to the other countries. Therefore, it is expected that positive and significant correlation estimation will occur between trade and Thailand's growth in this case.

The openness policy of Thailand is affected by both the ASEAN and WTO obligations as a member of these bodies. Under the trade liberalisation context of AFTA, Thailand has actively implemented and enhanced tariff elimination since 1995. All products included in this scheme are subject to a tariff reduction to between zero and five per cent in 2003 reducing to zero per cent in 2010. In 2000, Thailand's AFTA average tariff declined to 7.3 per cent compared to 9.7 per cent in 1999 (WTO, 2000). Based on the commitments of Thailand, the appropriate average AFTA rate should not be higher than 7.4 per cent in 2000 (WTO, 2000). However, the real average MFN tariff is more than 18 per cent that is considered quite high compared to other ASEAN members. According to the CEPT scheme, the tariff elimination process can be divided into several stages. Members were obligated to reach tariffs of zero to five per cent for a

minimum of 85 per cent of the inclusion list by the year 2002 (WTO, 2000). This requirement increased to a minimum of 90 per cent in 2001 and 100 per cent in 2002. Besides that, the average CEPT tariff of Thailand decreased to 4.64 per cent in 2003. Thailand was also committed to reduce 80 per cent of all tariff lines in the CEPT to zero per cent by 2007.

The ASEAN Framework Agreement on Services (AFAS) extended the scope of cooperation to include services liberalisation in 1995 (WTO, 2000). This agreement covers some sectors excluded from the GATS schedule of Thailand. The Framework Agreement on an ASEAN Investment Area (AIA) was also signed to promote investment and trade within the region via a more liberal and transparent investment environment and policy. The national treatment will be applied to all industries for ASEAN investors in 2010 and to all other investors in 2020. Thailand was strongly motivated to accelerate the implementation of the AIA in 2003. As a result, investment regulations of Thailand are adjusted so that there are no national treatment limitations to foreign investments. Additionally, the ASEAN Economic Community (AEC) is planned to commence when the CEPT scheme reaches its completion to enhance the scope and depth of all services liberalisation to achieve a free flow economy in 2020 (WTO, 2000).

The implementation of most favoured nation (MFN) treatment to all WTO members is the minimum obligation. Thailand has undertaken several initiatives of the WTO to improve market access since 1995 (WTO, 2000). Tariff reduction and the continual elimination of other quantitative restrictions on agriculture is the major issue. In 1996, Thailand agreed to eliminate tariffs on selected information technology products according to the Information Technology Agreement negotiated in the WTO Ministerial Conference in Singapore. However, many applied tariff rates of Thailand were higher than its WTO commitments in early 1999 (WTO, 2000). Furthermore, the average tariffs on some imported products rose substantially after the spread of the becoming unattainable financial crisis in October 1997 resulting in numerous WTO applied rates.

The scope of tariff elimination was extended considerably due to the implementation of the Uruguay Round commitments. This tariff binding covers both industrial and non-agricultural products commencing from 1995 to 1999 and from 1995

to 2004 respectively. Thailand also has extended the technical barriers standard in accordance with the WTO related obligations. In term of trade related investment measures (TRIMs), some local content requirements were phased out in 1993 (WTO, 2000). Consequently, the requirements previously levied on many activities excluding the production of diary products and selected automobile assemblies have been deleted. Trade related intellectual property rights (TRIPs) are the other necessary implementation area. The relevance of existing domestic laws and regulations are revised to include the new issues that are drafted to reach close accordance with WTO commitments under this aspect.

The custom procedures such as valuation, tariff classification and rules of origin are adopted to comply with WTO standards and requirements that is strongly agreement with the conclusion of the Doha Development Agenda (WTO, 2003). The most important WTO negotiations of concern to Thailand deals with the agriculture issue due to its significant role in the economy. As a result, the subsidy and damping provisions are categorised as the first priority from the perspective of Thailand. These provisions are essential to guarantee the effective implementation of WTO requirements in developing country members.

To sum up, the roles of AFTA and WTO influence the trade policy of Thailand significantly as Thailand is a member of both multilateral and regional trade bodies. The transparent trade liberalisation obligations are the key issues of these organisations. The scope was extended and deepened in the late 1990s to include trade in services, TRIPs and TRIMs. Thailand is an important and active ASEAN member, it is necessary for Thailand to implement and comply with liberalised trade policies and obligations to obtain the highest benefits.

4.7 CONCLUSIONS

To sum up, it is seen that many survey and empirical studies have been undertaken to address the issue of the openness policy in developing Asia. Survey studies simply review and discuss other studies to provide a consensus or argument. Different contributions can be derived from these studies in terms of the relationship between openness and growth, productivity and poverty. Most of the studies report that openness has a significant positive impact on growth in developing countries.

Nevertheless, this benefit depends on other internal factors especially the degree of protection prior to liberalisation. The adopted model from Tran Van Hoa (2004 and 2008) in this study comprises a number of desirable features contributing to its accuracy and reliability such as the statistically significant and empirical results robustness. The explainable proxy variables for economic and trade policy are also incorporated into the model as well as the external crises and shocks variables.

The recent trends in Thailand's development and trade are described in the first part of this chapter. These trends cover the key macroeconomic indicators, mainly trade and FDI. Regarding openness, trade expanded significantly in the late 1980s until the mid 1990s due to the implementation of intensive outward-oriented policies. In the early 2000s, trade rebounded mainly because of the negotiation and implementation of Thailand's several bilateral FTAs. Agriculture products remain one of the most important exports. The proportion of trade in manufactured products expanded in the late 1990s and continued to the early 2000s. The trade flow with the major partners, namely, Japan and the US increase steadily during the late 1980s and dropped significantly in the Asia financial crisis. On the other hand, recovery trends can be seen with most selected partners in the early 2000s. Additionally, as a small developing economy, the roles and trade liberalisation agreements of the AFTA and WTO affect Thai trade policy implementation intensively. Consequently, during the 1980s until the present, Thailand's trade policy is focused in an outward-oriented direction.

The model of Thailand's openness is constructed by introducing two simultaneous implicit functions linking trade and growth. This model reflects that Thailand's growth relies on its trade with its selected bilateral FTAs, resiliency against external crises and shocks, and beneficial policy reforms including FDI attraction and higher trade in services. As a result, FDI and trade in services are included in the trade-growth equation to reflect the structure of the economy that may affect trade and growth. The economic variables (fiscal, monetary, trade and industrial policy) and non-economic variables (economic size, policy reform and external crises and shocks) are included in the trade equation. Moreover, the estimated model is supported by many theoretical justifications that can be described from the mercantilism concept; the traditional and new trade theories; the impact of FDI on growth; the EGT and the open Keynesian macroeconomic policy approach. Therefore, the estimation results can be

considered as an important instrument to study the interaction between Thailand's openness and its economic and trade policy extending to multilateral, regional and bilateral FTAs.

CHAPTER 5

ESTIMATION AND EVALUATION OF THE MODEL

5.1 INTRODUCTION

Chapter 4 mainly discussed the EGT model, followed by the recent trends in Thailand's growth, trade, GDP, FDI and services, and its RTA developments and their correlations and co-movements. While graphical analysis is useful to give us a descriptive understanding of the casual relationships between them. An econometric model was then developed later in the chapter 4 to provide a theoretical framework to investigate these relationships. This chapter collects and processes all necessary data and, using appropriate estimation methods, provides substantive findings on the impact of Thailand's openness on trade and economic policy including growth. The preferred final findings are then analysed in the next two chapters to provide policy implications and recommendations. The other main objective of this chapter is to elaborate the model's structure and estimation procedures that require many steps to obtain the estimation results. The first path is to define the variables incorporated in the model. The data need to be obtained from reliable sources; therefore, several data sources are required. These data have to be transformed to the appropriate form, prior to estimation. Many diagnostics statistics are used in the estimation process to explain the results.

It can be said that discussing an empirical implementation of Thailand's openness model, providing suitable estimates of the model's parameters, and interpreting the findings are the goals of this chapter. The collection and processing of data are presented in Section 5.2. It is necessary to explain the model's features carefully because they lead to accurate and reliable interpretations. The estimation methods are described in Section 5.3. The features of the estimated model are then presented in Section 5.4. Section 5.5 discusses the interpretation of the results and the conclusions are found in Section 5.6.

5.2 COLLECTIONS AND PROCESSING OF RELEVANT HISTORICAL DATA

The relevant data to the model's estimation include: Thailand's openness defined as total trade divided by GDP and other related variables e.g. FDI and trade in services divided by GDP. They are analysed using the trend and graphical analysis

methods. In addition, both the other relevant macroeconomic variables such as the GDP and trade relations with seven major trading partners and blocs are also analysed by the same methods. These methods are used to investigate and explain the patterns of growth, trade, FDI and trade relations with the above partners and blocs. Consequently, to examine these relationships more precisely, quantitative methods must be undertaken.

It is useful to describe the data collection and processing carried out prior to commencing the estimation procedures. The model is estimated using annual data for the period 1984 to 2004 when data are available. Data on GDP and other macroeconomic variables including FDI and services of Thailand are obtained from the International Centre for the Study of East Asian Development (ICSEAD), World Development Indicators (World Bank) and BOT databases. Total trade value between Thailand and its relating trading partners is also retrieved from the same sources. Both trade and macroeconomic (except growth which is defined as the rate of change of real GDP) data are at current prices in the US dollars. Government policy including fiscal, monetary, trade and industry policy data for Thailand is also obtained from the ICSEAD databases. These data are approximated respectively by the government budget/GDP (GY); the M2/GDP (M2Y); the interest rate (I); the exchanged rate of the baht per US dollar (EX); and the unemployment rate (UN). Unemployment denotes industrial policy because an efficient industrial policy leads to a decrease in the unemployment rate due to more job creation for labour.

The GDP of selected Thai trading partners is extracted from the World Development Indicators database (WDI) of the World Bank. Three external major crises and shocks or dummy variables are included in the model. These variables are Thailand's capital liberalisation of 1988, the Asia financial crisis of 1997, and the financial institution reform policy of 2002. The sufficiency of the economy has been denoted in the model by using a proxy dummy variable. The SARS outbreak in 2003, the avian bird flu in 2004 and the tsunami devastation in December 2004 are omitted due to the unavailability of data. All of the variables are transformed into the rates of change form as required of the EGT approach (see Tran Van Hoa, 2004a, 2004b and 2008).

The dummy variables included in the estimated model consist of capital liberalisation, Asian financial crisis and financial reforms. The capital liberalisation variable takes the value of 1 in 1988. The Asian financial crisis takes the value 1 in 1997 and the financial reforms variable takes the value of 1 in 2002.

5.3 ESTIMATION METHODS

Apart from the importance of the estimation methods that can lead to different results and the acceptable statistical efficiency objective, the OLS and 2SLS or instrument variables (IV) are used to estimate the parameters of the model to obtain the most appropriate and reliable results. It is necessary to define the instrument variables to undertake the estimation processes. These instrument variables consist of Thailand's trade partners' GDP, government budget, money supply, interest rates, inflation rate, exchange rates, unemployment rate, population, and crises and shocks. The endogenous variables are real GDP growth rate and total trade with Thailand's partners' divided by GDP. These IVs are the model's exogenous variables.

Equation (8) is a reduced form equation, it can be estimated by the OLS to produce reliable findings. As a structural equation, (7) has, however, to be estimated by the 2SLS. The use of OLS for this equation will treat it as a conventional growth equation where trade, FDI and services are exogenous. This will produce biased and inconsistent or unreliable parameters. The discussion of relative performance by ex post and ex ante through the forecasting mean square error (MSE) is excluded from the study. The ADF test is also used in our background research to test the stationary level of all variables to avoid the basic econometric problems.

Standard diagnostic tests such as the t-test, the F-test, R^2 , adjusted R^2 and Durbin-Watson (DW) are used to interpret the significance and efficiency of the estimation results. The sign and amount of the parameters determines the relationship and impact between the independent and dependent variables. The hypotheses that openness has positive impact on growth, and the exogenous and independent variables have different impact on trade and growth are expected and examined. The estimation procedures are undertaken by using the E-views software program.

5.4 FEATURES OF THE ESTIMATED MODEL

The model's estimation is carried out in two parts. First is the explanation of modelling experiments of the preliminary models that included major trade variables as discussed in Chapter 4 and their available proxied data, several dummy variables affecting economic growth such as capital liberalisation, the Asian financial crisis and financial institutions, and system reform and the sufficiency economy policy. As discussed in Section 5.3, the EGT model generates the well-known growth regression models when the OLS is used for their estimation. In addition, when all elasticity and impact parameters are subjectively assumed and all equations are made non-stochastic, the EGT model can be regarded as a simplified version of the computable general equilibrium models used extensively in the impact analysis literature. These growth regression and CGE models were considered for comparison but not used for analysis due to their well-known specification and realism limitations. Second, the final preferred models are then selected from a large number of the different models and data used in Part 1. The selection is based on theoretical plausibility, and statistical significance and reliability. The following section consists of the estimation experiments to find the appropriate model for Thailand's openness in terms of the model's economic plausibility and statistical performance, accuracy and reliability of the final results. The construction, estimation processes and empirical findings are then presented in the subsequent section.

5.4.1 Features of the Modelling Experiments

Starting with the complete model of growth and trade (in goods, FDI and services) incorporating other economic and non-economic factors and crises and reforms for Thailand, a number of experiments were carried out to investigate its empirical economic and statistical acceptability. These are called primary experiments and for the eight complete models for Thailand that are initially included, the following qualitative dummy variables are added: the WTO and ASEAN memberships, the King sufficiency economy scheme, the village fund and Thailand's political instability. The empirical results based on standard statistical testing including the R^2 , adjusted R^2 , t-test, F-test and Durbin-Watson (DW), are used to examine and justify the model

performance. It is found that the estimation results can be considered as producing satisfactory model performance (see Table 5.1 and 5.2).

Nevertheless, the weakness of some of the models in terms of the causation between the dependent and mentioned dummy variables can be obviously seen. This weakness can be described via the unexpected sign and significance of the dummy variables as follows. The WTO and ASEAN membership has positive but insignificant impact in all models. The King's sufficiency economy scheme has negative but significant impact in all models. The village fund policy has a positive and significant impact in only some models. The political instability has a negative and significant impact in some models. The unexpected correlation and insignificant to growth of these variables is found in some models. As a result, the final and preferred estimated models are built up by dropping the above dummy variables that have an unexpected relationship and significance. Therefore, the structure and empirical findings of the final and preferred models are expressed in the next section.

5.4.2 Features of the Final Preferred Models

This section describes the process of selecting the final and preferred empirical findings for eight models including total, regional and bilateral trade-growth models, based on equations (7) and (8) in the previous chapter for Thailand and its seven major trading partners and blocs. Both the OLS and 2SLS were used for comparison of findings and their statistical efficiency. The importance of the estimation methods employed is that they can lead to different results despite the same model and data being used in the process. Consequently, three scenarios of structural modeling specifications have been estimated for each model based on the aim of statistical efficiency comparison. These consist of the OLS and 2SLS (an IV), as well as the cases without FDI and services, with FDI and with both FDI and services, respectively. The estimated time series data are tested for the stationary property prior to commencing the estimation processes to avoid spurious regression. It is found that all these data are stationary at the same level that is integration of degree one, $I(1)$, by using both the correlogram specification and the Augmented Dickey-Fuller Test (ADF).

The results are given in the following tables. The bilateral and plurilateral FTAs consist of the Thailand-ASEAN4, the Thailand-USA FTA (commencing

negotiations in 2004), the proposed Thailand-EU FTA, the Thailand-China FTA (signed in 2003), the Thailand-Japan FTA (commencing negotiations in 2004), the Thailand-India FTA framework (signed in 2003) and the Thailand-Australia FTA (commencing negotiations in 2002).

The importance of the estimation methods employed is that they can lead to different results despite the same model and data being used in the process. Consequently, three scenarios of structural modelling specification have been estimated for each model based on the aim of statistical efficiency comparison. These consist of the OLS and 2SLS (an IV), as well as the cases of without FDI and services, with FDI and with both FDI and services respectively. The 2SLS is used to obtain better and more appropriate results for the comparison perspective. The estimated time series data is tested for the stationary property prior commencing the estimation processes. It is found that all these data are stationary at the same level that is integration of degree one, I(1), by using both the correlogram specification and the Augmented Dickey-Fuller Test (ADF). The summary of estimation results is the follows.

5.4.3 Model of Thailand's Total Trade with Its Major Partners

This sub-section illustrates the estimation results of the total trade model. The openness variable in multilateral trade model is defined as the total trade between Thailand and all selected trading partners divided by Thailand's GDP.

TABLE 5.1 ESTIMATION RESULTS OF THE NATIONAL GDP AND OPENNESS WITH FDI AND SERVICES FOR TOTAL TRADE MODEL FROM 1984 TO 2005

Methods	OLS	2SLS
Variables		
Constant	6.408	6.110
Openness/GDP	0.349*	0.420*
FDI/GDP	-0.020	-0.024
Services/GDP	-0.220	-0.234
Capital Liberalisation 1988	9.009**	9.105**
Asian Crisis 1997	-24.631***	-24.953***
Financial Reforms 2002	21.386***	22.561***
R ²	0.663	0.660
Adjusted R ²	0.528	0.524

F-VALUE	4.912	4.913
S.E.	8.237	8.268
DW	2.105	2.204

Notes: *** Significant at the 5% level. ** Significant at the 10% level. * Significant at the 15% level.
Sources: World Development Indicators Database, World Bank (2004) and ICSEAD Database 2004.

From the results given in Table 5.1, the important following findings can be obtained. All variables included in Table 5.1 and Table 5.2 in the next sub-section are independent variables and the dependent variable is Thailand's economic growth. First, modelling output growth has been acceptable and successful; the estimated model of Thai growth via all selected trading partners combined has an acceptable high modelling performance that is R^2 reaching up to nearly 70 per cent. Second, when considering the dynamic features of this estimated model using graphs, plots and Durbin-Watson statistics, it can be observed that there is no serious first or higher autocorrelation. Third, openness as defined by total trade/GDP is positive and of significant impact by both the OLS and 2SLS methods. Finally, as expected, the corporation of the three crises and shocks into the model reveals the different results. The financial crisis of 1997 apparently has a negative and significant impact. On the contrary, the capital liberalisation and financial institutions and system reform policies have a considerably positive and significant impact on the economic performance of Thailand in the estimated period in all models.

5.4.4 Thailand's Regional and Bilateral Trade Models

This section reveals the estimation results of the remaining seven models dealing with Thailand's regional and bilateral trade with its major partners. The openness variable in the regional trade model is defined as total trade between Thailand and the ASEAN4 partners divided by Thailand's GDP. The openness variable in the bilateral models is defined as total trade between Thailand and its selected trading partners divided by Thailand's GDP.

From the results given in Table 5.2, the following important findings can be noted. First, while it is difficult to model output growth as defined by the change in GDP, the estimated model of Thai growth via each trading partners has considerably high modelling performance, that is R^2 reaching up to almost and more than 60 per cent

in most estimated models and especially more than 70 per cent for the Thailand-Japan model. Second, when considering the dynamic features of these estimated models using graphs, plots and Durbin-Watson statistics, it can be observed that there is no serious first or higher autocorrelation. Third, openness as defined by total trade/GDP in the case between Thailand and Japan has a positive and significant impact. For other models, openness has a positive but insignificant impact except for the Thailand-Australia model that has a negative but insignificant impact. In the case of the Thailand-India model, openness is positive in OLS and negative in 2SLS, but has an insignificant impact. FDI has positive or negative but insignificant impact in all estimated models. Similarly, the effects of services are negative but insignificant in all estimated models. Finally, the incorporation of the three crises and shocks into the model reveals, as expected, the different results. The financial crisis of 1997 has a negative and significant impact, whereas capital liberalisation and financial institutions and system reforms policies have a positive and significant impact on the economic performance of Thailand in the sample period for all models.

TABLE 5.2 ESTIMATION RESULTS OF THE NATIONAL GDP AND OPENNESS WITH FDI AND SERVICES FOR REGIONAL AND BILATERAL TRADE MODEL FROM 1984 TO 2005

Models/Methods	Thailand-ASEAN4		Thailand-EU		Thailand-China		Thailand-Australia	
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Variables								
Constant	7.059	6.666	6.649	6.822	5.581	4.562	8.388**	9.488**
Openness/GDP	0.158	0.236	0.230	0.197	0.069	0.010	-0.057	-0.176
FDI/GDP	-0.004	0.000	-0.032	-0.029	-0.012	-0.012	-0.003	0.019
Services/GDP	-0.179	-0.191	-0.166	-0.165	-0.077	-0.042	-0.177	-0.220
Capital Liberalisation 1988	8.382*	8.303***	9.763***	9.587*	9.860**	10.450**	7.936	6.684
Asian Crisis 1997	-23.654***	-23.941***	-24.155***	-23.999***	-24.235***	-24.755***	-21.933***	-19.582***
Financial Reforms 2002	19.065***	19.434***	21.052***	20.657***	19.412***	19.902***	17.866***	16.933***
R ²	0.629	0.623	0.619	0.619	0.639	0.632	0.616	0.561
Adjusted R ²	0.481	0.472	0.467	0.466	0.495	0.485	0.463	0.386
F-VALUE	4.244	4.128	4.066	4.020	4.431	4.375	4.019	3.688
S.E.	8.635	8.708	8.752	8.756	8.518	8.603	8.783	9.395
DW	1.978	2.161	1.834	1.810	1.812	1.901	1.551	1.512
Models/Methods	Thailand-India		Thailand-Japan		Thailand-US			
	OLS	2SLS	OLS	2SLS	OLS	2SLS		
Variables								
Constant	7.792*	7.881*	7.523**	7.571**	7.849*	7.815*		
Openness/GDP	0.026	0.024	0.395***	0.377***	0.003	0.024		
FDI/GDP	-0.012	-0.010	-0.023	-0.022	-0.014	-0.016		
Services/GDP	-0.178	-0.190	-0.260	-0.260	-0.157	-0.163		
Capital Liberalisation 1988	8.471*	8.406*	7.176*	7.530*	8.547*	8.567*		
Asia Crisis 1997	-23.461***	-23.475***	-22.982***	-23.876*	-23.096***	-23.234***		
Financial Reforms 2002	19.031***	19.554***	20.456***	20.920*	18.366***	18.660***		
R ²	0.608	0.608	0.737	0.735	0.604	0.603		
Adjusted R ²	0.451	0.441	0.631	0.630	0.445	0.444		
F-VALUE	3.871	3.618	6.991	6.990	3.806	3.803		
S.E.	8.885	9.184	7.280	7.295	8.931	8.935		
DW	1.854	1.838	2.451	2.409	1.694	1.705		

Notes: *** Significant at the 5% level. ** Significant at the 10% level. * Significant at the 15% level.
Sources: World Development Indicators Database, World Bank (2004) and ICSEAD Database (2004).

To conclude, the main features of the estimation findings can be explained by the followings. First, all of the time series data in the model are stationary with I(1). The modelling performance is highest for Thailand-Japan and Thailand-China respectively in terms of R², adjusted R², sum squares of errors and the Durbin-Watson statistics. The Durbin-Watson statistics are high enough to conclude that serious first or higher autocorrelation does not exist in all estimated models. Second, the estimated impact of

the right-hand-side dependent and independent variables is different in each model. Equation (8) also provides valid instruments, as explained earlier, for trade in equation (7). This can be described as follows. It is found that openness has a positive and significant impact in the case of the total trade model and the bilateral trade model of the Thailand-Japan FTA. In regards to FDI and services, both are positive and negative respectively but insignificant in all estimated models. Finally, it can be seen that crises and shocks contribute, as expected, a different impact on the economic performance of Thailand during the period of study in all models. The Asian financial crisis of 1997, as the origin of contagion effects in the region, had a negative and significant impact. On the other hand, capital flow liberalisation of 1988 and the financial institutions and system reform policies of 2002 had a positive and of significant impact on the economic performance and recovery of Thailand.

5.5 INTERPRETATION OF THE MAIN RESULTS

The next step to complete this chapter is to conduct the interpretation of the main results. This is formulated in this section combining economic, econometric and modelling reliability interpretation and including a forecasting power.

5.5.1 Economic Interpretation

The first interpretation of the main estimation results is reported in this section. The economic interpretation considers the main estimation results presented in the previous section. The structure of the EGT model used for Thailand's openness in this study consisted of both the main and conventional components of the determinants and relationships between trade and growth. These major components and relationships are examined for the eight countries and blocs in this research. In regards to the comparative aspect, the estimation results of the EGT model are compatible with other similar previous studies using different methods of trade-growth modelling such as the CGE, the GT or other quantitative trade-growth studies (e.g. Tran Van Hoa, 2004a, 2004b). The empirical findings on the trade-growth causation in which trade has been broadened by incorporating services and investment as well as the crises, shocks and

policy reform explained in the last section contribute to several new and interesting economic findings and interpretations.

The findings can be seen as providing empirical support of current trade liberalisation policy negotiations and implementation initiatives of Thailand under the multilateral, regional and bilateral contexts in only some cases, particularly for the Thailand-Japan FTA. Moreover, these findings can be attributed to the important, credible and practical implications and recommendations for negotiating FTAs and are related to economic cooperation dialogues, according to the key interests of Thailand (see Tran Van Hoa, 2004a, 2004b, 2008).

Regarding the empirical results, these show that Thailand's trade with its global trading partners as defined by the openness size relative to its GDP has some support in terms of being statistically significant and to beneficial Thailand's growth determinants only in the specific case of a bilateral agreement with Japan. This result can be strongly supported by the fact that trade value and volume with Japan is the highest compared to that with other trade partners in this study. This claim can be linked to the priority given to consideration of trade and economic cooperation for policy makers in Thailand to gain mutual benefits from a Thailand-Japan FTA. Lastly, it can be said that trade has been the essential key driver for the Thai economy in the past decades (NESDB, 2005).

More specifically, it can be said that trade liberalisation benefits Thailand most in terms of the bilateral Thailand-Japan FTA. The positive and significant impact of openness can be explained by the EGT due to the highest trade value and volume trade between Thailand and Japan as explained by historical trade over GDP. The geographical distance, location and transportation cost advantage and the economic size of Japan are other supporting factors of this claim. As a result, the negotiation and implementation of the Thailand-Japan FTA, including other trade related and economic cooperation issues should be set up as the top priority. The trade openness proxy variable is defined by trade over GDP to explain that trade liberalisation under FTAs means less protection resulting in more trade openness between partners. The impact of openness can be expressed by the EGT through the development of the simultaneous trade-growth model.

Trade in goods and services and investment are included as important features of this study. Services and investment are measured by the credit services account of the balance of payments and total inward FDI. Both services and investment have a negative but insignificant impact. These findings can be attributed to the volatility and small proportion of GDP of services and investment during the estimation period, and that inward FDI is mainly directed to the manufacturing sector. So, the impact of inward FDI on manufacturing GDP can be seen more clearly than on total GDP. Nevertheless, not only trade in services and investment but also trade in goods can be regarded as the important elements of nearly all current FTA negotiations in order to enhance the economic performance of Thailand and other partners of the FTAs. Additionally, the effort to include the framework of competition law and policy to accelerate trade in services and investment has been strongly undertaken in almost all recent FTAs (Tran Van Hoa, 2004a, 2004b).

The empirical findings support the claim that trade in goods is, conceptually, the crucial element of all FTAs and closer economic relations even though, empirically, the impact is positive and statistically significant for only the Thailand-Japan bilateral trade model in our study. It can be empirically shown by its large contribution to Thailand's growth by multilateral and bilateral Thailand-Japan trade, based on the estimation results and historical time series data of the past two decades or more.

The other important feature of the estimated EGT models in this study is the specification of shocks, crises and policy reform variables. These variables contain sudden or gradual short-term and long-term effects. This feature can not be observed in other related methods and models e.g. the CGE, the GTAP and the GT. These shocks and policy reforms are the major recent economic determinants in Thailand. First was the capital liberalisation of 1988 via the implementation of the BIBF scheme resulting in freer borrowing from abroad mainly by financial institutions. Second was the Asia financial crisis of 1997 that commenced in Thailand in July 1997 resulting in the floating of the Thai baht, with its contagion effect spreading to other countries in the region. Third was the financial institutions and system reform of 2002. This policy reform was implemented to strengthen fragile financial institutions and systems in Thailand and to protect against the crisis re-occurring.

According to the empirical findings, the capital liberalisation of 1988 can be considered an essential and significant beneficial policy reform for the economic performance of Thailand in nearly all EGT models. This can be explained by the fact that Thailand received extremely huge portfolio investment inflows and bank loans in the late 1980s, because of the large interest rate differential between onshore and offshore markets resulting in the expansion of credit and investment. In contrast, the Asian financial crisis of 1997 had an obviously massive damaging impact on the economic performance of Thailand in all EGT models. Many factors can be used to explain this crisis. First was the large asset market bubble due to over investment in non-performing sectors. Second was the loss of massive international reserves because of the policy of fixing the Thai baht value by the Bank of Thailand as a defence against the currency attack. Third was the large amount of foreign debts and non-performing loans (NPLs), as well as the continued balance of payment deficits in the late 1980s until the 1990s. These factors led to the floating of the Thai baht, Thailand's economic contraction and the Asian financial crisis.

Concerning the financial institutions and systems reform, the empirical outcomes are remarkable. This policy reform obviously had a positive and significant impact on Thailand's economic performance. This finding can be attributed to the establishment of the Thai Asset Management Corporation (TAMC) to manage, restructure and solve the debt problems particularly NPLs. As a result, external debt problems, declined by 36 per cent in 2003 (ICSEAD, 2003). Besides that, the balance of payment also experienced a turnaround to favourable trends after the crisis. These factors contributed to the recovery of Thailand's economy.

From the above, it can be concluded that when shocks and policy reform are appropriately included into the model using the time series trade-growth data. They show a serious effect development and growth of a country. By analogy, the Indian Ocean tsunami devastation would have been another major issue concern that affected the development and growth of the country and region from a government's and other policy maker's perspective.

5.5.2 Econometric Interpretation

This section describes the econometric interpretation of our empirical findings. Compared with most related previous studies, the trade-growth models based on the gravity theory or similar theory appear to show an underestimation of the trade effect on growth (see Tran Van Hoa, 2004a, 2004b, 2008). It is also found that 2SLS (or IV) estimates are slightly larger than OLS estimates. This can be supported in the case of trade defined as openness/GDP for the multilateral trade model. The empirical estimation of bias here can normally be seen because of the nature of the model including the characteristics of the instruments and collected data.

The application of a suitable estimation method is an important and necessary consideration to obtain more accurate and unbiased results. This study deals with the OLS and 2SLS. It can be said that in terms of econometric consistency and identifiability, both structural equations in the models are identified. The two estimation methods, OLS and 2SLS, are applied because different estimation methods produce different results for the same model as well as for the statistical efficiency comparison (Tran Van Hoa, 2004a, 2004b and 2008). It should be noted that using the OLS in our study means critically that the trade-growth model is a regression neglecting therefore endogeneity of trade in growth and growth in trade. In the statistical efficiency and accuracy viewpoint, nevertheless, the empirical findings by the OLS and 2SLS shed light on research strategy to improve the estimation and forecasting theory. These considerations should be focused on the higher model estimation efficiency that relate to misspecification, measurement errors and simultaneity bias.

5.5.3 Modelling and Forecasting Reliability

The explanation of modelling reliability is included in this section. To complete this task for a trade-growth model in a simultaneous-equation or 2SLS context, it needs to calculate a reliable proxy for T from its reduced form for each of the estimations carried out. The standard evaluation criteria including the correlation coefficient, the root mean square errors (RMSE) and the Theil inequality coefficient decompositions, namely U_m (bias), U_s (variance), and U_c (covariance) are calculated to

evaluate the performance of the proxy for T compared to the actual T in each estimated EGT model. The evaluation results are shown in Table 5.3.

From Table 5.3, it can be said that the proxy for T by its reduced form estimates is a very good in all models excluding the Thailand-India and the Thailand-US models. The correlation coefficients of all models except these two are higher than 70 per cent up and to nearly 90 per cent for the Thailand-Japan model. It can also be explained that all these measurements of the instrument efficiency are assumed unrelated with the residual ϵ_1 in equation (7).

The calculated RMSE, mean error and the bias, variance and covariance are small except for the Thailand-India and the Thailand-US models. Consequently, these empirical findings can be used to support the robustness and reliability of estimation results obtained by the OLS and 2SLS. Furthermore, these empirical results can also be used as guidelines to propose credible policy implications and recommendations in the proceeding chapters.

TABLE 5.3 RELIABILITY OF TRADE IN GOODS PROXY IN MODELS OF THAILAND'S TRADE WITH ITS MAJOR TRADING PARTNERS FROM 1984 TO 2005

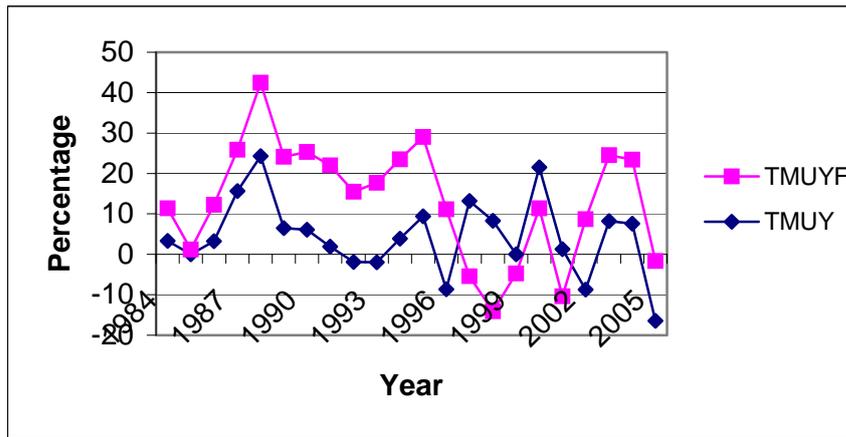
Model	Total Trade	TH-ASEAN4	TH-Australia	TH-China
Correlation Coefficient	0.879	0.840	0.741	0.805
RMSE	2.040	1.184	1.166	0.873
Mean Error	1.615	0.940	0.899	0.707
Um	0.000	0.000	0.000	0.000
Us	0.005	0.003	0.005	0.002
Uc	0.995	0.997	0.995	0.998
Model	TH-EU	TH-India	TH-Japan	TH-US
Correlation Coefficient	0.853	0.117	0.890	0.253
RMSE	1.981	20.635	3.640	9.191
Mean Error	1.597	16.811	2.870	7.146
Um	0.000	0.000	0.000	0.000
Us	0.007	0.147	0.026	0.127
Uc	0.993	0.853	0.973	0.873

Notes: Um+Us+Uc=1 (See Pindyck and Robinfeld, 1998).

Source: Author's calculation using E-views program.

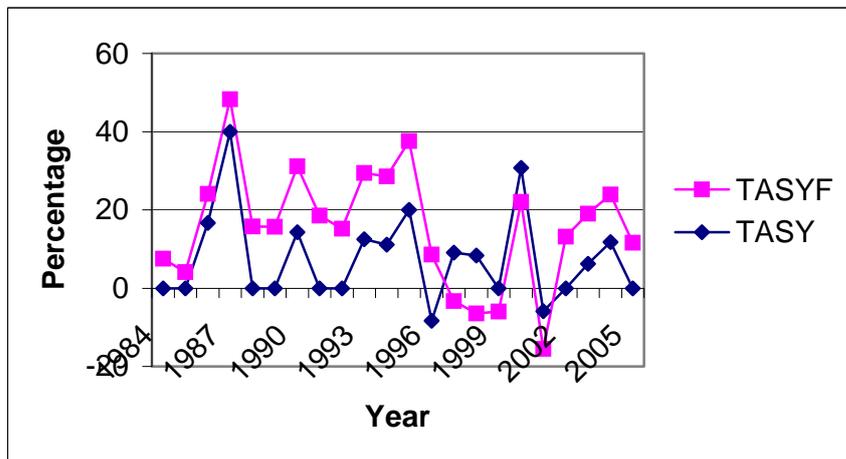
The next step to complete the estimation results interpretation is to compare the actual trade flows and those from the estimated EGT models. The procedure was advocated earlier by Friedman (1953) and more recently by Kydland (2006) where the model performance should be judged by its realism or data-model consistency or nearness (see Tran Van Hoa, 2004a, 2004b, 2008). The results of this procedure can be shown and explained by the following figures.

FIGURE 5.1 MULTILATERAL TRADE FORECAST



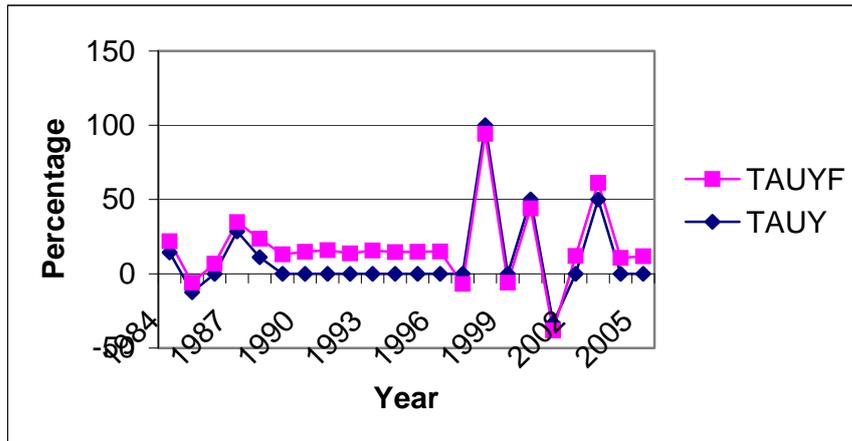
Note: TMUY and TMUYF denote respectively Thailand's total/GDP and its forecast by the EGT model.

FIGURE 5.2 THAILAND-ASEAN4 REGIONAL TRADE FORECAST



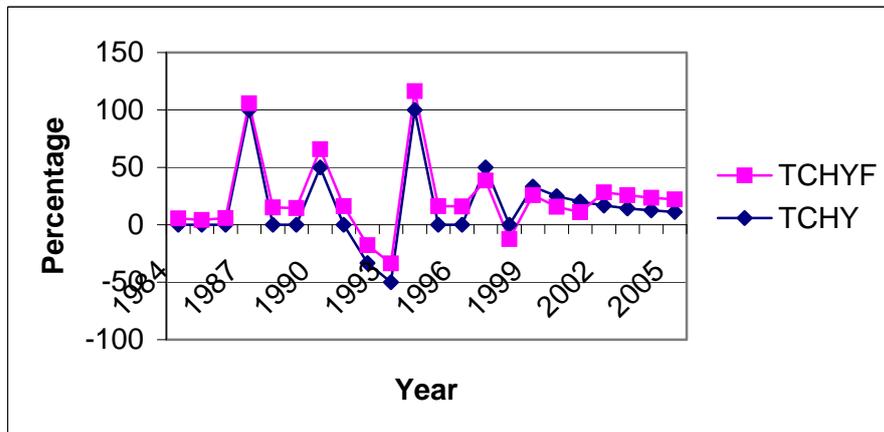
Note: TASY and TASYF denote respectively Thailand-ASEAN4's trade/GDP and its forecasts by the EGT model.

FIGURE 5.3 THAILAND-AUSTRALIA BILATERAL TRADE FORECAST



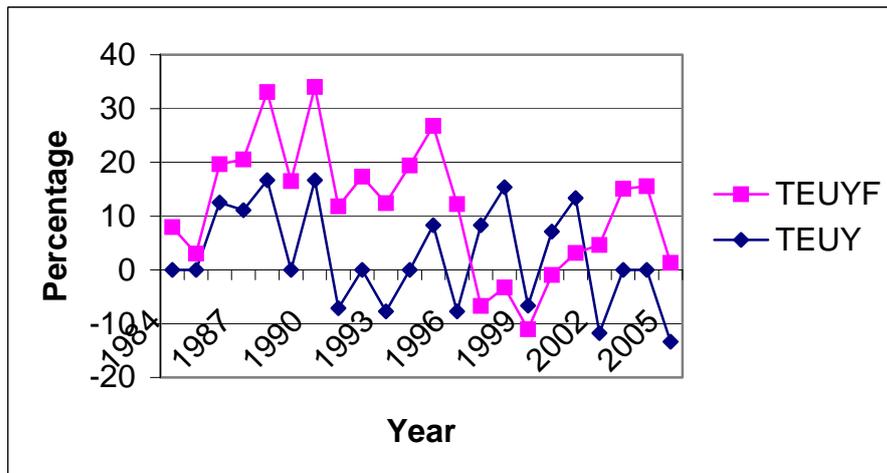
Note: TAUY and TAUYF denote respectively Thailand-Australia's trade/GDP and its forecasts by the EGT model.

FIGURE 5.4 THAILAND-CHINA BILATERAL TRADE FORECAST



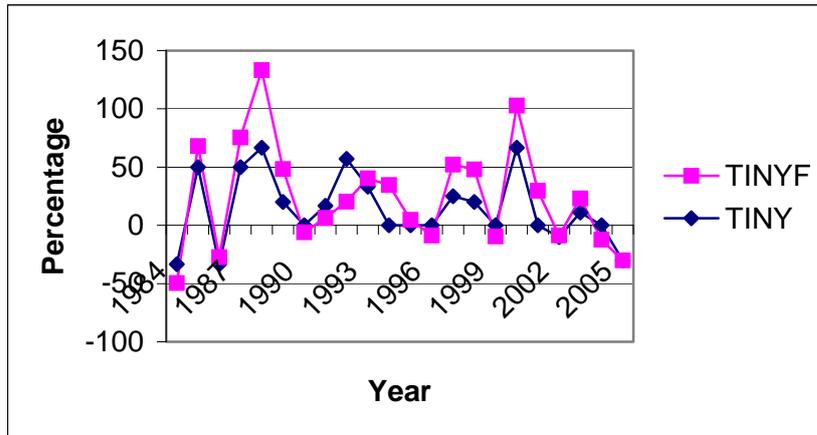
Note: TCNY and TCNYF denote respectively Thailand-China's trade/GDP and its forecasts by the EGT model.

FIGURE 5.5 THAILAND-EU PLURILATERAL TRADE FORECAST



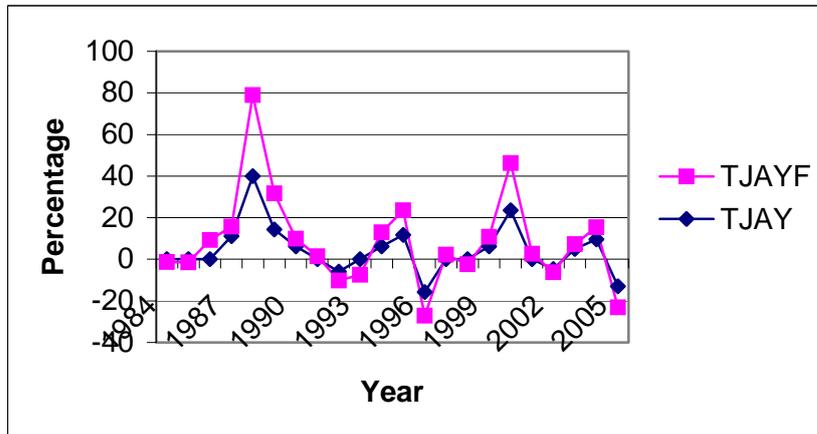
Note: TEUY and TEUYF denote respectively Thailand-EU's trade/GDP and its forecasts by the EGT model.

FIGURE 5.6 THAILAND-INDIA BILATERAL TRADE FORECAST



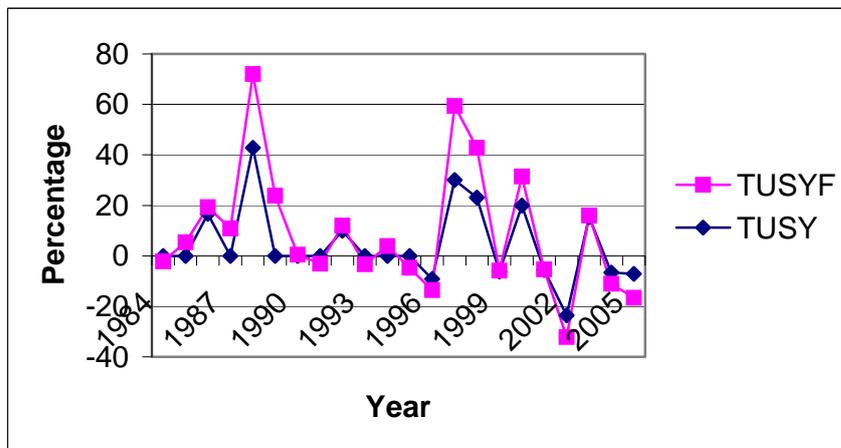
Note: TINY and TINYF denote respectively Thailand-India's trade/GDP and its forecasts by the EGT model.

FIGURE 5.7 THAILAND-JAPAN BILATERAL TRADE FORECAST



Note: TJAY and TJAYF denote respectively Thailand-Japan's trade/GDP and its forecasts by the EGT model.

FIGURE 5.8 THAILAND-US BILATERAL TRADE FORECAST



Note: TUSY and TUSYF denote respectively Thailand-US's trade/GDP and its forecasts by the EGT model.

The movements or fluctuations of actual trade flows for selected trading partners and their estimates from the EGT models are plotted in figures 5.1 to 5.8. It can be seen that the new flexible modelling approach using the simultaneous-equation and function free EGT approach, generates an estimated proxy for T that imitates very well all troughs, peaks and turning points of the actual T in nearly all the models under study, especially the bilateral trade models between Thailand and Australia, Thailand and China, Thailand and Japan. The other important aspect of this performance property is in the fact that all economic variables have been expressed in terms of their rates of changes, a notoriously difficult modelling challenging in the econometric literature. According to the modelling reliability and forecasting criteria described above, it can be affirmed that the estimated EGT models reveal acceptable statistically reliable results. Thus, practical policy implementations and recommendations are proposed in the next two chapters by using these results as the basics.

5.6 CONCLUSIONS

The estimation of the EGT models for Thailand's openness policy study is the major objective of this chapter. These models cover multilateral, regional and bilateral trade in a total of 8 models. These models are based on the EGT theory and constructed in terms of a simultaneous-equation structure. The OLS and 2SLS (IV) are the estimation methods applied to obtain more accurate and reliable empirical results, and the standard diagnostic statistics and more advanced criteria are both used to explain and interpret the results. According to the empirical findings, the openness to trade has a positive and significant impact only for the multilateral and Thailand-Japan bilateral trade models. The positive and significant value of the openness variable for the Thailand-Japan model can be strongly supported and explained by both the GT (reported elsewhere, see Frankel and Romer, 1999) and EGT models. In contrast, the effects of FDI and services are negative but insignificant in all models. The effects of Thailand's capital liberalisation of 1988 and financial institutions and system reform are positive and significant in nearly all models whereas the Asian financial crisis of 1997 has a clearly negative and significant impact. In terms of modelling reliability of our findings, it is found that all models are highly reliable producing correlation coefficients of more than 70 per cent and small RMSE and mean error in all models accept the

Thailand-India and Thailand-US models resulting in a good estimated proxy of actual openness. It is also found that when the graphs of actual trade flows between Thailand and its major trading partners and their estimates are plotted, the estimated proxy for openness contests nearly all points of the actual openness data particularly for bilateral trade models between Thailand and Australia, Thailand and China and Thailand and Japan.

From the above findings, it can be concluded that openness or trade liberalisation is a catalyst for Thailand to enhance its economic growth in only some FTA considerations. Thus, the government needs to focus on the priority of implementation of FTAs with partners by accelerating a comprehensive FTA with Japan first, according to the empirical results. As Thailand is an open small developing economy, trade policy should be set up and implemented appropriately to reach this goal. Investment and trade in services are related issues that need to be negotiated in the current FTAs (WTO, 2003). Additionally, policy makers should concentrate on the implementation of appropriate policy reforms to accelerate Thailand's economic growth and support the implementation of its trade policy.

CHAPTER 6

IMPLICATIONS FOR THAILAND'S ECONOMIC AND BILATERAL FTA POLICY AND EXTERNAL RELATIONS

6.1 INTRODUCTION

This chapter discusses the implications of the model estimation findings and their reliability, as described in the previous chapter, for Thailand's economic and trade policy particularly in the context of bilateral trade analysis. The policy implications are divided into two categories and based on the interpretation of the model's features and estimation results, and also discussed in relation to Thailand's contemporary trade and integration policy issues.

First, the policy implications for economic and trade policies are explained in an overall perspective in Section 6.2.1. Second, the policy implications for economic and trade policies for Thailand's major trade partners are described in Section 6.2.2. The estimated bilateral FTAs models cover Thailand's major trade partners that have either implemented an FTA or have one under negotiation. These partners are Australia, China, India, Japan and the US. Thailand has recently accelerated its intensive bilateral FTAs as a high priority trade policy to expand high potential export markets both inside and outside the region, and aims to explore economic cooperation in terms of trade and investment, including other economic integration perspectives (for related studies, see Chirathivat and Mallikamas, 2004).

The implications of Thailand's investment and service policies are also described in both an overall perspective and with each of Thailand's major trade partners in Section 6.3. The explanation of the role and impact of crises and shocks is presented in Section 6.4 and divided into three domains: domestic, regional and global. Additional qualitative data and other resources to support our policy implications and recommendations are gathered from related studies of Thailand's governmental and international private economic institutions, and international organisations. These data include related working papers, research and other reports from relevant organisation websites such as the International Monetary Fund (IMF), the Asian Development Bank (ADB) and Thailand Development Research Institute (TDRI), and the researcher's own perspective. The findings are then compared to other relevant existing literature findings

on Thailand's economic, openness and trade policy, crises and shocks including regional relations. The conclusions are included in Section 6.5.

6.2 IMPLICATIONS FOR THAILAND'S DOMESTIC ECONOMIC AND TRADE POLICY

This section begins with a comparative perspective between the findings from the previous chapter and major studies in the existing literature. This is summarised in Table 6.1 below and is used as the background analysis in the subsequent sections.

TABLE 6.1 SUMMARY OF MAJOR ISSUES AND FINDINGS

Issues/Findings	Fiscal Policy	Monetary Policy (M2, INF, IR, XR)	Industrial Policy (UR)	Trade Policy	FDI and Services	Policy Reforms and Crisis	Global Oil Shock
Our Findings	- All 7 models	- * MS, INF + - IR + - * XR All 7 models	+ TH-ASEAN4, TH-AU, TH-CH, TH-EU, TH-IN - * TH-JP, TH-US	+ * TH-JP - TH-AU + Others	- TH-ASEAN4, TH-AU, TH-CH, TH-EU, TH-IN, TH-JP, TH-US	+ * Reform - * Crisis All 7 models	- All 7 preliminary models
Puntasen (2003)	+ * GB						
IMF (1996) and ADB (2000)		+ * PS					
Akrasanee et al. (1995), Curvey et al. (1997) and Chirathivat and Mallikamas (2004)				+ * Openness			
McGuire (2002) and Low (2004)					+ * FDI, Services		
Dowling and Valenzuela (2004), Menkhoff and Suwanaporn (2007) and Phongpaichit and Baker (2000)						+ * Reform - * Crisis	
World Bank (2008)							- * Shocks

Notes: + = positive, - = negative and * = statistically significant at the 5% level.

M2 = Money Supply, INF = Inflation, IR = Interest Rate, XR = Exchange Rate, GB = Government Budget, PS = Price Stability, UR = Unemployment Rate.

Findings for trade, FDI, services, reforms and crises are based on 2SLS. Findings for fiscal, monetary and industrial policy including population are estimated by the OLS from the reduced equation. Global oil price shock is estimated from the preliminary estimated structural equation.

Sources: Puntasen (2003), IMF (1996), ADB (2000), Akrasanee et al (1995), Curvey et al (1997), Chirathivat and Mallikamas (2004), McGuire (2002), Low (2004), Dowling and Valenzuela (2004), Menkhoff and Suwanaporn (2007), Phongpaichit and Baker (2000) and World Bank (2008).

The following implications are divided into two parts. *First, are implications for overall domestic economic policy (Section 6.2.1). The second part deals with the implications for economic and trade policy for Thailand's major trading partners (Section 6.2.2), as well as the potential area of economic cooperation between Thailand and these partners.* This part shows the context of how important trade policy is as an engine of growth for Thailand, and is based on the empirical findings and related existing literatures. These implications can be regarded as reflecting the importance of current trade liberalisation, especially the implementation of the FTA policy. Furthermore, to address the recommendations based on the existing literatures and our findings, Table 6.1 was constructed and used to support the proposed policy of the subsequent sections.

6.2.1 Implications for Thailand's Economic Policy

This sub-section discusses the implications for Thailand's economic policy. The appropriate macroeconomic policy that supports with trade policy is an important tool to reach the goal of economic growth. As a result, Thailand's macroeconomic policy has to be implemented accordingly and be compatible with trade policy. The comparison between the findings from the previous chapter and the major existing literature of this issue are explained first. After that, the survey of relevant policies is undertaken to complete this subsection, followed by the evaluation and criticism of these policies based on the comparison summary from the above table.

6.2.1.1 Government Budget

Our findings in Table 6.1 show that the change in government budget has a negative but insignificant impact on growth, while a change in money supply and inflation has a negative and significant effect on growth in all models. The impact of the change in interest rates is positive and negative but insignificant in some models, while the change in exchange rates has a positive and negative and significant impact on growth in some models. Unemployment as a variable for industrial policy has a positive and negative but insignificant impact on growth in different model. These different findings are obtained by estimation the reduced-form equation of growth that is not reported in the previous chapter. It can be said that these different findings of fiscal,

monetary and industrial policy effect occurred because the financial crisis period is included in the estimation period. Nevertheless, it is strongly believed that an appropriate fiscal and monetary policy is necessary to enhance growth as well as trade policy. The major issue revealed is that the transmission mechanism of a stabilising automatic fiscal policy is inefficient. Besides that, the budget system is also inefficient. Consequently, a new system called a rolling budgeting system was suggested for implementation by Puntasen (2003).

6.2.1.2 Village Fund Policy

According to the preliminary estimated models that included the dummy variables for the King's sufficiency economy scheme and village fund policy, it is found that both of these variables have a positive but insignificant impact on growth. This is contrary to some findings of the major existing literature because the government had not designed and implemented appropriate policies for a sufficiently long time to obtain the expected positive and significant outcome. Indeed, the sufficiency economy scheme had been intensively implemented for only a few years despite the fact that it had been introduced in the early 1990s, as the government did not understand clearly the value of a sufficiency economy. The King's sufficiency economy concept implies a strengthening of the local community through self-reliance in areas where insufficient trade existed due to high transaction costs and inequality of bargaining power (Puntasen, 2003, p. 201). Concerning the village fund policy, these funds were often misallocated and used in non-productive ways when they were distributed to people in grass-root in rural areas. The survey of current economic policy and the relevance of our new findings to the debated on Thailand's economic policy are discussed in the by the following sub-section.

6.2.1.3 Fiscal Policy

The automatic stabiliser was the main fiscal policy implementation focus of Thailand in the early 2000s (Puntasen, 2003, p. 185). This policy uses the surpluses in high-growth rate years to balance, while deficits in low-growth rate years. During a period of economic expansion, the government always runs a budget surplus to protect the overheated economy from inflation. In contrast, during a period of economic

recession, the government operates a budget deficit to stimulate a strong recovery. The automatic stabiliser is not an inefficient policy, but the lack of quality planning and institutional limitations are the main problems (Puntasen, 2003, p. 186). Furthermore, government debt rose massively when bond issuance was used to cover the losses generated by the Financial Institution Development Fund (FIDF) and to restructure the financial sector and external debts of many state-owned enterprises. In 1999, the government implemented several additional packages to enhance a rapid economic recovery. The one million baht fund was distributed to each village in Thailand under the village fund policy aiming to stimulate the grass roots economy in the rural areas. The major problem was how to allocate the budget more efficiently and to use it in time for each fiscal year. The budget system of Thailand must be improved to reach this goal. There is a new performance based budgeting system that differs from the traditional system in terms of allocation decisions based on performance. This system is called rolling budgeting (Puntasen, 2003, p. 198). The mix of performance based and rolling budgeting can be considered as an efficient built-in stabiliser that respond to external changes by allocating the country's surplus to all relevant government agencies essential for creating a protection capacity against possible future crisis occurrences.

The reasons why fiscal policy cannot perform fully its automatic stabilising role in Thailand, unlike in developed countries, is because of the following constraints. More than 70 per cent of the expenditure has been dominated by current expenditure, not investment expenditure, and only small percentages contribute to social spending, e.g. unemployment insurance in times of crisis and welfare. Hence, from this explanation, it can be predicted that GBY would obviously have an insignificant impact.

6.2.1.4 Monetary Policy

According to the findings on monetary policy, the effect of a change in money supply and inflation is negative while a change in interest rates is both positive and negative and significant on growth in some models. On the other hand, a change in exchange rates has a negative and significant impact on growth in almost all models. The tight monetary conditions and policy was implemented during the early 1980s (IMF, 1996, p. 18). The following indicators describe this situation: first is the level of real interest rates including their movement compared to foreign interest rates; second is

the change in the growth rate of private sector credit; and third is a change in the reserve money growth rate. The tight and prudent monetary policy assisted in restoring the external balances during the crisis (ADB, 2000, p. 11). These restored external balances can be seen from the international reserves rebuilding, inflation being controlled and the baht stabilising. The lower interest rates led to an increase in the ability of firms to pay the debt burden and to stimulate private investment demand. An inflation targeting policy was proposed and adopted to guarantee long-term price stability and to accelerate transparency and accountability. The Bank of Thailand utilised this monetary policy framework to support the collapsed fixed exchange rate scheme in mid-1997 (ADB, 2000, p. 13). In the late 2006, the Bank of Thailand also implemented the 30 per cent required reserve margin of foreign capital aiming to stabilise and balance the foreign capital flows to discourage speculation on the baht and unstable exchange rate fluctuation (Manager Online, 2008).

The efficient control of money supply, inflation rate, interest rates and exchange rate stability is crucial in the context of monetary policy. The efficient implementation of an inflation targeting policy including an optimum exchange rate fluctuation enhances macroeconomic stability and export competitiveness. The optimum exchange rate can be determined by the degree of deviation of the nominal exchange rate from the real exchange rate. A decrease in deviation between these variables contributes to a higher optimum exchange rate. As a consequence, many suggestions were proposed by academia to optimise the exchange rate when the required reserve margin was abandoned. Pakapaswiwat (2008) stated that there are six alternatives to manage and decrease the exchange rate over-fluctuations after this restrictive scheme was cancelled. First is to decrease the attraction of capital inflows by lowering domestic interest rates at least 0.5 to 1 per cent to equal or be lower in comparison with the US interest rates. Second is to intervene in the exchange market by purchasing the US dollar and selling the baht simultaneously. This scheme enables Thailand to increase international reserves, although, bond issuance is needed to absorb liquidity. Third is to decrease the pressure on the baht and enhance capital outflows by more intensive motivation and stimulation of private sector investment offshore. Fourth is to implement the short-term repatriation profits tax. Fifth is turning to the basket of currency exchange system but extending the fluctuation band to increase flexibility.

Sixth is to enforce foreign capital inflows to purchase the full-risk guarantee. In addition, the basket of currency exchange rate system is suggested to implement (NESDB, 2008).

6.2.1.5 Overall Recommendations

The evaluation of the above survey of economic policy and preliminary recommendations for economic policy to support trade policy and to enhance growth are addressed in this section. The growth of the Thai economy obviously slowed down in the early 1990s, despite the fact that outward-oriented policy had been intensively implemented for a decade. Consequently, it should be stressed that the supporting key macroeconomic management policies must increase Thailand's ability to compete successfully in the highly competitive and unstable world market (Uathavikul, 1990, p. 4). This proposal can improve Thailand's government budget system.

Monetary policy implementation in most developing countries has remained ineffective due to problems occurring in the usage and control of monetary instruments (Uathavikul, 1990). In the case of these countries including Thailand, the rapidly expanding economy leads to pressure on prices and inflation. The most important guideline is to manage the monetary system appropriately and maintain a balanced economy as much as possible. More specifically, the amendment of laws regulating the Bank of Thailand is necessary to ensure sound operational practices that maintain economic stability and foster sustainable economic growth. Examples of these laws amendment directions are capital control policy implementation, and tax collection and required margin subject to capital inflow for portfolio investment.

From the above, it can be said that the conduct of monetary policy in Thailand focuses on the benefits generated by policies possessing a high degree of credibility and compatibility in the long run (IMF, 1996, p. 19). The negative impact of highly fluctuating inflation is very challenging to efficient inflation target policy implementation as well as the smoothing of unstable exchange rates under a managed float system. This statement can be supported from the findings reported in Table 6.1. This contributes to the capacity to implement successful inflation and exchange rate adjustment policy implementation. To achieve sustainable growth, the Ministry of Finance and the Bank of Thailand must ensure that both fiscal and monetary policies are

based on their mutual accord and benefit to the economy. Additionally, the inflation targeting policy has to be implemented more efficiently in terms of controlling inflation and exchange rate stability. The investment environment and regulations restoration has to be done in such a way as to increase foreign investors' confidence.

6.2.2 Implications for Thailand's Bilateral trade and FTA Policy

The implications for bilateral trade policy are discussed in this subsection. Thailand is a small developing country and a member of many multilateral and regional organisations (e.g. the WTO and AFTA), therefore it has to implement trade liberalisation policies according to its obligations with these organisations. Moreover, the bilateral FTAs were intensively negotiated and implemented with many developed countries both inside and outside of the region in the early 2000s. The implementation of outward-oriented or export promotion trade policy is apparently the most recommended instrument for trade liberalisation of small developing countries including Thailand.

This finding from the previous chapter is different from the other related studies because of the empirical features of the dynamic EGT model and historical time series data (Tran Van Hoa, 2004a and 2004b). Other studies are mainly based on the theoretical assumptions and speculation of a positive impact of trade on growth including the static simulation of the CGE model such as the GTAP. More importantly, our findings are consistent and compatible with other related studies in terms of the controversy of impact of trade on growth due to the different models, target countries, assumptions and estimation techniques.

6.2.2.1 Bilateral Openness

Based on the findings reported in Table 6.1, both the findings and other major studies (see Akrasanee et al., 1995; Curvey et al., 1997; Chirathivat and Mallikamas, 2004) confirm the positive and significant impact of trade openness on growth, despite its small value. It can be claimed that the intensive outward-oriented policy is successful, although, growth slowed down significantly during the crisis period. The impact of trade liberalisation in the case of a bilateral Thailand-Japan FTA is positive and significant on growth, despite its small value. This finding is supported by the

quantitative data of the high trade value and volume between Thailand and Japan, as well as the market share of Thailand's exports that reflect the dominant and important trade partnership with Japan. It can also be supported by the EGT in terms of both the geographical distance advantage and economy size. Other major studies and our findings suggest that Thailand's outward-oriented policy should be continued to increase the long-term competitiveness of high potential export industries. As a result, Thailand's trade policy makers should be concerned and attempt to reap the benefits as much as possible.

From the findings reported in Table 6.1, as well as Thailand's high economic growth in the late 1980s to the early 1990s, it can be said that trade liberalisation accompanied with an outward-oriented policy was successful. However, the current and anticipated future trends may force more intense competition between Thailand and the rapidly changing comparative advantage countries in the world market. As a result, Thailand can exploit this comparative advantage transformation to achieve long-term sustainable development and growth (Sussangkarn, 1997, p. 8). Efficient export-led development strategies can be implemented via several possible channels to fully promote the country's competitiveness (Sussangkarn, 1997, p. 10). First is the more efficient promotion of industrial exports to have sustainable competitiveness and to expand the export markets of these goods. Second is to drive Thailand to be the major economic centre in the region through its geographical advantage.

In domestic trade reform, the issue of domestic protection had to be eliminated. Under the inward-oriented regime, domestic production was protected through import tax, licensing, banning or other non-tariff barriers. This policy can be regarded as an important instrument during the early stages of industrial development where infant industry protection was needed in many developing countries (Dowling and Valenzuela, 2004, p. 119). Several factors drove the Thai government to replace this inward-oriented policy by an intensively outward-oriented policy: the economic slowdown, domestic demand contraction and the instability of agricultural exporting commodity prices (Peamsilpakulchorn, 2006, p. 77). The devaluation of the baht in 1985 was a crucial factor contributing to a fully outward-oriented implementation policy to gain more competitiveness in the world market. The outward-oriented regime benefited the economic boom period before the 1997 crisis in two ways

(Peamsilpakulchorn, 2006). First, the economy structure was transformed by mainstreaming the manufacturing and service sectors. Second, was the deeper linkage between Thailand and the global economy.

6.2.2.2 Bilateral FTA Recommendations

The following trade policy recommendations of bilateral trade policy particularly within the FTA perspective are proposed to enhance the contribution to growth of Thailand's trade. The impact of openness between Thailand and most of its major trade partners is shown to be positive but insignificant on Thailand's growth, but this does not absolutely imply that it is impossible to obtain mutual benefits, and there is room for improvement. It can be said that these benefits have not been negotiated recently in the early 2000s and implemented for a short time, and some are even under negotiation. There are five major bilateral FTAs that are the focus of our discussion: the Thailand-Australia FTA, the Thailand-China FTA, the Thailand-India FTA, the Thailand-Japan FTA and the Thailand-US FTA included.

The negotiation and implementation of bilateral FTAs are less time-consuming, more flexible and easier to reach final agreements when compared to multilateral and regional FTAs. Moreover, it can be seen that the impact of bilateral FTAs is higher than that from multilateral and regional trade liberalisation, according to our empirical findings. However, bilateral FTA implementation has to be based on the basic agreement of the WTO, called the WTO-plus rule to assure mutual benefits (Prachason, 2007). Overall recommendations are discussed below and followed by the individual cases of the five major FTAs listed above.

1) Trade

It can be affirmed that the global trading system has become much more liberalised and world economies have become increasingly integrated. However, the slow progressive liberalisation of both traditional and new issues, such as trade in agriculture and services of the Doha Round Agreements of the WTO, motivates regional and bilateral FTA negotiations that are considered a huge advantageous step as the building blocks to multilateral trade liberalisation. This criterion reflects the current important view of Asian regionalism, resulting in the expansion of various FTA forms

(Tran Van Hoa, 2004a, 2004b). The important desirable objectives of the FTAs are to implement a wider and deeper regional economic integration and cooperation, to enhance trade between members and to stimulate growth, as well as increase welfare.

Progress in FTA negotiation and implementation of Thailand since 2002 is evident in that it is well positioned and committed to a dual track policy. More specifically, the Thai government actively desires to transform a dual track to a fast policy later, via promoting other trade related issues such as trade and investment facilitation including services. It can be said that the major existing literature supports the positive and significant role of trade liberalisation or openness despite the fact that in some cases, it is found that the role is small. This empirical finding can be attributed to a better and advanced estimated trade-growth model combined with the use of historical time series data. Based on the empirical findings on Thailand's trade with its major partners, the impact of trade openness on growth is positive in most cases. However, it is significant only in the case of the Thailand-Japan FTA model. In practice, the implementation of bilateral FTAs is a high priority and focus of Thailand's recent trade policy.

Chirathivat and Mallikamas (2004) also suggest the following policy recommendations of key issues to form multiple FTAs that need to be analysed. First, trade creation and trade diversion represents the fundamental costs and benefits of regional and bilateral liberalisation and economic partnership that requires examining in depth the potential risks of opening up the market and the opportunity gains from partners' well-prepared and efficient implementation. Second, the transportation costs among the prospective members should be lowered to contribute to trade creation and to enhance market widening. Third, the increased market access for partners leads to increasing returns to scale, and more efficiency and competitiveness in the export industries. Fourth, the issues in strict FTAs can be different from customs union and rules of origin, and can act as additional trade barriers in an FTA.

The policy recommendations of trade for Thailand's major FTAs are discussed in sections 6.2.2.3 to 6.2.2.7 to enhance the trade flow between Thailand and its partners. It can be seen that the empirical results of impact of trade on growth are not positive and significant for all models. Nevertheless, the policy recommendations have to be discussed in relation to the role of trade openness for all models, because

accelerating trade liberalization via a more open market and free trade is the crucial objective of FTAs.

2) FDI and Services

Like most developing countries, free trade enhances Thailand's opportunity of growth and development through being active in bilateral trade liberalisation efforts. The removal of tariff and non-tariff barriers creates a more open trading environment. The manufacturing sector can gain results via diversifying resources and expanding its production base resulting in economies of scale, productivity and specialisation development, and increased competitiveness. Furthermore, an open and free trade policy attracts increased FDI inflows to promote growth through employment, technology and knowledge diffusion. Trade in services liberalisation is also strongly required by developed countries in FTAs. However, this process is time-consuming in developing countries mainly because of their uncompetitive and protected services sector. Efficient and proper preparation, adjustment, reform and deeper cooperation are all essential to solve the negative impact. More specifically, these schemes protect Thailand from losing not only trade and expanded markets, but also exclude it from an enormous integrated pool of global resources and capital needed for economic development (Department of Trade Negotiation, 2008a).

3) FTA Negotiation Strategy

In relation to our findings, the negotiating strategy for Thailand's FTAs and the preparations and adjustments needed to ensure Thailand's national interests are protected, and the business sector benefits from the FTAs are achieved, can be developed as follows (Department of Trade Negotiation, 2008a).

Thailand's FTA negotiating strategy

- FTAs must cover a comprehensive scope of trade in goods, services and investment as well as participate in non-tariff barriers elimination and facilitation in trade and development cooperation.
- FTAs need to be concerned with reciprocity, taking into account the different levels of development of partners and flexibility (such as a longer liberalisation period required accommodating necessary adjustments).

- WTO rules and conditions have to be asserted in FTAs to incorporate efficient mechanisms preventing negative effects on domestic industries, e.g. anti-dumping (AD), countervailing duty (CVD), safeguards and dispute settlement mechanisms (DSM).

FTA preparations and adjustment

- Set up of FTA Negotiation Committee that consists of experts from the public and private sectors to coordinate service and enhance the implementation, adjustment and restructuring processes of the Thai economy.
- Required trade facilitation to lower trade and business costs with tax and tariff structures reforms, customs procedures simplification and harmonisation, finance and credit facilities expansion.
- Promotion of more intensive trade and economic relationships between Thailand and its FTA partners via the formation of joint business councils, working committees, official visiting and trade fairs and exhibitions.
- Strengthening of small and medium enterprises (SMEs) and grassroots economy sectors through training of entrepreneurship marketing skills development to increase productivity, efficiency and international competitiveness.
- Develop transportation infrastructure to facilitate trade and promotion of a productive and innovative workforce, by training in knowledge and skill improvement, as well as the establishment of social safety nets.

In addition, Thailand also need to enhance and extend the implementation process of signed Asia neighborhood FTAs such as the Thailand-China FTA and the Thailand-Japan FTA, as these partners are more powerful in the Asian and global economy. The MFN and elimination of anti-dumping and countervailing duties must be negotiated and the coverage must be extended to include trade in services and investment to guarantee the mutual benefits of FTAs. In addition, the variety of potential outcomes of FTAs depends on the breadth of products, depth of liberalisation, facilitation procedures, time frame and adjustment costs. Generally, the most important concern is to negotiate and implement bilateral FTAs compatible with the two paths of regional and multilateral trade liberalisation. Thailand's FTA policy strategy can be

improved by the following according to the suggestion by Sally (2008): first explicitly relate FTA policy options to domestic reforms policy to mutually enhance growth; and efficiently coordinate with non-government organisations (longer time-lines should be compatible with fewer negotiations).

Some additional considerations should be focused on when negotiating FTAs with different partners (Montreevat, 2003). Discriminatory preferences can be used to force utilised products to be excluded from the international markets. The rules of origin implementation complexity are difficult issues to solve. The compatible implementation of the various FTAs with multilateral and regional agreements is also an important issue. Besides, the FTAs should include high potential competitive export industries to assure the benefits of FTAs. The research and development, production cost reduction, and logistic improvements to decrease transportation costs are examples of issues that increase industry competitiveness. Thailand has to be forceful in its negotiations to implement the requirements of rules of origin, competition policy, and protection of intellectual property rights as well as labour and environment standards, particularly with developed partners.

The readiness of Thailand to accept numerous condition set up by large and powerful negotiating partners under the context of bilateral trade agreements is an important consideration. Some examples of this issue are the low sanitary standards in the case of Thailand and Australia, an exclusion of agriculture in the case of Thailand and Japan, and the service liberalisation in the case of Thailand and Australia and between the US. The US-Singapore FTA can be used as an example to study and prepare the Thai delegation for FTA negotiations with the US. Nevertheless, the difference in both economic structure and development of all partners needs to be taken into account. Another crucial issue that needs to be solved effectively is the allocation of resources and a fair income distribution from the FTAs.

The improvement of competitiveness and productivity is also crucial for the Thai agriculture sector, because it is the country's major export sector. The fair income distribution between farmers, producers and exporters should be recognised. The government should implement policies to increase the quality of agricultural products, the value added of final products, as well as the low price guarantee and appropriate subsidies to farmers. Concerning FTAs, the priority of the Thai government to enhance

more enhance its negotiation skills and insist on the incorporation of WTO rules and conditions both when negotiating new FTAs and when renegotiating to more effectively implement and extend the scopes of signed FTAs. This is an ample task to gain benefits from trade creation, and to avoid trade diversion and possible added costs from the trade liberalisation competition of neighbouring countries FTAs and with Thailand's other major trade partners.

According to Prachason (2007), there are many lessons to be learned concerning trade liberalisation by FTAs: first, it can stimulate faster and greater imports of food that adversely affect Thai farmers; second, it can affect different economic sectors in different ways, the agricultural sector tends to be loser because of remaining non-tariff barriers and limited gains are available only in a few commodities covered particularly in the Thailand-China FTA; third, the agriculture sector also has less adjustment capacity than the industrial sector; and fourth is the simplification and harmonisation of rules of origin in Thailand's FTAs to decrease trade diversion and costs.

4) Relevance to Policy Reform

The above FTA strategy policy requires the transformation of trade policy tracks (Sally, 2008). It is important to simultaneously implement the wave of asserted unilateral liberalisation and regulatory reform to avoid misguided government intervention and to enhance competition. The focus and priority of Thailand's FTA policy has to be compatible with the WTO fundamental agreements. Besides, the efficient adjustment to assist small rural farmers that are adversely affected by the country's market opening and massive imports of cheap goods has to be implemented. Therefore, the Thai government must strongly commit to implementing an efficient dual policy of domestic liberalisation under FTAs and regulatory reforms agenda.

The priority of liberalisation policy under both regional and bilateral FTAs to enhance benefits is recommended by the following. The first priority is trade in goods liberalisation particularly in agricultural goods, followed by manufactured goods. The second priority is trade in services, especially in financial services liberalisation. The third priority is trade related investment liberalisation. Other important aspects to support this aim are human resource and infrastructure development cooperation.

Furthermore, a unilateral liberalisation without discrimination needs to be implemented with all countries, including transparency competition policy reform. In addition, capacity building policies to increase competitiveness of potential industries under FTAs and adjustment assistance policy for affected small farmers are necessary.

In summary, there is no doubt that Thailand has encountered many restructuring and adjustment process difficulties under its competitive trade liberalisation environment. An appropriate strategy and efficient adjustment preparation would contribute to more gains in terms of an increased resource base, market expansion opportunities and technology know-how acquisition needed for further development and growth. Thailand has to accelerate to achieve full economic cooperation with all of its FTA partners. This suggested approach is called dual track approach, to assure continual successful growth and to secure Thailand's position to benefit in the global trading system arena.

6.2.2.3 Thailand-Australia Free Trade Agreement

The Thailand-Australia Free Trade Agreement (TAFTA) was first agreed upon in a joint study in July 2001, to strengthen bilateral trade and extended investment relationships. Australia is a highly stable economy, with low tax rates and strong market-orientation that matches the criteria for FTA readiness more than Thailand. The massive economic restructuring of Thailand during recent years as a result of economic crises has produced a relatively sound and strong market-oriented trade policy reform. This is a reasonably good support for closer economic integration of both partners.

Thailand and Australia have commenced a cooperative and productive partnership on trade and other related economic issues (Department of Trade Negotiations, 2008b). Some issues remain under further negotiation such as trade in services, quarantine, comparatively high tariff levels and investment policy. The TAFTA was signed in July 2004 and became effective in January 2005. The current structure of Thailand's tariff schedule under the TAFTA is divided into six bands as follows: zero per cent for most industrial raw materials and essential goods; one per cent for selected raw materials, electronic parts and vehicles for international transport; five per cent for primary and capital goods; 10 per cent for intermediate goods; 20 per

cent for finished products; and 30 per cent for that goods need special protection (Department of Trade Negotiations, 2008b).

Thailand has a longer tariff elimination period than Australia with a gradual reduction that covers all products in 20 years, within five years for agricultural and manufactured products, within ten years for sensitive manufactured products and within 10 to 15 years for sensitive agricultural products. For Australia, the tariffs were zero immediately in January 2005 for most items, with sensitive items of textiles and clothing within 10 years and special safeguards remain for canned tuna, fresh pineapple and pineapple juice until 2008 (Department of Trade Negotiations, 2008b). It is necessary for both parties to commit to preferential liberalisation in FTA negotiations. The agenda, process and outcome have to balance the interest of both participations.

The trade flow expansion depends on the capacity of comparative industries in each economy. The exports of dairy products, aluminium and similar products are expected to increase for Australia while the exports of textiles and clothing; processed foods and glassware are expected to increase for Thailand. Both Thailand and Australia also gain in terms of increased capacity to penetrate in the regional and global markets because of lower material and input costs, expertise and closer cooperation. It is beneficial for Thailand to rely on strong export growth especially in the electronics sector and possibly in the automobile and components sector apart from the agricultural products to enhance growth (Department of Trade Negotiations, 2008b).

A number of policy options are available here for the TAFTA. It improves the market perception of both parties to cooperate in all trade issues under an FTA. The agricultural food sector of Thailand is projected to improve productivity. The Thai dairy sector can focus on increasing competitiveness for exports. Anti-dumping laws should be based on transparency and mutual recognition and quarantine issues should be harmonised. In the manufacturing industry, the Thai textile industry has lower protection and competitiveness loss due to higher wages, unskilled labour and misallocation of FDI in the 1990s. Thailand can utilise the TAFTA to exploit the high potential of the Australian market to increase its export share, however, the high tariffs imposed by both countries are a major protection barrier. Consequently, the tariffs elimination under the TAFTA can assist Thailand in expanding its market share and

more effectively in competing with its important export competitor, e.g. China that has nearly 70 per cent of the Australian import share.

Intensifying the links between Thai and Australian alliances and encouraging joint ventures can enhance the textiles and clothing trade via the TAFTA. The Thai government should use the TAFTA to be an attraction to Australian inward investment in this industry and, as a consequence, preferential access to Australian investments will motivate investment from other sources. Thailand and Australia have agreed on the rules of origin for preferential trading partners that are important to stimulate trade flows, nevertheless, implementation problems have arisen from the overlapping FTAs. Thailand takes a heavier burden of overall small adjustment costs than Australia as a developing country and the reason is that the average tariff in Thailand is higher than that in Australia.

Australian FDI in the food and agriculture sector in Thailand has been growing since the late 1980s and continued to do so in the early 1990s. The Australian investment interest is in dairy products by joint ventures with the Thai dairy industry and fast food. The main impediments to bilateral trade are non-tariff measures that restrict some Thai agricultural exports such as frozen chicken, and fresh fruits and vegetables. The TAFTA can enhance trade facilitation in terms of quarantine and anti-dumping cooperation. Possible agrifood sectoral impacts of increased trade and investment can be expected in meat, seafood, dairy, horticulture, grains, sugar and processed foods.

Moreover, the TAFTA can be regarded as an efficient instrument to explore and strengthen bilateral trade and investment linkages via strategic business co-operations to create regional and global markets networked by FTAs. The expected benefits of FTAs basically depend on their scope, coverage and implementation period. It is recommended that the TAFTA must be able to enhance economic growth and living standards in both economies via the following strategies (Department of Trade Negotiation, 2008b): 1) more intensive bilateral trade and investment liberalisation to encourage higher trade and investment flows and to extend to third countries; 2) collaborate to create a larger market network and to enhance productivity through transparency competition and economies of scale; and 3) set up a closer and deeper

economic cooperation framework including effectively addressing and mutually solving trade and investment as well as other related problems.

The strong recommendation of extended scope of investment, services and domestic regulation harmonisation reflects the strong linkage between trade and these issues under the TAFTA. It is certain that both Thailand and Australia will encounter short-term adjustment costs at least those accompanying output composition shifts due to trade and investment liberalisation. The examples of strategic policies to accelerate this process include financial sector reform, labour market improvement and human resource development. The TAFTA can add technical assistance and capacity building responses to these adjustment issues. Deeper integration acceleration via further mutual co-operation of both countries is necessary to enhance benefits particularly for Thailand.

6.2.2.4 Thailand-China Free Trade Agreement

The Thailand-China Agreement on fruits and vegetables tariffs elimination was initially negotiated and signed in October 2003 after Thailand hosted the Asian Pacific Economic Cooperation (APEC) Summit. This agreement was implemented under the Early Harvest Program of the ASEAN-China FTA and covers 116 items (Department of Trade Negotiation, 2008b). Agriculture is a highly sensitive and vulnerable sector in both countries and it takes a long time to adjust to changing market conditions.

With respect to the ASEAN-China trade in goods liberalisation, tariff reduction is applied to all goods that are divided into normal track and sensitive track. The implementation period of normal track products is from 1 January 2005 to 2010 for China and the original 6 ASEAN members (Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand) and to 2015 for the newer 4 ASEAN members (Cambodia, Myanmar, Laos and Vietnam) (Department of Trade Negotiation, 2008c). It can be said that Thailand offers wider product coverage and faster tariff elimination progress than China under both categories; therefore, the offered access preference of Thailand is for broader and deeper change than rather (Pupphavesa, 2008).

The question of whether or not Thailand's immediate tariff elimination on both the ASEAN early harvest program (AEHP) and early harvest program products

(EHP) contribute to significant trade volume potential and growth between Thailand and China requires careful consideration (Pupphavesa, 2008). Compared to other bilateral FTAs, the China-Thailand AEHP and EHP have been concerned about the comparative advantages loss and the Thai farmers effecting because of the cheap price advantages of Chinese agricultural goods. The Thai government is concerned that the increased imports volume from China and its exports to third markets can lead to possible competitive losses in the Thai agricultural export sector.

Both the AEHP and EHP, and the rapid economic growth of China, offer considerable advantages to Thai exporters in terms of geographical proximity and reduced transportation costs. As a result, to supply China's agricultural imports, Thai farmers have over extended their production via inappropriate ways such as cultivation of crops in unsuitable lands and overuse of chemical fertilisers and pesticides that result in low quality agricultural products. The imports of fruits and vegetables from China have been shown to be contaminating in tests by Thailand's sanitary and phyto-sanitary standards (SPS). As China has different regulations in different regions, and, the government should provide assistance to exporters concerning these different regulations issues.

To eliminate these obstacles, the Thai government has provided adjustment assistance to cover costs arising from agricultural trade liberalisation under FTAs by establishing and restructuring the Agricultural Production Fund (APF) to improve competitiveness. For example, financial and technical assistance through research and development, technology upgrading and improved logistics and infrastructure for agricultural products transportation are being developed. Particularly, the transportation linkages between the southern China region and the northern Thailand region have grown under the ASEAN-China economic cooperation agreement.

The restructuring and adjustment of uncompetitive and disadvantaged sectors is the most important issue that needs to be solved efficiently under the bilateral FTA. It can be said that Thailand's FTAs including AEHP and EHP benefit mainly large enterprises; therefore, the restrictions and relevant rules and regulations should be concerned with guaranteeing benefits to small and medium participants. Pupphavesa (2008) suggests that the Chiangrai province is suitable for developing a gateway and hub for Thailand-China agricultural trade because of its geographical advantage. The

mutual harmonisation of SPS measures is another necessary requirement to enhance the benefits of the AEHP. Moreover, development and investment in other national supported trade and investment, e.g. financial services, telecommunication and transportation infrastructure and logistics, can be a vital instrument for enhancing the mutual benefits of the Thailand-China FTA in the near future. The future Thailand-China FTA should be extended for deeper integration of industrial cooperation and investment and services liberalisation.

Trade liberalisation of fruits and vegetables under the AEHP and EHP of ASEAN-China FTA is an initial pathway to foster the successful negotiation of the Thailand-China FTA. Extended coverage and deeper integration is essential to enhance mutual benefits especially for Thailand, because China is a huge emerging potential market in Asia and is a pool of capital resources due to its advantages of low wage and attraction of FDI flows. In the future, this extended coverage needs to include manufactured products and services, particularly tourism and transportation in the future to foster mutual benefits from the FTA.

6.2.2.5 Thailand-India Free Trade Agreement

India is another crucial strategic trade partner of Thailand due to its dynamic economic growth and abundance of skilled personnel, and its status as the knowledge base of Asia. The trade linkage between Thailand and India reflects the fact that India is an increasingly important source of Thailand's imports. Das et al. (2002) state that despite the fact that bilateral trade between Thailand and India is small; it has potential to expand continuously at a high rate. India imposes high import-weighted average tariff rates on Thailand's exports. Currently, the high trade barriers are mainly extended to food and other agricultural products including textiles and capital goods.

The Thailand-India FTA (TIFTA) proposal was formulated to extend economic, trade and investment cooperation. The joint study was set up in October 2003 and the two countries agreed to sign an agreement to establish an FTA in 2010. This proposed agreement is highly achievable because Thailand and India are close partners within both the BIMSTEC and ASEAN-India FTA proposal. The primary agreement covers trade in goods, trade in services, investment, trade and investment facilitation and other related economic cooperation (Department of Trade Negotiation,

2008d). Moreover, not only tariff liberalisation but also closer cooperation in terms of standards of harmonisation such as health and other standards as part of an FTA is necessary to be seriously negotiated.

Tariff liberalisation under the proposed Thailand-India FTA is expected primarily to contribute to import price reduction. It should also affect demand-pull on exports because of a reduction of the partner country's import tariffs. These benefits are expected to improve the export competitiveness of both countries in the global market. There are other potential positive impacts from the TIFTA in terms of improved market access, enhanced product and export competitiveness due to reduced costs, and downstream production expansion in both countries. However, the rules of origin are important issues and are similar to the Thailand-China FTA and the Thailand-Australia FTA.

Das et al. (2002) suggest strategy recommendations to eliminate adjustment costs and to enhance mutual benefits under the Thailand-India FTA (TIFTA) that cover the WTO to consistently guarantee the achievement of sustainable development and welfare, scope and coverage, rules of origin, trade facilitation measures and institutional mechanisms. The TIFTA should cover all trade in goods between parties except only for a negative list. It also needs to include the agreements related to tariff, non-tariffs, quota tariffs and direct trade measures, as well as state trading and government procurement. For the rules of origin, to incorporating a bilateral accumulation mechanism provision should be considered in line with the regional accumulation provision agreement. Finally, trade facilitation measures are required to sufficiently support the success and benefits of the TIFTA by the following: 1) to improve information quality and to bridge an information gap; 2) to increase the vertical export activities integration; 3) to enhance the mutual customs cooperation via rules, procedures, classification and documentation harmonisation; and 4) to support banking facilitation through trade and investment financing by credit, guarantee and insurance.

Tariff elimination especially in the raw materials and final goods sectors can enhance the downstream activities dynamism. The TIFTA should also be consistent with the WTO rules in terms of a wide range of adjustment procedure. The TIFTA will have a positive impact on some of Thailand's manufacturing sectors such as textiles, leather, chemicals, rubber and plastic products, and vehicles and parts and electronics

equipment, because of improved market access. However, there is a negative impact of declining output on some sectors such as minerals, food products and wearing apparel due to the import competition (Department of Trade Negotiation, 2008d). Thus, improved market access, competitiveness enhancement in downstream production and exports of the positive impact sectors may be implemented. Moreover, the adjustment costs should be implemented for the specific negative impact sectors.

Both Thailand and India are developing economies with certain commonalities but disparity in economic progress. Therefore, an effective economic linkage policy should enable them to both benefits from bilateral and global integration. In the early 1990s, India began to reform economic policies particularly its trade and investment liberalisation policy resulting in the fastest growing economy in Asia. In this context, bilateral economic cooperation, especially in terms of an FTA, is immensely beneficial because of India's emerging market and economy size. As a result, a mutually desirable proposal of trade composition, and significant diversification of scope and coverage, including the elimination of high tariff and non-tariff barriers, is crucial factors to enhance deeper integration and mutual benefits.

6.2.2.6 Thailand-Japan Free Trade Agreement

The Thailand-Japan FTA was initially negotiated by forming a closer economic partnership (CEP) in the early 2000s and developing into an FTA later. The total bilateral trade value between Thailand and Japan has been more than 20 per cent of total trade value during the past two decades showing Japan as the major trading partner of Thailand. The massive Japanese investment ties with Thailand have resulted in huge trade deficits for Thailand. The service trade deficits are attributed to the imports of electrical and non-electrical machinery parts, chemicals, iron and steel. Simultaneously, the Japanese market is difficult to penetrate for the regional agricultural product exporters including Thailand, because of the harmonisation problem of the WTO sanitary and phyto-sanitary standards issue.

The Thailand-Japan CEP has had nine formal negotiations from February 2004 until July 2005 (Department of Trade Negotiation, 2008e). Major cooperation occurred in the areas of agriculture, food safety, and improvement of the competitiveness of Thailand's manufacturing sector, particularly iron, steel and auto

parts. Sensitive industrial products such as jewelry, leather, textiles and clothing are under exception to Japanese tariff elimination. Products subjected to immediate Japanese tariff elimination and consist of fresh and processed shrimp, tropical fruits fresh, and processed vegetables and canned fruit. Moreover, there is quota removal and tariff elimination to zero rate for high sensitivity products e.g. leathers and footwear (Department of Trade Negotiation, 2008e).

On 1 September 2005, the Thai Prime Minister and Japanese Prime Minister signed the Thailand-Japan Economic Partnership Agreement (JTEPA). It aimed to effectively create new perspectives and dimensions of market and investment opportunities including future collaboration. It was obvious that both economies had encountered intensive challenges to enhanced sustainable economic competitiveness as a result of a fast changing East Asia and the global economic environment (Chirathivat, 2006). JTEPA substantially addresses two groups of issues: the first has five major issues related to an FTA and the second has seventeen major issues related to economic cooperation as described below (Chirathivat, 2006).

Concerning the trade of industrial products, the tariffs on steel products imported from Japan will be reduced over the next eight to ten years. The import tariffs on selected cars, automobile parts and other parts will be eliminated in 2009, 2011 and 2013 respectively. The exports of Thai textiles, jewelry, wood products, particle and fiberboard, and some petroleum and petrochemical products, are subject to immediate tariff elimination. For trade in agricultural products, apples, pears and peaches are tariff free, while fish will be exempt within five years except for herring and cod from Thailand. Japan offers tariff elimination on 1,400 of 2,300 products (e.g. shrimp, boneless and cooked chicken in 2004 and immediate elimination for selected tropical fruits). The strict Japanese regulations of the rules of origin are major obstacles for Thailand's agricultural and fishery products and require further negotiations. Other important issues, apart from tariff elimination that should be negotiated in depth to increase benefits to Thailand, include market access, quotas and SPS of agriculture products (Department of Trade Negotiation, 2008e).

According to Chirathivat (2006), many implications can be illustrated from the following. Currently, the JTEPA represents bilateral trade and investment liberalisation between a developed and a developing economy. When comparing the

non-tariff barrier measures, Thailand applies non-tariff measures generally across the different sectors while Japan applies non-tariff measures to a specific sector. Because Thailand and Japan adjust well to regional and global competition well with low costs, it is expected that trade creation benefits will be higher than trade diversion costs. The adjustment costs vary in the different sectors, so as a consequence, target specific trade barrier removal and liberalisation contribute to lower costs, bilateral trade and investment expansion as well as increase economic efficiency together with an FTA (Chirathivat, 2006).

The gains from trade liberalisation for both partners can be created via industrial networks where Thailand acts as a potential alternative source of natural resources and a supplier of intermediate products inputs. In this way, Thailand can be a crucial partner in regional and global markets for automobiles, and electrical and electronic products. Furthermore, Thailand should aim to supply Japanese customers' demand for consumer goods and Japanese industries' inputs. The positive list approach, product specification with different layers and selected service categories are possible to continuously guarantee gradual benefits. Chirathivat (2006) also suggests that more generally, the give and take negotiation pattern and across the board liberalisation enhances resource allocation efficiency and strengthens production efficiency in both countries.

In general, bilateral FTAs basically deal with tariff and non-tariffs for market access. The Thai agricultural sector tends to benefit from high tariff elimination for wide range of products. In addition, the rules of origin are remaining important barriers and should be negotiated to be transparent with mutual recognition to improve the market access of Thai exporters particularly for agricultural and fishery products. They are expected to be highly restrictive rules for the JTEPA, however with greater transparency firms, in both countries can benefit from the rules of origin utilisation. In addition, the JETPA should not neglect broader regional and multilateral framework to avoid the adverse diversion effects from bilateralism. The JTEPA framework should include and focus on liberalisation; facilitation and cooperation comply with the WTO and ASEAN disciplines. The adjustment for domestic producers in Thailand should be efficiently implemented, and more extended product coverage of both partners undertaken.

6.2.2.7 Thailand-US Free Trade Agreement

The US is one of Thailand's major markets. The leading Thai exports to the US are agricultural products, high-technology products and textiles (Department of Trade Negotiation, 2008f). Major of Thai imports from the US include raw materials, industrial inputs and high-technology products that are not produced domestically. Thai exports to the US were in trade surplus mainly due to the massive drop of imports caused by the financial crisis in mid-1997. The major issues affecting Thai exports are non-tariff measures of anti-dumping and countervailing duties. Furthermore, the loss of the general system of preferences (GSP) on agricultural products has resulted in trade tensions for a decade.

The Thailand-US FTA (TUSFTA) originated at the tenth APEC leader meeting in Mexico in 2002. This new US trade initiative with the ASEAN named the Enterprise for ASEAN Initiative (EAI) was proposed to offer the prospective opportunity of bilateral FTAs between the US and ASEAN countries that were committed to economic cooperation, reforms, and trade and investment openness (Department of Trade Negotiation, 2008f). Sensitive issues were trade in services, competition policy, intellectual property rights, investment and environmental and labour standards.

There have been six TUSFA negotiations and the last was in January 2006. Negotiation issues cover four major areas of market access: services and investment, trade and investment related measures, sanitary and phytosanitary standards, and intellectual property rights; and twenty-two other related areas. Similar to other FTA negotiations with a developed country, trade in services, rules of origin and intellectual property rights protection are significant new features of interest to the developed partner in the TUSFTA. However, the recent US trade policy has transformed into considering regional and bilateral FTAs with politically and economically strategic partners (TDRI, 2003). Tariff elimination on the trade in goods is a primary negotiation issue that complies with the underlying principle of market access. The negotiation of the agricultural products' tariff elimination timeframe varies with different developing partners.

Thai farmers and exporters will gain higher benefits from improved market access when tariff and non-tariff measures are eliminated within a given timeframe. Important Thai agricultural export products such as rice, shrimp, frozen seafood, rubber, fruits and vegetables, and sugar will gain an opportunity to increase. The recommendation for the Thai government and Thai trade negotiators is to support domestic policy reform to remove of trade distortions by implementing price guarantees and productivity enhancing programs. Nevertheless, five issues need to be seriously considered and negotiated for the Thai trade negotiators to extract benefits for Thai farmers and businesses: import quotas, SPS measures, administrative protection, subsidies and sensitive products tariff reduction modalities (TDRI, 2003). Moving to the industrial sector, the exports in many areas will not be increased automatically. Reorienting product lines to match the US consumers' demand, improved product quality, cost reduction design capability development and shortened delivery time are essential to enhance benefits. Rules of origin also need to be appropriately implemented to facilitate preferential FTA treatment.

6.3 IMPLICATIONS FOR THAILAND'S INVESTMENT AND SERVICE POLICY

This section, based on our empirical findings reported earlier, describes the implications for improving the effectiveness of total investment and total services of Thailand and is extended to the bilateral policy under an FTA perspective. The data used in all estimated models are aggregate net inflow FDI and services from all sources. Trade in goods and closer economic relations are regarded as the most important issues of all FTAs. Nevertheless, FDI and trade in services are also regarded as other important engines of Thailand's economic growth. Technology transfer is also a crucial catalyst for the development and growth of Thailand and other developing Asian countries.

The most obvious costs relate to TRIMs and emerge from the lack of both efficient institutions and resources. The WTO should also alleviate these adjustment costs in numerous ways (Lloyd, 2001, pp. 2-27). First, the objectives of the WTO should be extended to full non-discrimination and transparency in all trade related issues. Second, full non-discrimination should be targeted to all traded goods and services based on the principle of equality treatment. Third, full non-discrimination and

equality principles can be achieved by coherence of the existing and new rules of the WTO. Fourth, the coverage of non-discrimination needs to be extended to more goods. Lastly, the WTO has to seriously pay attention to new issues, particularly the interests of developing countries, including the revision of the transparency competition policy issue. For regional trade liberalisation under the AFTA, different sectors face different problems and this leads to difficulties in completing AFTA trade liberalisation as explained by Ajanant et al. (1990, p. 179).

The success of export oriented policy implementation can be attributed to several factors (Cuyvers et al., 1997, p. 8). First, a stable and competitive exchange rate as compared to other neighbours in the region is the catalyst of a dynamic export oriented economy. Second, the moderately low inflation rate during the 1980s through the price control of essential products was an important factor. A third factor is low wages resulting in exports competitive advantages as well as attracting more FDI. Furthermore, it can be said that an important development aspect of an export-oriented policy is import liberalisation (Akrasanee et al., 1991, p. 15). The Board of Investment (BOI) is an important government organisation responsible for motivating and attracting FDI via many programs, e.g. the export-processing zone and tax elimination including more flexible regulations. The specialised financial institution to facilitate this is the Export-Import Bank of Thailand that was set up in 1994. This financial institution aims to promote exports and investment from abroad via many channels such as providing credit, guarantees, insurance and other financial services.

Based on the empirical findings, Table 6.1 showed that both FDI and services have had a very small negative and insignificant impact on growth. It can be said that these findings are different from the expected outcomes occurred because the financial crisis period is included in the estimation period and also because of the quality and sample size of the data used. However, regarding the major issues, it can be assumed that both FDI and services are beneficial to developing countries through increasing competitiveness and technology transfer in the long run (ADB, 2000). Our finding does not imply that there is no room for benefits from investment and trade in services liberalisation to growth, but the sample period is only so many years. Other factors that may have affected the findings are that some manufacturing industries are infant industries at their early stage, as well as the recent huge inflows of FDI to high potential

recipients in terms of low wages and high labour productivity such as China and Vietnam.

TABLE 6.2 MAJOR SOURCES OF FDI TO THAILAND, 2005-2007 (million baht)

Sources	2005	2006	2007
Japan	171,796	115,200	164,323
ANIEs	20,163	24,528	24,662
China	2,286	2,456	15,856
India	1,106	2,671	7,398
US	8,689	71,407	101,107
Australia	1,210	514	1,557
EU	32,372	13,337	51,198
ASEAN	35,573	23,031	50,086

Note: ANIEs is defined as Asian Newly Industrialised Economies and consists of Taiwan, Hong Kong and South Korea.

Source: Board of Investment (BOI) 2008, Thailand.

From Table 6.2, it can be seen that Japan was the main source of FDI to Thailand during 2005 until 2007; however, there was a 30 per cent decrease in 2006. The table also shows that FDI from both China and India increase massively in 2007. FDI from Australia was the lowest compared to other sources. More generally, Japan has been the most crucial source of FDI to Thailand's manufactured export industries for the past two decades.

Investment and services are two other important aspects of trade liberalisation that are covered in most levels of trade liberalisation agreements. Furthermore, these issues are new to developing countries that struggle, due to their lesser negotiating power and other disadvantages compared to developed countries, in multilateral trade negotiations (WTO, 2003). Thailand is a dominant country in the ASEAN region attracting massive inflows of FDI, particularly in the manufacturing export sector because of low wages and skilled labour. Net inflows of FDI/GDP were high, reaching approximately 20 per cent in the late 1980s until the first half of 1990s, decreasing to less than 10 per cent between 1998 and 1999 due to the financial crisis and a decrease in the confidence level of investors.

The developing countries' economic performance recently has depended on the efficiency of service sector exports (McGuire, 2002, p. 2). More benefits from

service liberalisation resulted from increased market access to the developed economies. Domestic liberalisation has led to higher resource allocation efficiency resulting in an improvement of quality and competitiveness of the sector and the economy. Reducing all types of restrictions gradually in the first stage and much more later can assist this policy implementation. Non-discrimination, national treatment and on-going implementations are also necessary requirements to achieve this goal. Services and investment liberalisation enhances competitiveness, efficiency, lower prices and upgrades the quality, as well as increases the variety of consumer choices (McGuire, 2002, p. 27). Sound, reliable and transparent service and investment liberalisation policies attract FDI inflows. Inward FDI benefits the economy by influencing the exported type of goods and services in the short term. In the long term, domestic competitiveness is linked to the world markets through technology, knowledge and skills transfer.

Some major service sectors have been reformed and made more liberal in accordance with the WTO and ASEAN regulations. Thailand's revision of the *Foreign Business Act* enforced since 1999 is a crucial contributor to services and investment liberalisation. More foreign investment in the service industries including hotel and accommodation, and travel agencies has benefited from these regulatory revisions. The Financial Sector Master Plan was formulated by the Bank of Thailand to serve this objective in 2002. More liberalised foreign joint ventures and equity in the banking sector are important policies to implement this plan. In terms of securities investment, Thailand has deepened its capital market to act as a more efficient and security fund mobilisation and investment alternative (WTO, 2003, p. 15). Tax incentives have been seen principally contributing to strengthening the development of the capital market, including liberalised securities investment.

In spite of the aggregate empirical impact of FDI and services that may have important bilateral effects, the following sub-sections parts describe the implications for investment and service policies between Thailand and its selected partners.

6.3.1 Thailand-Australia

As the TAFTA also includes specific liberalisation of trade in services on a preferential basis to comply with the requirements of GATS, Thailand and Australia

gain in different ways. Thailand gains from the impetus to investment, competitiveness and growth, and Australia gains from increased market access in Thailand. The specific services sectors included in the TAFTA are banking and insurance, professional services and telecommunications. The TAFTA should contribute in attracting increased Australian flows to Thailand and to encourage engenders a market economy perception in the policy environment of both countries.

The TAFTA should foster two-way trade and investment between the parties, because it involves a high potential for profit and competitiveness of the motor and vehicle producers and growing export markets. As Australia has advantages in automotive engineering and design capacity, Thai industry should develop its design capacity to suit local and foreign consumers and technology transfer. The two markets' integration creates a new dynamism that stimulates and develops improved economies of scale and product specialisation. A deeper linkage leads to the production of more new models in an integrated market via inward investment.

Trade in the services sectors such as higher education, tourism and health services that are included in the TAFTA should be expanded to fully achieve mutual benefits. Thailand and Australia have also agreed to accelerate cooperation by addressing wider issues of interest such as standards and conformance, electronic commerce, competition policy, anti-dumping, quarantine, government procurement, intellectual property, financial issues cooperation, transportation, joint ventures and technology transfer. These new trade issues covered can be considered as a helping to diversify and strengthen economic, trade and investment relations between the partners that are more advanced than the traditional scope of FTAs. The TAFTA should create favourable conditions for service supply movement across borders. In particular, it also should promote concrete two-way tourism flows including joint ventures in tourism related areas such as hotels and restaurants. The financial services sector and air transportation should further enhance liberalisation (Department of Trade Negotiation, 2008b).

An effective domestic competition policy is needed to support trade policy in terms of market access improvement. Another important recommendation is capacity building of the domestic manufacturing industry and investment environment including

technical assistance in technology transfer from Australia that is also essential, for Thailand to enjoy the benefits of the TAFTA.

6.3.2 Thailand-China

Closer cooperation between Thailand and China under a future Thailand-China FTA should be attributed to a win-win situation resulting from trade liberalisation, confidence building and economic stability. Extending this cooperation to include investment and services soon will attract more Chinese inward FDI to Thailand's highly competitive export industries. Both countries should more fully utilise the benefits included in their membership of the WTO, APEC, ASEAN and ASEAN+3 FTA. Moreover, an opening and market reform of China to include a trade and investment liberalisation scheme is crucial motivation to expand bilateral trade and investment flows. Market reform and transparency competition policy are essential to accelerate the success of the Thailand-China FTA and its mutual benefits.

Like in other ASEAN members, Thailand considers the massive inflows of cheaper Chinese goods particularly textiles, electronics and agricultural products, as well as the diversion of FDI from ASEAN to China, as the principle challenges of FTA negotiation (Tongzon, 2002). However, Thailand is confident that its enormous agricultural exports will be purchased by China because of its emerging high income and large economy size. It is strongly believed that the FTA between China and ASEAN countries such as Thailand and Singapore will be an important factor contributing to the region's economic growth particularly after the financial crisis attack of 1997 due to the massive inflows of Chinese FDI (Tongzon, 2002).

However, the Thailand-China FTA can be regarded as of both economic opportunities and challenges. The manufactured export industries of apparel and textiles, footwear, machinery and electrical appliances will be confronted with strong competition as a result of an FTA with China. An efficient competitiveness enhancement of these sectors in Thailand should be implemented before extending the coverage of manufactured products liberalisation of the Thailand-China FTA. In addition, it is possible that Thailand will benefit from the proposed FTA as an attractive importing source for intermediate goods as well as agricultural raw materials and food products to continue Thai industrialisation and growth proceeds

It is possible for Thailand to contribute as the location of the region's integrated production and distribution network that will attract Chinese FDI. The non-tariff barriers, especially those subjected to goods and services from ASEAN remain high, however, China agreed to eliminate these before 2005 and within three years for high value and not sensitive products from the ASEAN. Expansion of the tourism and transportation sectors should be prioritised because of the close cultural connections and higher income of Chinese citizens and the geographical advantage for trade and investment transportation linkages. It can be said that both China and the ASEAN view an FTA as a channel to strengthen economic cooperation and linkages with a high potential for the region and for the partner countries on extended and other trade related issues (Tongzon, 2002).

6.3.3 Thailand-India

The investment linkage situation between Thailand and India presents a dismal picture as Indian investment projects have remained few in number and some unfinished whose absolute investment value has decreased from as long ago as 1988. From the Indian perspective, the major obstacle is an information gap concerning policy guidelines, potential sectors and prospective partners. Another important aspect is that the Indian investment policy and environment have been liberalised only recently and their infrastructure has not been efficiently developed. From the Thai perspective, some barriers have to be eliminated to facilitate investment flows from Thailand to India. In terms of globalisation, liberalisation of the Indian economy and the export-oriented strategy of Thailand contributed to economic relations expansion between these countries in the first half of the 1990s. The 'Look East' policy of India and 'Look West' policy of Thailand were implemented during the second half of the 1990s for deeper regional economic cooperation (Department of Trade Negotiation, 2008d).

The TIFTA can be further expanded to negotiate investment issue in depth and more seriously. The related issue of transparent competition policy can also be implemented in both countries to attract more bilateral inward FDI. Furthermore, investment cooperation, particularly in terms of joint ventures of the sectors that compete with each other, may be considered and implemented soon. The TIFTA can also be an efficient catalyst for accelerating deeper cooperation in the service area.

More specifically, banking and finance sector collaboration should be pursued. Tourism and related industries and facilitation have also been implemented because both countries have historical, cultural and eco-tourism advantages. Information and communication technology (ICT) is another high potential area for cooperation and linkage due to the skilled human resources of this booming industry in India.

6.3.4 Thailand-Japan

Japanese FDI to Thailand is mainly in the manufacturing sector exploiting lower cost production base advantages offshore to maintain their market around the world. Thailand has remained one of the more attractive sources for investment. However, Japanese investment value decreased significantly in 1998. Successful Japanese investment is in the form of fully inward investments, joint ventures and small Japanese companies supplying to the large and well-known companies. As a consequence, this has deepened Thailand's industrial development base. This process has come from technology diffusion and transformation to Thai manufacturing industries and economy.

Chirathivat (2006) also reported that there are some relevant challenges that need to be examined for the JTEPA. It is clearly evident that the bilateral economic relationship of both trade and investment between Thailand and Japan has grown rapidly showing opportunities for exploring common and mutual interests. There is room for trade flows and investment linkage complementarily. The considerable numbers of sensitive items, including the service sectors' liberalisation scheme of Japan, are beneficial to Thailand. Thailand should take advantage of the JTEPA to be the production base for strategic manufacturing exports, upgraded quality and standards. However, sectoral reform and cross-border commercial practice improvement are necessary. It is in Japan's interest to accelerate its economic linkage power in Southeast Asia in the face of the declining role of the Japanese economy and the rise of an emerging Chinese economy (Chirathivat, 2006).

To achieve this goal, Thailand expects Japan to increase investment and technology transfer while the efficiency gains are obtained from effective resource pooling and market sharing. Since the service sector is becoming more important for the Thai economy, service liberalisation is also essential to enhance the mutual benefits

of JTEPA, particularly for the Thai economy. The mutual transparency of the rules of origin as well as an extended coverage of investment and services are crucial factors contributing to the success and benefits of the JTEPA. The application period of national treatment and MFN has to be appropriate. Moreover, Thailand should get more benefit from the JTEPA in terms of enhancing Japanese FDI into the manufactured export industries so Thailand can become the production hub of the region (Chirathivat, 2006).

Trade in services covers an intensive framework on transparency, commitments of schedule and methods modification, and safeguard measures and mechanisms. The liberalisation plan of Japan includes 138 sub-sectors, while Thailand's plan includes less specific commitments. These liberalisation commitments comply with GATS and are called GATS-plus rules. Similarly to trade in services, the investment agreement framework covers MFN, performance requirement, and investment in services, dispute settlement, transparency and protection of rights.

The MFN should be applied with a positive approach to both sides including the transparency and competition policy. These strategies should contribute to attractiveness to FDI and create more opportunities to enhance industry competitiveness. Both partners should be more enthusiastically implementing trade in the specific service sectors' liberalisation commitment including the GATS commitment. Tourism, banking and finance, telecommunications and health care are potential sectors for enhancing liberalisation. TRIP is also another serious negotiation issue especially for Japan. Thailand can be more concerned about implementation of efficient intellectual properties' protection regulations. Therefore, an initial trade and investment barriers removal, together with an extended free and open trade and trade related areas, is an efficient strategy to stimulate more benefits of the JTEPA.

6.3.5 Thailand-US

The most important sector of trade in services under the TUSFTA is the financial sector. Financial services in the TUSFTA consist of two classifications, insurance and insurance related services, and banking and other financial services. The main features that should be contained in the FTA are national treatment, MFN, market access and cross border supply movement. The proper implementation of competition

law and regime to restrain an anti-competition practice is required. A more transparent regulatory regime should be applied to the supply of services.

Furthermore, the financial services obligations generate benefits in the following aspects. First are market access barriers reduction, transparency improvement and security guarantee from discrimination. Second is increasing opportunities for players to diversify their portfolios as well as enhancement of domestic financial sector competitiveness. Another crucial area that should be contained in the TUSFTA is a specific provision on intellectual property rights (TDRI, 2003). These provisions are trademarks, copyright and related rights, and patent. Furthermore, Thailand should strongly negotiate for longer adjustment periods due to the time needed to consider related regulations and laws improvement and lack of efficient resources when compared to the US.

There has been agreement on investment between Thailand and the US since 1966 under the *Treaty of Amity and Economic Relations* (TDRI, 2003). This agreement allows both citizens and companies to own and operate in each partner's territory except for communications, transportation, fiduciary functions, banking involving depository functions, exploitation of land and natural resources, and domestic trade of indigenous agricultural products. However, this agreement is considered a violation of the WTO's MFN obligations of trade related investment. Consequently, there are four choices for Thailand concerning this agreement (TDRI, 2003). First, it is to request for an exemption in the WTO. Second, it is to terminate up the Treaty to abolish all privileges to the US companies. Third, it is to grant the same privileges to all other WTO members. Last, is the construction of a new WTO-consistent bilateral investment agreement in FTAs.

The most desirable choice in terms of possibility, adjustment costs and benefits is that investment coverage should be extended to include only long-term investment of FDI, because Thailand needs to set up effective regulations for short-term investments particularly speculation. A dispute settlement mechanism to protect foreign investors from unfair government measures is also required and technology transfer should not be prohibited by the performance requirement. The TUSFTA should be enabling the attraction of more FDI to Thailand as a key engine for growth via the extended scope of foreign investment. Service liberalisation of telecommunications and

financial services can also promote more gains from greater competition, as well as transparent and effective domestic regulations. Thailand should also negotiate for a minimum timeframe of ten years to facilitate and implement intellectual property rights protection via copyright right and patent law (TDRI, 2003).

Apart from policies on trade in agricultural and manufactured goods, trade in services, trade related investment and intellectual property rights are also issues requiring further careful negotiations for extended coverage and deeper integration. However, Thailand has less negotiation power, in particular in these sensitive issues, because of its lack of efficient reformed regulations. In addition, many of the current Thai laws contribute to the difficulties of foreign-owned corporations operating in these industries. This lack of efficient regulation is the obstacle that contributes to the need for a longer adjustment period for Thailand along with drafting the substantive final TUSFTA and its successful implementation.

Greater competition and a more open economy contribute to the positive influence of an FTA on long-run economic performance in a dynamic perspective. The examples of dynamic effects are economy of scale, contestable markets and improved productivity through new technology and innovations. The export oriented FDI can also be a catalyst of FTA long-term impact. Service liberalisation, technology diffusion and labour skill improvement are considered as other long-term impacts of an FTA, to move Thailand ahead and efficiently compete with lower emerging economies, e.g. China and Vietnam (TDRI, 2003).

From above, it can be seen that the major existing literature supports services and investment liberalisation for developing countries, while our empirical findings for services and investment have negative but insignificant impact on growth. Therefore, it can be said that the empirical findings, due to a lack of data and small sample size in our study, are not compatible with the major existing literature. Services and investment liberalisation should be implemented to enhance the economic growth of developing countries via technology transfer and knowledge spill over in the long run.

6.4 THE IMPACT OF DOMESTIC, REGIONAL AND GLOBAL CRISES, SHOCKS AND POLICY REFORM ON THAILAND'S TRADE AND GROWTH

This section discusses the role of crises, shocks and policy reform on Thailand's economic and trade policy, and is a major innovative specification feature of our modelling study. These crises, shocks and policy reforms occurred in the 1980s and 1990s. All of these unprecedented shocks can be regarded as domestic, regional or global issues, and are included in the model as dummy variables. These internal and external factors affect the economic performance of Thailand. As a result, this section provides important implications for Thailand's economic and trade policy. The a priori expected relationship and significance of these crises, shocks and policy reforms are assumed as follows. First, the effects of domestic policy reforms are expected to be positive and significant, and second, the effects of the crises and shocks are expected to be negative and significant. The implications of the role and impact of these factors are presented in the following sub-section.

6.4.1 Issues of Domestic Crises, Shocks and Policy Reforms

The findings related to Thailand's 1990s and early 2000s capital and financial reforms are analysed as follows. From the 1980s to the 1990s, Thailand's economic performance was affected by several internal factors. These factors consist of many policy reforms and they are the financial system and institution reforms resulting from the Asia financial crisis beginning in Thailand in July 1997. The other internal significant shock was the Indian Ocean tsunami's massive devastation in December 2004. The revenue from the tourism sector declined sharply resulting in a decrease of GDP. Moreover, the recent military coup and violent anti-government protests during 2007 to 2009 also has contributed to decreased investor confidence and FDI including the tourism industry sector that has had a high share of Thailand's GDP. In addition, bilateral FTA negotiations have been obstructed due to the instability of government.

From the findings reported in Table 6.1, it is found that the domestic issues of capital liberalisation and financial institution and system reform had a positive and significant impact on growth. Based on these major issues, the same conclusion of domestic policy reform impact can be affirmed. Both capital flow liberalisation in the late 1980s and the financial institution and system reform in the early 2000s have had a

positive and significant impact on growth. The first policy benefited growth by attracting huge foreign capital inflows mainly for portfolio investment. The second policy was implemented to solve the obvious fragile and uncompetitive state of Thailand's financial institutions and system that were seriously affected by the financial crisis. This policy remained necessary to restore growth after the crisis period. Nonetheless, the first policy can also be considered as an important factor resulting from the crisis via too massive foreign capital inflows, a bubble economy boom, and currency attacks and speculation. Thus, it can be said that the findings are in support of the major issue resolution. The relevance of these findings to the debates on this issue can be discussed as follows.

From the empirical findings in Table 6.1, the domestic reform dummy variable had an expected positive and significant impact on Thailand's growth. The financial institution and system reforms of the early 2000s had a remarkably positive impact on growth. It can be said that this policy reform benefited to growth because the financial sector is also an important player in the Thai economy as a credit and fund distributor stimulating investment and consumption demand. The financial institutions especially the commercial banks were unable to expand credit to enhance the economy during the crisis period, due to the NPLs and insolvency problems. As a result, the financial institutions and system reforms were successfully, particularly the setting-up of the asset management corporation to solve NPLs, as well as other regimes to enhance the efficiency and to strengthen the financial system. The other regimes were the enforcement of capital increase and more foreign equity and joint venture allowance, including more relax rules governing foreign branches or subsidiaries operation.

The effect of the capital flow liberalisation in the late 1980s was expected to be positive and significant to growth. The empirical finding was confirmed this expectation. Massive capital inflows were borrowed from offshore foreign currency because of the huge interest rate gap. There was no efficient exchange rate risk protection due to the fixed exchange rate system. Financial institutions had brought these funds onshore because of a lack of prudential regulations and efficient risk appraisal, and mostly for long-term non-productive sectors leading to the bubble economy boom. At the same time, the Thai baht was massively attacked by speculators because of its overvaluation as well as the continued trade balance deficits have

occurred. Furthermore, the Bank of Thailand lost huge reserves attempting to protect the baht. The managed float exchange system was implemented in July 1997 as the crisis began. From the above, it can be said that capital flow liberalisation did not guarantee benefits to developing economies. The badly prepared, inappropriate timing and the financial system's fragile state contributed to the collapse of the bubble economy in the second half of the 1990s, followed by the crisis in the case of Thailand.

As the strong negative consequences of the financial crisis unravelled, many insuring reform policies to deal with the crises and shocks were intensively implemented. An important example is the financial institution and system reform in terms of both strengthening the fragile financial sector and enhancing the competitiveness capacity. The financial reforms were implemented mainly by an urgent need of crisis resolution and to force the economy back to a normal performance situation. The emerging economy of Thailand had been driven by the high growth of the financial sector (Menkhoff and Suwanaporn, 2007, p. 4). However, fragile, badly planned development and inappropriate functioning of the financial sector accelerated the attack of the financial crisis in July 1997. These reforms were implemented via the financial sector master plan developed by the Bank of Thailand. The dominant aspect of this sector in developing Asia economies is financial repression defined by the various control schemes intervening in the financial system and resulting in inefficient credit allocation and uncompetitive operation and environment (Dowling and Valenzuela, 2004, p. 148). The most important sector in Thailand's financial system is commercial banking. Due to this, credit was unable to mobilise high potential borrowers due to preferential collateral and feasibility evaluation. Furthermore, a lack of sufficient prudential supervision was the other major factor contributing to the highly fragile and uncompetitive financial system.

Private sector debt especially in the banking sector rose enormously from the implementation of the Bangkok International Banking Facility (BIBF) that started in the early 1980s (ICSEAD, 2000). This was the financial liberalisation in terms of simultaneous short-run offshore borrowing and long run onshore lending due to the massive difference in interest rates. The lending had also been distributed to non-productive sectors mainly real estate, leading to over supply and bigger bubble economy. A specific organisation named the Thailand Asset Management Corporation

(TAMC) was set up to manage, decrease and give corporate restructuring assistance in 2001 (ICSEAD, 2002). More prudential credit providing regulation, supervision and moral hazard perspective were also other necessary requirements to strengthen the system's fragility after the crisis. Foreign investments owners were also permitted to operate their branches or subsidiaries including joint ventures with Thai businesses. Taking into account of the capital market, this development motivation aimed to improve market quality and stimulate the market attractiveness to issuers and investors (Menkhoff and Suwanaporn, 2007, p. 9). The first development plan is covered the period between 2002 and 2005 and the second plan covers the period from 2006 until 2010. The advanced equity market, namely the bond market, was the main goal of this plan. This plan also aimed to increase individual investors' shares to gain more liquidity due to the huge institutional shares.

Another typical feature of financial system development was the proliferation of specialised financial institutions. The government established many state-owned financial institutions to provide direct financial assistance to specific sectors. The financial system's upgrading and risk aversion were also undertaken via the establishment and implementation of the National Credit Bureau in 2005 (Menkhoff and Suwanaporn, 2007, p. 12). This organisation was set up because of the lack of credit provision and debtor quality information to support the decision of financial institutions. Furthermore, the broader general access to financial services and increased allocation efficiency and quality were included in the financial system's development plan (Menkhoff and Suwanaporn, 2007, p. 13). These schemes were implemented through two veins: 1) to suggest to commercial banks to provide financial assistance to potential medium income customers; and 2) to improve the operation quality and efficiency of stated-owned financial institutions particularly the Bank of Agricultural and Agricultural Co-operatives to fully become a rural development bank.

6.4.2 Issues of Regional Crises, Shocks and Policy Reforms

Many external shocks have emerged in the last two decades in the Asia region. These include the outbreak of SARS and avian bird flu in 2003 and 2004. But the Asia financial crisis in 1997 can be viewed as the most severe shock threatening the region's economic performance particularly the Southeast Asian countries. Requests for

assistance from the international organisations such as the International Monetary Fund (IMF) helped to solve the crisis.

Based on both the hypothesis and findings as reported in Table 6.1, the Asia financial crisis was expected to have a negative and significant impact on growth. The relevance of our findings to the major issues is obvious in that our evidence supports the expected outcomes of the damaging effects of the crisis in Thailand and its contagion to the region. This impact can be seen by the sharp decrease of the GDP from above 10 per cent to less than five per cent and even to be minus in some years during the crisis period. The crisis obstructed Thailand's economic growth massively and the serious contagion affected other neighbours in Asia. Consequently, Thailand asked the IMF and other international organisations as well as Japan for assistance to manage the crisis. The relevance of the finding strongly supports the current issues and it can be explained as the follows.

During the late 1980s until the early 1990s, Thailand had liberalised its capital account flows by having less restrictions and removing barriers to the inflows and outflows of capital via the implementation of the Bangkok International Banking Facility scheme (Phongpaichit and Baker, 2000, p. 1). Thai commercial banks and firms borrowed huge funds from external sources due to the high interest rate differentials. These foreign funds were invested mainly in the stock market to seek the benefits of high returns. This was the main factor driving Thailand as one of the emerging markets. However, the commercial banks and financial firms also misused the foreign short-term borrowings by lending to long-term unproductive projects such as real estate. In addition, the credit allocation of these financial institutions was undertaken and determined under insufficient prudential risk assessment resulting in the surged increase in outstanding NPLs. The Thai baht was also under attack and speculate intensively simultaneously due to the currency overvaluation. And due to the fixed exchange rate regime, the Thai baht became overvalued leading to loss of export competitiveness and exports declining tremendously (Phongpaichit and Baker, 2000, p. 3). Besides that, the total outstanding foreign debts of both the government and private sectors increased, and the Bank of Thailand lost massive international reserves in intervening in the exchange market to protect the baht's attack and speculation.

The reform policies to deal with the regional issues of the financial crisis spread out from Thailand and were mainly in accordance with the assistance from international organisations. The government and the Bank of Thailand decided to request assistance from the IMF to provide the solution guidelines. The main recovery packages were macro packages and financial restructuring and privatisation. For the financial restructuring, the foreign equity and joint ventures in Thai commercial banks and other financial institutions were allowed to increase. For the Thai government's supportive policy, the Financial Institution Development Fund (FIDF) was established to cover the bank and finance companies account losses by increasing foreign loans' withdrawal and decreasing repayments (Phongpaichit and Baker, 2000, p. 5). This special arrangement also supported crisis solving by negotiating debt restructuring with the lenders. Moreover, the Japanese government also provided a so-called Miyasawa grant after the attack of the crisis with an aim to increase skills development and employment.

There are three major contributing factors of the Asian crisis (Dowling and Valenzuela, 2004, p. 154). First was the capital flow liberalisation causing the growth of financial bubble through booming stock, reflected by the bid-up prices despite the limited supply. Second was the lack of strong moral hazard and prudential regulations leading to imprudent and risky loans because of the failure to apply a credit risk assessment. Third was the inability to make repayments of huge outstanding NPLs and external liabilities due to the currency devaluation. Other factors causing the crisis dealt with the inadequacy of the financial management system that covered commercial banks, other financial institutions, the capital market, and the ineffective implementation of the capital flow sterilisation policy during the capital flow liberalisation.

The external sector difficulties included the rapid growth of the current account deficit, the overvalued exchange rate, and the collapse in export competitiveness and performance. Based on the above factors, many reform agendas were prescribed (Dowling and Valenzuela, 2004, p. 57). First was the implementation of an effective exchange rate reform scheme. Second was the capital account reform for an under-developed and risky capital market including the adoption of international portfolio investment controls through both direct and indirect instruments. Third was

the reform of financial and capital markets by adopting international financial practice standards, revising and implementing more efficient supervision and regulations, and the development of more liberalised derivative markets such as the bond market. With respect to financial sector weakness, the following suggestions need to be undertaken (Dowling and Valenzuela, 2004, p. 155). First is the enforcement of more prudential regulations, a greater use of loan collateral and more effective risk appraisals. Second is to create a more competitive environment. Third is to continue to privatise state banks and improve lender resources, legal seizure of assets, as well as to improve accounting and auditing standards to be compatible with international standards.

6.4.3 Issues of Global Crises, Shocks and Policy Reforms

The final issues are categorised as global issues. All small and developing countries including Thailand have a limited ability to protect and insulate their economies from the impact of global shocks despite undertaking efficient economic policies. These shocks consist of oil shocks and global recession. The terrorists' attacks are another recent factor influencing the global economy and security.

Table 6.1 showed that the global oil shock had negative but insignificant impact on growth. The oil shock dummy variable included in the primary estimated model was in the late 1980s and close to the capital liberalisation dummy variable. As a result, the negative and insignificant impact of the oil shock can be attributed to the effects of capital liberalisation. Thus, the oil shock was dropped from the final estimated model. Another global shock was the economic recession of Thailand's major trade partners especially the US and Japan. As a result, Thai authorities for macroeconomic planning had to monitor and evaluate this situation closely to insulate the effect on Thailand's economy.

Furthermore, the seeking of more high potential markets and long-run competitiveness enhancement of the export industries should be implemented to foster growth and to survive in the severely competitive world market. This relevance of the finding to the debates on this issue is briefly explained below. It can be said that the finding supports the expected effects of an oil shock in terms of a negative impact although insignificant on growth. Therefore, the implementation of an efficient

insulation policy for developing countries such as Thailand to protect them from the impact of these shocks is necessary.

As Thailand is a small developing economy, being affected by global shocks is unavoidable. Thailand is short of oil resources, so the imports of oil are an essential engine to foster economic growth because it is the most important raw material necessary to produce goods. Both the first and second oil crises in 1980s and 1990s accelerated the inflation rate and slowed Thailand's output growth. However, high inflation decelerated and became relatively stable after the second oil crisis to around one to six per cent in terms of the GDP deflator from 1982 to 1997 (ICSEAD, 1999). But the further remarkable increase in oil prices in the second half of 2005 has slowed production and output growth (World Bank, 2006). Thailand is currently trying to reduce oil import dependence by developing new alternative energy sources e.g. bio-diesel.

The current global economic recession and financial crisis of 2008 is regarded as another crucial shock affecting global economic performance particularly the US economy. Indeed, this latest round of global financial crisis emerged in August 2007 when the huge US sub-prime mortgage market collapsed, and along with a new phase in the crisis in September 2008, resulted in the weakening and loss of confidence in global financial institutions and markets (IMF, 2008). This new financial crisis mainly relates to huge decreases in liquidity capital in the major US banks and financial institutions because of the massive losses on sub-prime mortgage related exposures. The merger and acquisition of major banks, investment banks, and security and insurance companies have been implemented to solve the crisis. It strongly and adversely affected the US stock market and generated a contagion effect spreading to other stock markets in the different regions including Asia.

The emerging and high economic performance countries in Asia including Thailand have gradually been affected by the above global economic downturn and financial crisis (IMF, 2008). Growth has been slightly decreased and net exports have moderately decreased due to the currency appreciation. In contrast, the strong trade and investment links between many countries, with the US and Europe while these countries depended on large current account deficit financing through bank related or portfolio capital inflows, have been hardly affected by the tightening of external financing.

However, in contrast, the emerging Asian economies as a group have experienced earlier financial turmoils which resulted in implementing policies geared towards more sustained market access, restructuring and reform of the financial system and institutions, including enhancement of more efficient public sector balance sheets and management, as well as privatisation (IMF, 2008).

The global financial turbulence demands rigorous research and evidence-based implications to policy makers, in emerging and developing economies including Thailand, to provide responses to implement an appropriate and efficient macroeconomic policy to insulate the impact of this crisis. Interest rates have been decreased to alleviate tightening credit. An increase of reserve requirements can be used as an alternative choice. A more effective exchange rate management of the floating system is also essential to prevent fluctuations of the balance of payments. An increase of export competitiveness to expand the market shares in other major markets and to attract long-term inward FDI is also necessary to achieve this objective. This crisis is also a new challenge to the Thai economy's sustainable growth.

The economic recession of the US and Japan is another external shock affecting Thailand's economy. These two giant economies are Thailand's main export partners. Therefore, a fall in imports demand results in a decrease in exports earnings. Even though these economies recover, Thailand had recently lost its market share to high potential competitors in Asia particularly China and Vietnam. Value added creation and more market diversification are essential strategies to recover export performance and competitiveness. However, the new threat of the US economic recession has emerged in the in the second half of 2008 and continues to the present. The low quality NPLs in the real estate sector of the commercial banks and other financial institutions (namely the sub-prime loans) were the catalyst of this global economic recession (World Bank, 2008). The recent US economic fluctuations are affecting nearly all-developing economies, particularly in Asia, that have just recovered from the 1997 crisis.

6.5 CONCLUSIONS

The implications for Thailand's economic and trade policy from our empirical study reported earlier are proposed and discussed in this chapter. They are

supplemented by the review of current policies and evaluation, as well as other relevant studies and findings on economic and trade issues. To recover from the crisis, it is important that fiscal, monetary and industrial policies support each other while simultaneously the acceleration of trade liberalisation is implemented. A slow and inefficient budget distribution may be an obstacle to the stimulation of the domestic consumption demand and investment. Moreover, the restriction of the IMF's stimulus packages is another impediment to fostering economic growth in the short-term after the crisis. Performance based and rolling budgeting is an alternative way to increase the efficiency of Thailand's budgetary system. The recent inflation targeting policy has to be implemented more efficiently to control inflation rate and exchange rate fluctuations. The Bank of Thailand has adopted the required reserve margin for foreign capital investment funds to protect the baht from over-speculation and control the stability of the exchange rate.

In addition, Thailand's financial institutions and system is the priority sector to focus on to initiate and boost an economic recovery. The capital flow liberalisation of the late 1980s led to the massive inflows of short-term borrowing funds due to the huge interest rate gap. The overvalued Thai baht led to currency speculation resulting in massive foreign debts. The FIDF and TAMC have been built up to solve the severe NPLs problem of financial institutions via debt restructuring. Like other small developing economies, the performance of Thailand's economy is also affected by the global oil shocks and the economic recession and fluctuations of the US and Japan. The current financial crisis originating from sub-prime NPLs in the US financial institutions, the credit crunch and the stock market downturn are also regarded as new threats to long-term sustainable economic growth in other regions

Trade liberalisation is also an essential engine of growth for developing countries. Thailand has to mutually and collectively promote more intensive cooperation with other developing countries to raise their bargaining power to reap the benefits and to guarantee that fair regulations are followed at the next round of negotiations in terms of the new trade related issues such as services, investment, intellectual property rights, competition policy, anti-dumping and countervailing duties and labour and environment standards. Thailand has negotiated, signed and implemented a number of FTAs with its various partners. Thus, a new and challenging

development for Thailand's policy makers is to efficiently implement appropriate economic and trade policy at all levels to be an engine for long-run growth. The coverage of the proposed and concluded FTAs should be uniformly compatible with multilateral and regional trade liberalisation agreements. This fundamental rule is called the WTO-plus. Tariff elimination should be reasonable and within an acceptable time frame for implementation, and should also be flexible. The FTAs with Asian neighbours should be more concerned with further negotiation and enhancement. Some of Thailand's bilateral FTAs have been initially negotiated and implemented under a closer economic partnership agreement (CEP). Both regional and bilateral FTAs should be extended to cover trade in services and investment as well as other trade related issues, to guarantee mutual benefits to all participation members. The Thai government should implement efficient industrial policy to strengthen long-term competitiveness of exporting industries due to tariff elimination requirement of the FTAs. A fair income distribution among the interested groups in FTAs should also be of concern and the adjustment costs have to be dispensed efficiently. Nevertheless, the progress of Thailand's bilateral FTAs is obstructed mainly by the military coup, political instability and a rapid change of governments. Therefore, it is essential for the Thai government to be enthusiastic in accelerating regional FTAs and making partners confident in their mutual willingness to create FTAs with good prospects for reciprocal benefits as the most important criterion.

CHAPTER 7

RECOMMENDATIONS FOR THAILAND'S REGIONAL AND PLURILATERAL ECONOMIC AND TRADE POLICY

7.1 INTRODUCTION

Based on our research findings reported in Chapter 5, this chapter first proposes and discusses the recommendations for Thailand's economic and trade policy in Section 7.2 concerning the regional and plurilateral relations of the ASEAN and the EU. The purpose is to contribute to the formation of an efficient economic and trade policy of Thailand in both these groups of FTAs. Similarly to the previous chapter, the recommendations for aggregate or total investment and service policy are also included in this section. In addition, the recommendations for Thailand's policy reform and crisis management are described in Section 7.3. The policy recommendations of multilateral and regional FTA trade are also discussed in Section 7.4, because it is essential for small open developing countries like Thailand to develop this policy appropriately to ensure economic growth and development in the long run (Panitchapakdi, 2001). These recommendations are then briefly discussed and compared to related recommendations and issues available from other resources such as reports, fact books, research papers and the websites of official or reliable sources. These resources are from the ASEAN, Ministry of Commerce, Board of Investment (BOI), Thailand Development Research Institute (TDRI) and Asian Development Bank (ADB). Both descriptive and data-based analysis will be used. The conclusions are presented in Section 7.5.

The empirical findings of the Thailand-Japan bilateral trade model in Chapter 6 are obviously according to the expected outcomes. Therefore, the discussion of policy recommendations for other plurilateral and bilateral models are proposed, and extended by examining and discussing relevant trade and development issues in the literature from various reliable and practical sources to make this chapter complete.

7.2 RECOMMENDATIONS FOR THAILAND'S MAJOR REGIONAL AND PLURILATERAL ECONOMIC AND TRADE POLICY

This section discusses the policy recommendations for Thailand's regional and plurilateral economic and trade policy between Thailand and the ASEAN4 and the

EU. The ASEAN4 and the EU are the focus of research because they have been Thailand's major trade partners since the 1990s (Ministry of Foreign Affairs, 2008). Thailand has posted to a trade surplus with ASEAN countries since 1993 and this accounted for 18 per cent of Thailand's total exports in 1998. In 1988, the Thai export share to the EU increased to 18 per cent compared to 16 per cent in the previous year.

TABLE 7.1 SUMMARY OF EMPIRICAL FINDINGS ON REGIONAL AND PLURILATERAL TRADE POLICY IMPACT ON THAILAND'S GROWTH

Models/Findings	Thailand-ASEAN4	Thailand-EU
Trade	+	+
FDI	-	-
Services	-	-
Capital Liberalisation (1988) and Financial Reform (2002)	+ *	+ *
Financial Crisis (1997)	- *	- *

Note: + = positive impact, - = negative impact and * = statistically significant level at the 5% level.
Source: Chapter 4.

7.2.1 Policy Recommendations for Thailand-ASEAN4

This subsection covers the implications for Thailand-ASEAN4 (Indonesia, Malaysia, Philippines and Singapore) trade policy followed by a discussion of the AFTA and ASEAN Single Market. The structure of the next two subsections consists of background, important issues, current progress, obstacles and overall recommendations. As seen from Table 7.1 in Column 2, the impact of trade or openness with ASEAN4 on Thailand's development and growth is positive but statistically weak. This does not mean that there are no possible benefits to Thailand from this intra-regional trade, but there is room for intensive enhancement that has not yet been implemented sufficiently. The statistical insignificance of the findings may be due to the small sample size available or the aggregate nature of the data used. It is expected that with more data available in the future, the findings would be more conclusive.

The following policy recommendations for trade, FDI and services are based however on the findings reported above and discussed in the context of the Thailand-ASEAN4 and AFTA perspective. It is also emphasised that although the impact of

openness between Thailand and the ASEAN4 is statistically weak but positive or beneficial to Thailand's growth, the recommendations are still based on these beneficial findings in this study. Two other good reasons to use these findings are: (1) the trade-growth nexus continues to be a controversial issue in the international literature (see Rose, 2007), and (2) these findings are likely to be improved with larger sample sizes and/or system estimation to take into account the full effects of additional information and economy-wide econometric modelling. The recommendations can be further supported, supplemented by and compared with other related studies in the area.

7.2.1.1 Trade

Policy Question: Why is Thailand-ASEAN4 trade good for Thailand's growth and development and what policies can improve it?

The intra-ASEAN regional trade is defined as total trade between Thailand and ASEAN4 (Malaysia, Singapore, Indonesia and the Philippines), divided by Thailand's GDP. The first task is to discuss the trends of intra-ASEAN regional trade as given in the following tables.

TABLE 7.2 INTRA-ASEAN TRADE VALUE/GDP, 2006 (US\$ MILLION)

Country	Exports	Imports	Total	Total Trade/GDP, %
Brunei Darussalam	1,887.3	745.8	2,633.2	23
Cambodia	235.4	991.2	1,226.5	17
Indonesia	18,483.1	19,379.2	37,862.3	10
Laos, PDR	289.8	500.7	790.5	22
Malaysia	40,979.6	32,290.7	73,270.2	47
Myanmar	2,149.7	1,174.7	3,324.4	28
Philippines	8,192.2	10,218.3	18,410.5	16
Singapore	83,801.6	62,300.4	146,102	110
Thailand	26,944.2	23,539.8	50,484	24
Vietnam	6,241.0	12,453.7	18,667.7	31

Source: ASEAN Statistical Yearbook, 2006.

From Table 7.2, it can be seen that among the ASEAN members, Singapore has a maximum intra-regional trade value followed by Malaysia and Thailand.

Singapore also has the highest degree of openness measuring by its trade/GDP ratio of more than 100 per cent in 2006.

Trade between Thailand and the ASEAN member countries has increased significantly since the 1990s and has generally posted a trade surplus with these partners since 1993. As a result, the ASEAN market is considered important to Thailand's exports. Despite the financial crisis of 1997, trade between Thailand and other ASEAN countries has dramatically increased because of the expansion of both imports and exports. From Table 7.3, it can be seen that Thailand's total trade value with all these partners except Indonesia increased in 2006 compared to 2005. Thailand had a trade deficit with Malaysia and Indonesia and a trade surplus with Singapore and the Philippines during this period.

TABLE 7.3 THAILAND TRADE VALUE WITH THE ASEAN4, 2005-2006 (million baht)

Country	2005				2006			
	Total	Imports	Exports	Balance	Total	Imports	Exports	Balance
Malaysia	558,225	325,314	232,911	-92,403	577,288	325,327	251,961	-73,366
Singapore	524,494	216,452	308,042	91,950	536,667	218,070	318,597	100,527
Indonesia	284,652	125,716	158,936	33,219	258,136	131,939	126,197	-5,742
Philippines	158,020	75,718	82,303	6,585	179,060	81,260	97,800	16,540

Source: Ministry of Commerce and Customs Department (2008).

The major issues seem to revolve around AFTA trade liberalisation that over the years has been and continues to be confronted with many difficulties in reaching the single market integration. The empirical findings in the case of a Thailand-ASEAN4 model also support this claim via a negative but insignificant impact on growth. Consequently, many different regimes have been suggested, Thailand's AFTA trade liberalisation commitments, from a more coherent and forward-looking policy perspective (Pupphavesa and Grewe, 1994, p. 12): 1) to be more responsive to mutual calls made by partners for a shorter than ten-year timeframe to more quickly adjust, restructure and eliminate the existing tariffs and non-tariff barriers; 2) to encourage FDI inside the region by unilaterally decreasing raw materials and intermediate input import duties; and 3) to gain more benefits from the full implementation of the AFTA by undertaking efficient adjustment and restructuring schemes for uncompetitive industries.

The AFTA tariff elimination implementation process is considered a crucial factor contributing substantial benefits to Thailand. The tariff rates will shift from zero to five percent to zero tariff rate by 2010 of the original six members and by 2018 for the newer members. Soesastro (2003) suggests that this desired progressive framework requires several mutual developments such as increasing confidence and willingness to move faster, and implementing the region's open market commitment after the crisis, resulting in the long-run competitiveness of the region. Over the last ten years, ASEAN has experienced high and rapid economic growth. On the other hand, the ASEAN economic integration process has been obviously slow, steady and informal (Lim, 1998). Although the implementation of the CEPT commenced in 1992, the tariff and non-tariff barriers elimination remains ongoing. Also several industrial cooperation projects have only just been developed.

The Thailand Investor Service Centre (TISC, 2005) suggests several policy recommendations for increasing trade of the food and agricultural products sectors as follows: improve the efficiency and productivity in food and agricultural production by initiating the Agro Economic Zone to reduce costs, increase productivity and enhance competitive capability; add value to agricultural products and food by improving their quality; enhance the international competitiveness of these products and expand in the ASEAN market by strengthening the campaign 'Thai Kitchen to World Kitchen'. However, Pholphirul (2009) examines whether the AFTA produces trade creation or trade diversion to Thailand via three trade indicators: export similarity index, intra-industry trade index and revealed comparative advantage (RCA). It is found that the analysis of trade patterns between Thailand and other ASEAN members shows a high similarity in trade structure degree indicating that the benefits from trade creation from the AFTA are more than those from trade diversion when it is fully implemented. This pattern suggests there are reasonable grounds for future collaboration and supports the future ASEAN-plus arguments.

7.2.1.2 FDI and Services

During the period under study, FDI and services were found to have a negative but statistically insignificant impact on Thailand's growth. The insignificance of the findings can possibly be attributed to the small sample size available or the

aggregate nature of the data used. This can be improved upon in future research. The policy for improvement of their plausibly achieving a positive impact can be formulated as follows. The regional intra-industry trade particularly in electronic, computer and automotive industries has increased in the last decade until now due to a large extent to the ASEAN industrial cooperation scheme. For trade policy of this industry, Thailand should be active in cooperating with other highly competitive, high technology and low cost of production countries, especially Malaysia, to be a regional and global production hub, with a strong emphasis on developing brand name to expand the market worldwide (TISC, 2005). The textile and garment products are also an important export for most ASEAN countries. Consequently, this industry has been forced to improve productivity to compete within the region. The TISC (2005) also suggests three main strategies in terms of production, rules of origin and trade negotiation as follows.

Production

- Developing and improving quality.
- Increasing value-added content through being more creative and a variety of products.
- Efficiency in production and creating brand names.
- Creating and sustaining comparative advantages through effective supply chain net.

Rules of origin and trade negotiation

- Maximum use of local content.
- Promotion of raw material exchange programs with AFTA trading partners.
- Collaboration with other ASEAN members on further effective trade liberalisation.

The current and most ambitious goal of the ASEAN is the ASEAN Single Market to foster sustainable growth and competitiveness of the region. Nevertheless, the success of an ASEAN Single Market has encountered many difficulties and challenges both in terms of different levels of economic development, national income and political systems especially between the old members and the new members namely Laos, Vietnam, Cambodia and Myanmar. As a result, it will be very difficult and long path for ASEAN to achieve the success of an ASEAN Single Market

As a consequence, the ASEAN Investment Area (AIA) scheme has been set up according to the ASEAN Vision Plan 2020. This scheme aims to increase the prosperity, competitiveness and sustainable economic development and growth of the region in the long run via extended, deeper and wider economic integration. However, the AIA currently covers only a few sectors e.g. manufacturing, agriculture, mining, forestry and fisheries sectors, including appropriate services to these sectors. The ASEAN Single Market integration is one of the recent deep regional trade agreements (RTAs). Tran Van Hoa and Harvie (2008) explain that many factors are contributing to the proliferation of RTAs around the globe. These factors are: 1) the consequence of slow progress of multilateral trade negotiations particularly the WTO Doha Rounds that lead to uncertain benefits for developing countries; 2) North America and Europe's neglect to help solve Asia's recent economic and financial crises; and 3) the highly intense competition of the global trade liberalisation of the major trading blocs e.g. NAFTA and the EU. Another ultimate goal of the ASEAN Vision 2020 is to establish the ASEAN Economic Community (AEC). It aims to create the ASEAN as a single market and a production base to make the region stronger for the global supply chain segment through more effective implementation of existing schemes of the AFTA, AFAS and AIA. Additional necessary factors for the ASEAN Single Market are skilled labour movement facilitation and strengthening the institutional ASEAN mechanisms (Puntasen et al., 2008).

An efficient framework and active plans for trade in services and investment liberalisation must focus upon drafting and implementation. Additionally, trade and investment cooperation must include compatible implementation. All industries excluding those specified in the temporary exclusion and sensitive list have to be included in the AIA scheme. Lloyd (2008) explains that deep economic integration is an essential requirement for the ASEAN, including other RTAs, to be a single market. Shallow integration is defined as the elimination of only traditional border measures, tariff and non-tariffs including other measures for trade in goods and services, and production factors. Deep integration is referred to as the elimination of measures beyond the border. When considering the AFTA, some items in the inclusion list remain above the zero level, reflecting the fact that intra-ASEAN regional trade is totally free despite the fact that the CEPT has been implemented for a long time

Many recommendations have been proposed to tackle these difficulties and to enhance deep integration to achieve an ASEAN Single Market. Soesastro (2003) describes other specific core elements that need to be implemented to support the forecast possible realisation of the ASEAN Economic Community (AEC). These elements are compatibility and simultaneous free trade and open investment, selective service sector liberalisation, infrastructure development and an efficient institutional mechanism. Woolcock (2008) also affirms that the success of regional trade liberalisation must include the coverage, substantive provisions, mutual recognition, regulatory safeguards, rules of origin enforcement and overcoming the initial technical barriers to trade.

Arunsmith et al (2002) report that Singapore tends to gain the highest possible benefits due to its lowest tariff and non-tariff barriers when compared to other members. The GTAP and CAMGEM (Chulalongkorn and Monash University General Computable Equilibrium Model) are used to examine the benefits of a sectoral import tariff and non-tariffs removal of the AFTA to Thailand. Regarding the industry impact results for Thailand, many sectors (e.g. textile, garment, leather products and food products, vehicle and vehicle parts and mineral products) are likely to benefit considerably from free trade because of the massive production cost reduction.

7.2.1.3 Reforms and Thailand-ASEAN4 Trade Policy Recommendations

The following policy measures are recommended for Thailand to achieve the benefits of an AFTA and a future ASEAN Single Market. There are two negotiation strategies for Thailand, proactive and reactive. The proactive technique needs an initial persuasion of other ASEAN countries to decrease or possibly remove certain types of tariffs and non-tariff barriers for Thailand. The reactive technique concentrates on the measures that protect against the negative impact of deducting tariffs and existing non-tariff barriers in other ASEAN countries on affected sectors. The proactive negotiation should be applied to agricultural products, garments, and vehicles and parts. The reactive negotiation should be applied to electronic equipment, machinery, chemicals, petroleum products, iron and steel, and food products.

In the case of investment policy, there are two main areas that need to be enhanced: industrial linkage and efficiency improvement. Moreover, the harmonisation

of competition policy, rules of origin and custom procedures are also crucial to attract FDI into the ASEAN region to become a global production hub. Maule (1996) states that the AFTA is expected to have a positive effect on manufacturing sector of the ASEAN, so it can be more efficient and competitive in the global market resulting in the attraction of more MNEs to invest in the region.

On the regulatory aspects, the ASEAN also has recently introduced regulations to covering trade in services and investment. These rules are the GATS and ASEAN Investment Area (AIA) commitments. The financial co-operation and liberalisation is not yet fully negotiated and developed (ASEAN Secretariat, 1997, p. 78). To be successful, the ASEAN services and investment co-operation and liberalisation have to be linked with the CEPT scheme effectively (ASEAN Secretariat, 1997, p. 79). During the 1900s, the ASEAN region was an obviously attractive recipient of FDI, compared to the rest of the developing economies in other regions (Low, 2004, p. 31). Thus, the ASEAN has to implement more intensive investment liberalisation regimes to keep the region as an attractive source of FDI inflows. Two specific agreements are crucial instruments for promoting the ASEAN as a single investment area. These schemes are the ASEAN Investment Area and ASEAN Industrial Co-operation. National treatment is also another important requirement to accelerate the ASEAN Investment Area (Low, 2004, p. 36). The investment facilitation scheme should not only involve product movement but also resource sharing including industrial complementation between partner companies and countries.

An additional recommendation regarding financial cooperation especially to prevent the next round of crises is as follows. The Chiang Mai Initiative (CMI) was agreed to establish a bilateral currency swap agreement between the ASEAN+3 FTA (China, Japan and Korea) members in 2000. The important aspects of this agreement included an exchange of a short-term capital movement mechanism in East Asia, the international financial architecture reform and regular meetings between the deputy and ministers of finance (Dent, 2008). The CMI has moved forward in 2007 when this scheme was endorsed by converting the fund into a funding pool of reserves from members, drawable in times of crisis. However, the in-depth details related to the technical features, management, suitable operating time and mechanisms are under discussion at the new meeting in 2009.

7.2.2 Economic and Trade Policy Recommendations for Thailand-EU

Policy Question: *Why Thailand-EU trade is good for Thailand's growth and development and what policies can improve it?*

This section proposes and discussed policy recommendations for Thailand-EU trade relations and extends to implications for a Thailand-EU FTA. The EU is Thailand's fourth largest trading partner after Japan, the US and the ASEAN countries. A plurilateral FTA between Thailand and the EU was negotiated in the early 2000s.

TABLE 7.4 TRADE SHARES BETWEEN THAILAND AND INDUSTRIALISED EUROPE, 2000-2005 (%)

Year	2000	2001	2002	2003	2004	2005
Export Share	16.74	17.32	15.95	15.94	15.18	13.62
Import Share	11.47	13.79	12.19	11.10	10.67	10.08

Source: www.icsead.or.jp

From Table 7.4, the export share of Thailand to Europe increased in 2001 to nearly 18 per cent because of economic growth in that region, but has been decreasing since then. In the same way, the import share from Europe to Thailand increased to almost 14 per cent in 2001 and has also been decreasing in the subsequent periods.

From the empirical findings of Table 7.1 in Column 3, it can be seen that trade openness between Thailand and the EU has a positive but insignificant impact. This finding can be attributed to the lack of more extended trade data and the single-equation or limited-information estimation of the EGT model. It does not definitely imply that it is impossible for mutual benefits but there is room to improve the findings by extending the sample size and improving data quality.

The following policy recommendations for trade, FDI and services are proposed and discussed as a contribution to Thailand's growth under the Thailand-EU FTA perspective. These recommendations are discussed in terms of how trade, investment and services policy can be used deal with this trade partner for mutual benefits.

7.2.2.1 Trade

The EU actively enhanced the deepening of the FTAs in Asia in the late 1990s. It has become a greater Asian partner not only in terms of trade but also of FDI

inflows while the EU trade in services with the Asian countries has been very low. Bilateral FTAs between the EU as a group and many Asian partners (e.g. Japan, China, India and the ASEAN) have been negotiated and established. There are two features of the current EU FTA policy that concern the willingness and ability to economically accelerate these FTAs (Sally, 2007). First, the EU strongly desires to expand its regulatory practices especially on product standards and safety by using the FTA as a transmission vehicle. Second, the issues about commercially relevant FTAs are more serious than with other developed partners such as the US.

The European Economic Area (EEA) is single market integration between 26 European Union countries and 3 countries of the European Free Trade Association (EFTA). The EFTA was established in 1960 combining with the four small countries of Iceland, Switzerland, Norway and Liechtenstein. Thailand and the EEA had been negotiated to draft an FTA twice in January and May 2005. There were two further meetings for advanced negotiations, targeting the signature of the final agreement in 2006.

Plurilateral trade negotiation is considerably smooth; nevertheless, some sensitive issues of market access and intellectual property rights have to be resolved. The EU bilateral trade agreements with third parties mainly concentrate on industrial goods and processed agricultural goods. The main criteria for selecting countries to possibly form an FTA with the EU include economic interest, capacity to enter into free trade relations such as WTO membership and avoidance of discrimination against other countries that have established FTAs (Bergkamp et al., 2005). Many trade related issues are covered in the proposed Thailand-EU FTA, e.g. rules of origin, customs measures, government procurement, investment and competition policy, intellectual property protection, labour and environment and other non-tariff barriers.

The future Thai-EU partnership and development into an FTA is concentrated on wide-ranging mutual interest areas as agreed under the draft Partnership and Cooperation Agreement (PCA). The framework of the Thailand-EU Cooperation Facility is an essential instrument to foster economic integration between these partners. The Thai government has to adopt intensive development to comply with the EU mandatory and voluntary market requirements to enhance the FTA formation (Bergkamp et al., 2005). These mandatory and voluntary market requirements consist

of food safety, labour standards, industrial standards, environmental regulations and intellectual property right protection.

The recommendations for trade policy are proposed as follows. The tariff and non-tariff barriers elimination of Thailand's unprocessed and processed agricultural products remains an issue in the negotiation of this FTA due to the cut of GSP many times in the last decade. Therefore, Thailand should be stronger in its negotiations of this issue, even if, it takes a long time. An extended coverage of manufactured goods should be implemented at a later stage. An improved product quality particularly for agricultural products such as frozen shrimp is a priority for the attention of the Thai government and exporters, to benefit from tariff elimination under the future Thailand-EU FTA. Rules of origin have to incorporate mutual recognition of transparency to enhance the bilateral trade flows.

7.2.2.2 FDI and Services

During the period under study, FDI and services were found to have a negative but statistically insignificant impact on Thailand's growth. The statistically insignificance of the findings can be attributed to the small sample size available or the aggregate nature of the data used that can be improved upon in future research. The policy based on their plausible positive impact can be formulated as follows. Regarding investment policy, Thailand can benefit from a future Thailand-EU FTA via increasing FDI inflows in high potential export industries enabling Thailand to become the production hub of the region. This suggestion is supported by the fact that the EU is the third largest source of FDI to Thailand. Nevertheless, investment related issues such as competition policy and intellectual property right protection regulations should be improved and harmonised, especially for Thailand, to enhance FDI inflows. Technology transfer and diffusion is another benefit to Thailand's manufacturing export sector.

Service liberalisation is a necessary requirement to make the proposed Thailand-EU FTA a deeper integration. As tourists from the EU to Thailand are the largest group, the tourism related sectors are the first priority, to enhance efficiency and attract EU tourist flows to Thailand. Banking and finance, telecommunications and health care are other service sectors that will possibly benefit from services

liberalisation through an Alliance Business Law revision to allow more foreign investment participation and joint ventures.

In summary, the negotiations for a Thailand-EU FTA began only three years ago in 2006 and are still at the negotiation stage and moving towards the final agreement. Successful development of this FTA will take a long time mainly due to the disparate negotiating powers and issues involved when compared to other plurilateral and bilateral FTAs of Thailand. To accelerate this process, Thailand has to implement efficient reform procedures to meet the EU mandatory and voluntary market requirements, while the EU has to agree to an adjustment period and the provision of technical support to Thailand. Investment and services must be included in a deeper integration at a later stage. Other neighbours including China, Korea, Japan and India have actively negotiated an FTA with the EU, thus, the Thai government should be more prioritised and consider enabling of enhancing this FTA process.

7.3 RECOMMENDATIONS FOR THAILAND'S POLICY REFORM AND CRISIS MANAGEMENT

As the combination of policy reforms and crises is an important feature of our estimated model, recommendations for Thailand's policy reforms and crisis management and prevention are proposed and discussed in this section. Thailand's economic growth was decidedly slow in 2004 because of many factors, e.g. drought, avian flu, rising oil prices, and the lack of increased investment essential for growth (ADB, 2009). Furthermore, the implementation of other policy reforms such as infrastructure development projects, private debt imbalance restructuring and government budget deficit are channels to strengthen and promote sustainable growth.

The continuity of dual track policy implementation that aims to build up domestic fundamentals while enhancing linkages to the global economy through international trade, investment and financial cooperation, is essential (ADB, 2009). The reason for this policy is a slowdown in exports resulting from decreasing external and domestic demand. Also the small and medium enterprises (SMEs) assistance programmes to strengthen competitiveness have to be implemented simultaneously. The investment spending projects by the government and state owned enterprises (SOEs) should be mainly in infrastructure and energy. In addition, private investment is

expected to increase considerably as a result of a tax breaks policy. The monetary policy implementation of interest rate and exchange rate control by the Bank of Thailand has to be cautious and effective to accelerate investment, exports, balance of payment stability and economic growth. Moreover, corporate and banking sector restructuring, particularly debt burden and liquidity, is another requirement to strengthen and increase efficiency of important sectors of Thai economy (ADB, 2009). This policy is crucial to attract the confidence of investors both domestically and internationally bring them back in the long-term.

The Asian financial crisis of 1997 obviously attacked the economic performance and growth of Thailand. The external sector difficulties such as continued current account deficit, collapse in exports, overvalued exchange rates, capital liberalisation in inappropriate times, short-term maturity mismatch investment and currency speculation were some causes of the crisis (Dowling and Valenzuela, 2004). As a result, the weakness of an impressive bubble of economic growth together with inappropriate policies triggered the crisis. MacDonald (1998) states that the other important factor was a lack of transparency in the financial system and institution performance, as well as a weak legal structure and wide administrative scope that led to the massive NPLs problem. Consequently, the financial system was devastated because of the debt and liquidity burden.

Many response strategies including the IMF assistance packages have been adopted and implemented to solve the crisis. Separation and suspension of weak institutions and support for the remaining efficient ones was an overall strategy resulting in 56 finance companies being closed. The Bank of Thailand (BOT) intervened and took control of the small finance companies, especially those played with fraud and mismanagement via the reform of related laws. Furthermore, a new institution established in 2001, the Thai Asset Management Corporation (TAMC) implemented the debt restructuring that solved the NPLs of remaining companies. The *Bankruptcy Act* was also amended in 1999 to enhance opportunities for concession between lenders and borrowers to prevent bankruptcy. The transparency, disclosure regulations and corporate system were reformed to increase efficiency prevent the increase of NPLs and strengthen the fragile financial institutions and system. The

governance of transparency and disclosure was not limited only to Thailand but also generalised in Asia (McDonald, 1998).

The above schemes have to be continually improved to foster growth and to insulate against a new round of crises, because external factors can strongly affect the small and open economy of Thailand. Besides, exchange rate management is an essential concern when capital flow liberalisation is introduced. For developing economies like Thailand, capital account liberalisation should be the key reform after fiscal and exchange rate stabilisation, trade reform and financial sector good governance and supervision reform.

The current financial turmoil commenced in late 2007 from the sub-prime loans in the US financial system and the downturn of the security market, are expected to affect other developed and developing countries as the global financial crisis and economic recession spread. This financial turmoil episode is characterised by serious banking stress rather than security or exchange market stress (IMF, 2008). Generally, a financial stress episode is followed by economic slowdown or a recession. Thailand and other Asian countries experienced this problem with the Asian financial crisis of 1997 and have learned how to prevent the adverse effects and reoccurrence of the crisis. More leverage and financial innovation are the tools to insulate the economic contraction that follows in the wake of banking stress. The capital structure of financial intermediaries restoration is also a strong policy recommendation to enhance financial stability and alleviate a downturn (IMF, 2008).

Other policy recommendations to respond to and prevent the adverse impact and to restore the financial system have been suggested the IMF (IMF, 2008). These recommendations are divided into general principles of intervention and specific policy responses. The specific policy responses include emergency measures to contain the crisis and restructuring tools to restore the normal functions of the credit system.

General principles of intervention

- Pre-crisis sanctions on undercapitalised and imposed systemic risks in financial institutions, including setting up the legal mechanisms to deal with weak financial institutions (such as bank-specific bankruptcy regimes).
- Speedy and efficient liquidity support is essential for insolvent financial institutions to recover.

- Debt restructuring programs targeted towards distressed borrowers and corporation.

Emergency measures

- Regulatory capital forbearance and liquidity support.
- Government deposit guarantees and deposit convertibility suspension.

Restructuring tools

- Financial institutions recapitalisation.
- Establish Asset Management Corporation (AMC).

The Thai government adopted most of the above policy recommendations as its response to the Asian financial crisis of 1997. It remains necessary to continue to implement these and to be more efficient in avoiding the severe adverse effects of the current global financial turmoil and to ensure a strong financial system. However, many challenges that need attention have emerged in the process of undertaking these interventions, particularly in the cases of capital misallocations and efficiency in implementation.

7.4 POLICY RECOMMENDATIONS FOR MULTILATERAL AND REGIONAL FTAs

This section proposes and discusses some overall policy recommendations of integrated multilateral, regional and bilateral FTAs for Thailand. The policy recommendations in the previous sections focused on plurilateral, regional and bilateral FTAs. It is necessary for policy makers to combine and implement plausible and appropriate economic and trade policies in accordance with these perspectives to make the integrated policy recommendations work towards growth. These recommendations are a combination of review and analysis of the major related literature and the researcher's perspective. This task dealt with many challenging issues particularly for small developing countries like Thailand. More specifically, the proliferation of plurilateral, regional and bilateral trade liberalisation and economic integration should obviously lead to an increase of mutual benefits. Trade liberalisation has to be implemented not only as a stimulus for trade expansion, but also as an effective catalyst

to achieve concrete development goals (Panitchapakdi, 2001). These mutual benefits create sustainable long-run competitiveness and growth and prevent the attack of possible future crises.

According to the empirical findings in the previous chapter, the impact of openness or trade liberalisation was small in almost all estimated models but statistically significant to growth only in the case of the Thailand-Japan model. This finding is consistent with the controversial issue in some studies of relationship between openness and growth in developing countries (see Rose, 2007; Tran Van Hoa, 2008). However, it is essential for Thailand to implement an efficient integrated trade policy in the multilateral, regional and bilateral context to stimulate long-term growth.

7.4.1 Globalisation

Under a globalisation environment, trade liberalisation is regarded as essential and conducive to deeper integration and growth of national economies into a global economic system. The impact of trade liberalisation is diverse among developing countries and has become a major concern as one of the key engines for economic development. The efforts of continued trade liberalisation with recognition of more open market advantages and sacrifices reflect both faith and commitment to world trade in a rule-based trading system (Lloyd, 2008). To achieve mutually balanced benefits for both developed and developing countries, trade liberalisation is not only a persuasion for trade expansion but also an effective vehicle that makes tangible economic growth and development goals achievable.

Developing countries should play a more prominent role in further liberalisation focusing on a better, strengthened and balanced multilateral trading system to serve their long-term and sustainable development goals. Panitchapakdi (2001) states that it is beneficial to join the WTO, because of trade expansion opportunities. The most comprehensive and far-reaching trade liberalisation agreement was concluded in the Uruguay Round and resulted in gains for textiles and agriculture. However, developing countries face two crucial problems when efficiently integrating with the world trading system. The first is the adjustment costs and transition period involved particularly in competition policy and intellectual property protection. Second,

there are implementation difficulties because of a lack of resources, and a full and precise understanding of the problem (Panitchapakdi, 2001).

7.4.2 Multilateral Openness

As Thailand is a member of the WTO, it is obliged to conduct trade liberalisation according to the rules of this multilateral organisation. However, most developing countries are still disadvantage in multilateral trade negotiations because they have less bargaining power and because of the obstacles of newly covered issues, e.g. safeguards, intellectual property rights, investment, services, environmental and labour standards which are complex and difficult to solve. The developing countries need to express collective and forceful requests for further negotiations and liberalisation to support their interests and priorities. There are three recommended criteria to reach this goal (Panitchapakdi, 2001, p. 10). First, developing countries should strengthen their capacity to push for a greater access in developed country markets. The built-in agenda of domestic regulations including licensing, qualifications and other technical standards and barriers, have to be eliminated by developed countries. Second, developing countries should seriously assert the need for non-discrimination in the implementation of special and differential treatment. Finally, the new issues negotiations need to be subject to the development policies of the developing countries.

7.4.3 Regionalisation

Additionally, the ASEAN countries should realise the impact of being excluded from an intensive trade liberalisation competition. Tran Van Hoa and Harvie (2008) suggest recommendations for this concern. First, the proposed and successful FTAs have to cover investment and services liberalisation issues including efficient facilitation schemes. Thailand can also benefit from FTAs covering investment and service liberalisation through transfer of technology from developed trade partners. Second, the ASEAN should be more actively collusive in enhancing closer economic relations and cooperation between the three high performing East Asian economies, namely China, Japan and Korea, as well as Australia and New Zealand. Third,

investment and services liberalisation should be included in this enlarged ASEAN proposal, apart from trade liberalisation.

The benefits of regionalism, from deeper integration of an enlarged ASEAN and bilateral trade agreements, depend on whether it is a building or stumbling block to multilateral trade. Lloyd (2003) explains that it is important to consider the relationship between regional trade liberalisation and the combined effects of multilateral and unilateral reduction in MFN tariffs including trade barriers to each other. Hubs and spokes are other important issues to consider in the context of regional integration. Lloyd (2003) also defines a hub as an outside country that forms a bilateral trade agreement with one member of a multi-member pre-existing RTA. Bilateral spokes arise when one country in the hub forms a bilateral RTA with another single country outside the original RTA, and plurilateral spokes have same definition but form the partnership with another RTA member. There are only a few cases of plurilateral RTAs between developed and developing countries. Developing countries are slow to form RTAs both among themselves and with developed countries. Moreover, these RTAs are not insufficiently comprehensive in their coverage of commodities and instruments, resulting in a less attractive proposal to developed partners (Lloyd, 2003).

7.4.4 Regional Free Trade Agreements

Thailand has been involved in negotiations and signed FTAs with different countries over the years, and the basic motivations are benefits from improved market access and investment opportunities. These benefits also bring together efficiency gains from competition and economies of scale and technology diffusion. Chirathivat and Mallikamas (2004) claim that this new development strategy of future regional and bilateral FTAs should be concern about the following challenges. Discrimination against trade diversion still exists; therefore, Thailand's FTAs should be selected with caution so they are not conducive to infringing upon WTO and AFTA trade liberalisation. The coverage of proposed and concluded FTAs is considerably far from uniform due to the presence of overlapping bilateral and sub-region trade liberalisation. The outcomes of liberalisation schemes depend not only on negotiations but also on political decisions. Multiple FTAs can result in hubs and spokes especially with major partners, e.g. China, Japan and the US, and then if this occurs Thailand cannot play the

role of a hub but rather that of a spoke and this practice is complicated. The negotiation of multiple bilateral agreements consumes the resources of skilled people in trade negotiations as well as other trade related issues such as rules of origin, competition policy and intellectual property that are sensitive and difficult negotiation issues.

7.5 CONCLUSIONS

To conclude, in a globalisation area it is crucial and necessary for developing countries to gain benefits from trade liberalisation. These countries have to implement trade policy in accordance with the multilateral, plurilateral, regional and bilateral context. However, the WTO agreements process is slow and many issues of interest to developing countries remain unsolved. The examples of these issues are MFN, rules of origin, anti-dumping and countervailing duties, agricultural products subsidy and standards. On the other hand, developing countries have to enhance the reform of the mandatory requirements under the WTO agreements, e.g. competition policy, intellectual property rights protection, customs procedure harmonisation, sanitary standards and labour and environmental standards. Thailand as a small developing member of the WTO has to implement these rules. The regional agreement of the AFTA is also important for Thailand. Thailand as well as other ASEAN members should be active in not only accelerating the elimination of CEPT tariffs but also that of non-tariff barriers. The trade policy of the ASEAN members should support the vision of the AIA to be an ASEAN Single Market by focusing on expanding intra-regional trade and investment. Lastly, Thailand should create more value-added and quality of both its agricultural and manufactured products to become the region's production hub.

CHAPTER 8

CONCLUSIONS

8.1 INTRODUCTION

This chapter summarises the research theme, econometric modelling methodologies, empirical findings and policy recommendations in Section 8.2 as discussed in the preceding chapters. The policy recommendations are summarised in the context of trade, FDI and services, policy reforms, crises and bilateral and regional trade agreement respectively in Section 8.3. Section 8.4 points out some limitations of the study at this stage, and suggests possible improvements for future research in this area.

8.2 SUMMARY OF RESEARCH THEME, METHODOLOGIES AND MODELLING PERFORMANCE

This section summarises the research theme, and new methodological developments including modelling performance, prior to the summary of policy recommendations in the next section.

First, the conceptual framework (see Chapter 1) underlying the research was is described. Second, the internal and external economic and trade variables required to construct our econometric model were explained and the key research questions that were addressed.

The theoretical background and major existing literature were then investigated and analysed to explore the gap of knowledge in the subject matter and to establish contribution and significance of the study (see Chapter 2). The scope of the literature review included the foundation of economic integration and trade liberalisation, the current trade policy of Thailand, openness, and growth econometric modelling and studies. The significance of the study is that it can be used to generate evidence-based policy and quantitative analysis of the relationship between Thailand's openness and growth under different scenarios. These different scenarios were divided into seven models consisting of plurilateral trade between the ASEAN4 and the EU and Thailand and bilateral trade between Thailand and its major partners, e.g. China, Japan, India, Australia and the US.

The multilateral and plurilateral trade agreements of the WTO, AFTA, NAFTA, EU and MERCOSUR and bilateral trade agreements were analytically reviewed in Chapter 3, including the current trade policy of Thailand. Like other small open developing countries, Thailand's trade is strongly regarded as a crucial engine for growth. Trade liberalisation is an important policy for these countries in the face of globalisation and intense competition. An obviously intensive outward-oriented policy has been implemented since the late 1980s due to the failure of an inward-oriented and infant industries policy. This new policy has been successful because of the high competitiveness of Thai exports, particularly in agricultural and processed agricultural products, due in part to the Thai baht devaluation. However, the continuing decrease in exports and the capital account deficit resulted in significant balance of payment deficits in the late 1990s that led to a large extent to the financial crisis in July 1997. In the early 2000s, bilateral FTAs became the dominant trade policy of Thailand and aimed to expand market access and export share in its major trade partner markets included enhancements of other economic-related cooperation and deep integration. Moreover, the attraction of long-term FDI inflows especially in manufacturing export industries was also necessary to support Thailand's growth, because of the changing pattern of the country's trade partners in seeking lower wages and skilled labour advantages offered by Thailand's neighbours in the region such as China and Vietnam.

Chapter 4 considered the improved features of the endogenous trade-growth model. These included the incorporation of policy reform, crises and shocks, and the country's structure or economic condition.

In Chapter 5, the endogenous gravity theory two-simultaneous equation model for Thailand's growth and trade was constructed to examine the impact of openness on growth and was estimated using the OLS and 2SLS estimation techniques. Modelling performance was evaluated. Several statistics were used to analyse, interpret and evaluate the estimated model's reliability. The model's R-squares were considerably high, up to more than 60 per cent for all models. The estimation results of the seven EGT models were found to be fairly compatible with those from other similar previous studies that use different methods of trade-growth investigation such as the CGE/GTAP and the gravity theory or other quantitative trade-growth studies.

The reliability of our modelled trade proxy for actual trade flows from its structural form for each of the estimated models was also calculated to explain modelling reliability performance and forecasting power. Three standard evaluation criteria in this case included the correlation coefficient, the root mean square errors (RMSE) and the Theil inequality coefficient decompositions, namely U_m (bias), U_s (variance), and U_c (covariance). They were calculated to evaluate the proxy performance as compared to actual trade flows. The correlation coefficients were shown to be apparently higher than 70 per cent for nearly all models and up to nearly 90 per cent for the Thailand-Japan model. The calculated RMSE, mean error and bias, variance and covariance were small for almost all models. The performance was also evaluated by the Friedman (1953) and Kydland (2006) criterion where data-model consistency or nearness is required. The findings supported the estimated model's realism. Consequently, the empirical findings are robustness and reliable.

8.3 SUMMARY OF POLICY RECOMMENDATIONS

The summary of several policy recommendations presented in chapters 6 and 7 was divided into five perspectives: trade, FDI and services, policy reforms, crises and RTAs as follows.

8.3.1 Trade

The following recommendations are guidelines of the current trade liberalisation policy negotiation and implementation initiatives of Thailand under the multilateral, regional and bilateral context. These recommendations are important for negotiations to create FTAs and related economic cooperation dialogues according to the interest of Thailand. Only in the case of bilateral trade with Japan, was a statistically significant small support found to be Thailand's major growth determinant. This result can be strongly supported by the fact that trade value and volume with Japan is the highest when compared to other trade partners in this study. In addition, trade is found to be the essential key driver for the Thai economy in recent decades (NESDB, 2005). The positive and significant impact of openness can be explained by the EGT as due to the geographical distance, location and transportation cost advantage, and economic size of Japan. As a result, the negotiation and implementation of a Thailand-Japan FTA

encompassing other trade related and economic cooperation issues should be made top priority.

Based on the empirical findings in Chapter 5, only openness in terms of bilateral trade between Thailand and Japan divided by Thailand's GDP, is positive and significant to growth. This finding is interesting in view of the currently controversial debate on whether "trade causes growth" in the literature. Thailand's overall policy implications and recommendations, however, need to cover all FTAs because FTA is currently the most dominant trade policy regionally and globally.

In regard to a unilateral trade liberalisation, an inward-oriented policy was replaced by an intensive export-oriented policy in the 1980s due to the ineffectiveness of the former during the last two decades (Akrasanee et al., 1991). The high tariff rates in most import categories were massively reduced especially in the case of raw materials and intermediate product, including the semi-manufactured products used in finished manufactured product production. The non-tariffs barriers applied to both imports and exports were also alleviated. Effective outward-oriented policies as well as the trade and investment liberalisation schemes are necessary to enhance long-term growth and competitiveness. Thailand has switched from an inward-oriented policy to an obviously intensively outward-oriented trade policy the last two decades and is currently negotiating and implementing many bilateral FTAs with partners both inside and outside the region. The higher benefit level of FTA privilege policy is called the utilisation rate and depends on four crucial factors: product coverage, the MFN and FTA tariff rate difference gap, the rules of origin restrictiveness and the restrictiveness of non-tariff barriers (TDRI, 2008). The WTO-plus rule perspective is also essential for both regional and bilateral FTAs to assure mutual benefits to members and to reduce the stumbling blocks to multilateral trade liberalisation.

It is also proposed that an FTA should provide an external impetus for Thailand in terms of transparency competition policy enhancement and customs procedures improvement. In addition, the FTA should deliver more opportunities than risks in attracting foreign trade, investment and other related economic cooperation. It should be realised that a dynamic, open and liberalised trade policy along with an appropriately supporting macroeconomic policy is an important strategy for maintaining the continual growth of Thailand. Nevertheless, the country's current political unrest

and instability contributes to the quantity of Thailand's bilateral FTAs success negotiation. More importantly, the proliferation of FTAs between Thailand's neighbours in the Asia region has increased. The Thai government should be extremely diligent concern with this issue to benefit from the trade liberalisation competition and globalisation arena. It is essential for economic and trade policy makers to recognise and implement these policies to enhance growth and competitiveness in the long run and to guarantee the possible mutual benefits from multilateral, regional and bilateral trade liberalisation. More specifically, the bilateral trade liberalisation must be used as the building blocks to regional and multilateral trade liberalisation.

8.3.2 FDI and Services

The incorporation of trade in goods, services and investment is the new and dominant feature of this study. Services and investment are measured by credit services in the account of balance of payment and total inward FDI. Both services and investment have a negative but insignificant impact. These findings can be attributed to their volatility and small share of GDP during the estimation period, and that inward FDI is mainly to the manufacturing sector. Moreover, the service industry sectors have continued to increase in importance in the Thai economy as the number of employment and many joint ventures and inward investment increase. So, the impact of inward FDI on manufacturing sector GDP can be observed more clearly than on total GDP. Nevertheless, not only trade in goods but also trade in services and investment can be regarded as important elements of nearly all current FTA negotiations' coverage to enhance a economic performance of Thailand and other partners of the FTAs. Additionally, an effort to include a framework of competition law and policy to accelerate trade in services and investment has been strongly undertaken in almost all recent FTAs. Therefore, this is the reason why policy implications and recommendations for FDI and services had to be discussed in chapters 6 and 7.

Not only the extended issues covering trade in services and investment apart from trade in agriculture liberalisation, but also the major manufacturing sectors should be of special concern to policy makers (TDRI, 2008). These sectors are the automotive industry, textiles and clothing industry, iron and steel industry, and petrochemical industry. For the Thai automotive industry, the aim should be upgrading human

resources, promoting green technology and utilising alternative energy to increase long-run competitiveness. Product quality improvement and cost reduction including delivery time are also needed to improve supply chain capability. Thailand has to collectively and mutually more intensely cooperate with other developing countries to raise its bargaining power to reap more benefits and to guarantee the fair regulations of the next negotiations particularly in terms of the new issues such as services, investment, intellectual property rights, competition policy, anti-dumping and countervailing duties, and labour and environment standards.

8.3.3 Policy Reforms

In our study, it is noted that domestic policy reforms are mainly motivated by the urgent requirement for a solution to the current crisis. The FIDF and TAMC were built up to solve the severe NPLs problem of the financial sector, which was the main factor contributing to the 1997 crisis via debt restructuring. Thailand and most of its neighbours in Southeast Asia requested assistance packages from the IMF due to the rapid contagion effect. This IMF scheme needed to be efficient to insulate Thailand from the new round of current global financial crises caused by sub-prime mortgages—the so called ‘toxic loans’ originating in the US. Apart from financial institutions and system reform, appropriate industrialisation policy is also essential to enhance the competitiveness of potential export industries in the intensely competitive global trade. Furthermore, laws and regulations relating to FDI such as competition and tax policy have to be more transparent to attract more investment from FTA members. Long-term investment is still a necessary and single most important key factor in stimulating economic growth. The summary and policy implications and recommendations in chapters 6 and 7 are related to the estimation outcomes.

8.3.4 Crises and Shocks

Crises and shocks have played an important role in the economy of Thailand and other countries. They have been incorporated into our models to provide substantive policy analysis. Thailand’s capital liberalisation of 1988 via the implementation of the BIBF scheme resulted in freer borrowing from abroad mainly by several financial institutions. The Asia financial crisis of 1997 that commenced in Thailand in July 1997

resulted in the floating of the Thai baht and the contagion effect spread to other countries in the region. The financial institutions and system reform of 2002 was implemented to strengthen the fragile financial institutions and system of Thailand. Nevertheless, the current global financial turmoil is another external crisis that is affecting the economy of Thailand. Therefore, an efficient crisis management policy (e.g. capital flow and exchange rate stabilisation schemes together with learned from the financial crisis in 1997) needs to be implemented to prevent the adverse effects of this current crisis. This summary is the linkage between the estimation outcomes and policy implications and recommendations in chapters 6 and 7..

8.3.5 Bilateral, Regional and Multilateral Trade Agreements

Thailand is active in the CEPT implementation process. Nevertheless, this process is only slowly progressing due to the economic development gap between the old and new FTA members, including the difficulties involved in the total removal of tariff and non-tariff barriers despite the fact that many facilitation schemes have been set up. The AFTA has extended wider and deeper economic cooperation to achieve the ASEAN Investment Area and single market by 2020. The ASEAN needs extended scope, and more efficient facilitation not only in trade but also in investment and services liberalisation to be a stronger trading bloc. Moreover, future financial integration is also necessary for the ASEAN to become an economic community like the EU or NAFTA. However, this desirable achievement would take a long time due to various obstacles mentioned above. Additionally, the ASEAN-plus FTA proposals especially the ASEAN+3 (China, Japan and Korea) FTA should be accelerated collectively by all members, to enjoy the long-term benefits from deeper coverage of trade, investment and services liberalisation and finally becoming an efficient production hub of Asia. The estimated models also include regional and multilateral trade models; therefore, this summary is the linkage between estimation results and policy implications and recommendations in two previous chapters.

8.4 SUGGESTIONS FOR FURTHER STUDIES

Several suggestions for further study are proposed in this section. Many further studies that are related to openness and growth via economic integration can be

undertaken and extended based on this study. Firstly, other useful models while characterised by structural and modelling limitations (see Tran Van Hoa, 2004a, 2004b, 2004c, 2005, 2007) can be used to compare the relationship between Thailand's openness and growth. These models are the computable general equilibrium model (CGE) and global trade analysis project (GTAP) or trade-growth panel regression.

Secondly, with the reference to the estimation method, there are alternative techniques that can be used to improve the estimation of the models. For example, co-integration analysis can be used to examine the long-term causality relationship between openness and growth, and system estimation methods such as the three stage least squares or the generalised method of moments can be used to properly take into account the economy-wide interdependence of economic and trade activities.

Thirdly, it is possible that improved results can be obtained by using a larger sample sizes for estimation. With respect to the dependent variable, other variables can be used as the proxy for growth such as GDP per capita or GNP. In addition, agricultural GDP or manufacturing GDP can be used as the dependent or target variable, to investigate the micro impact perspective of openness on specific sectors.

Fourthly, the balance of payments and trade balance as well as total export value of the major agricultural and manufactured export products can be used as an alternative openness variable to study their impact on growth.

Finally, it would be interesting to apply the EGT modelling approach to examine the effect of trade liberalisation or openness on the economic growth of Thailand for the case studies of an enlarged ASEAN FTA such as the ASEAN+3, ASEAN+5, ASEAN+India and ASEAN+EU FTAs.

This study can be considered as one of the new initiatives with improved structural and modelling features to study the causality between other trade variables for openness and growth and to propose evidence-based policy implications and recommendations. The trade balance and net exports can also be regarded as alternative variables for openness. In summary, it can also be concluded that this study has been useful to examine the relationship between openness and growth by using EGT modelling approach that incorporates endogeneity, non-linearity, crises, shock and policy reform, while providing reliable policy implications and recommendations.

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APPENDIX: DATA SOURCES, DEFINITIONS AND TRANSFORMATION

1. DATA SOURCES

The macroeconomic and trade data for the model estimation of this study are obtained from the International Centre for the Study of East Asian Development (ICSEAD), World Bank-WDI and Bank of Thailand databases and cover the period between 1984 and 2005.

2. DEFINITIONS

The estimated models consist of both quantitative and dummy variables. The definition of these variables incorporated is as follows.

Variables	Definition
TMUY	Total trade value between Thailand and its seven major partners divided by Thailand's GDP
TAUY	Total trade value between Thailand and Australia divided by Thailand's GDP
TASY	Total trade value between Thailand and the ASEAN4 divided by Thailand's GDP
TCHY	Total trade value between Thailand and the China divided by Thailand's GDP
TEU	Total trade value between Thailand and the EU divided by Thailand's GDP
TINY	Total trade value between Thailand and India divided by Thailand's GDP
TJAY	Total trade value between Thailand and Japan divided by Thailand's GDP
TUSY	Total trade value between Thailand and the US divided by Thailand's GDP
YTH	Thailand's real GDP
YAS	ASEAN4's real GDP
YAU	Australia's real GDP
YEU	The EU's real GDP
YCH	China's real GDP
YIN	India's real GDP

YJA	Japan's real GDP
YUS	The US's real GDP
FDIY	Total inward FDI divided by Thailand's GGP
SERY	Total services divided by Thailand's GDP
GBY	Government budget divided by Thailand's GDP
MSY	M2 divided by Thailand's GDP
RT	Lending Interest Rate
IN	Consumer price index
EX	Average exchange rate of baht per US dollar
UN	Unemployment
POP	Population
CS88	Dummy variable of capital liberalisation of 1988
CS97	Dummy variable of Asian final crisis of 1997
CS02	Dummy variable of financial institutions and system reform of 2002

3. DATA TRANSFORMATION

The simultaneous-equation trade-growth models incorporating crises, shocks and policy reform in this study are estimated by OLS and 2SLS (IV). Most quantitative time-series data needed to be transformed to the rates of change and were divided by Thailand's current GDP, except for the interest rate, unemployment, population and dummy variables. The data transformation is required by the EGT modelling approach as adopted for the research to deal with possible nonlinearity in the trade-growth functional relationship.