

**Final Draft**

**The Analysis on Trade and Foreign Direct Investment in East Asia, and Its Policy  
Implication Before and After Crisis  
(Case Study: South Korea, Indonesia and Thailand)**

**The 2007 - 2008 ASEAN+3 Research Group Studies**

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## EXECUTIVE SUMMARY

The ASEAN+3 region which is home to 2 billion people and almost US\$10 trillion GDP in 2007 is an important economic force in the world. With such economic force, the region has a high bargaining power in the world economy and possesses the potential to intensify the economic cooperation among its member nations. In light of that, ASEAN+3 framework which is currently underway, is a huge attractive force for its members, especially those countries that have implemented economic openness such as South Korea, Thailand, and Indonesia.

Trade and investment among ASEAN countries has experienced growth since ASEAN Free Trade Area (AFTA) was established in 1993. Even the growth of intra ASEAN trade and investment has progressed slowly during 1990s. Other facts show that (i) trade between ASEAN countries and China surge, and (ii) economic growth in Japan and South Korea continuous grow. These conditions will provide strong market (market driven) for the regional economic grouping between ASEAN+3. Beside international trade, foreign direct investment also shows an upward trend, albeit slowly. The increase in foreign direct investment flows is expected to become the driver for the growth and intensification of intra-regional trade and economic growth in East Asia region. The increase in the volume of trade and foreign direct investment (FDI) will have implications for macroeconomic policies of East Asia nations. With the deepening of economic cooperation among East Asia countries, policy makers in each country have to develop comprehensive economic and financial market policies to ensure that fair cooperation at the regional level prevails.

Moreover, the 1997 economic crisis, especially in East Asia, gives many worth lessons. The currency crisis that started in Thailand spread to the neighboring countries of Southeast Asia and eventually triggered serious crisis in the currency and financial markets in Thailand, South Korea, and Indonesia. Ten years have passed since Asia's twin currency and banking crises. Comparing the period 2000–2006 with 1990–1996, growth has slipped by an average of 2.5% a year in the five countries (Indonesia, Korea, Malaysia, Philippines, and Thailand) that were most directly affected. This condition underscores the fact that adjustment to the previous economic crisis continues to this day. There is need for new schemes, as well as ASEAN+3 cooperation, to reform and strengthening the economic and financial market. ASEAN+3 economic cooperation is expected to strengthen economic growth and stabilize macroeconomic in ASEAN+3 countries.

In light of the foregoing, it is deemed necessary to carry out an analysis of the latest situation and tendency in trade development and FDI in the region. This study is using South Korea, Indonesia and Thailand as sample countries which hit hard by the 1997 crisis to understand better the trade and FDI pattern and to determine the implication on macroeconomic policies. This study will provide feedback/inputs to relevant economics

authorities, as well as make a significant contribution to efforts tailored toward strengthening the stability of economic and financial markets in East Asian nations.

ASEAN+3 is a cooperation arrangement between ASEAN nations and China, Japan, and South Korea. ASEAN nations have had long economic cooperation arrangements with the three East Asia nations. Beside bilateral agreement (i.e. Japan-Malaysia, South Korea-Singapore), ASEAN also had economic cooperation arrangements with each of Japan, South Korea, and China (ASEAN+1). In line with increasing intensity of the cooperation, it was necessary to create an umbrella framework, which leads to the formation of ASEAN+3. Economic integration of nations has led to a surge in export and import activities, especially in the region. The ASEAN markets provides a huge market opportunity for East Asia nations for their industrial exports and vice versa, as ASEAN nations, which are largely endowed with natural resources, have a immense opportunity to export their products to Japan, South Korea, and China.

Country with high global competitiveness index and high world competitiveness index tend to have higher share on export intra and extra ASEAN. Singapore, that have the highest rank among ASEAN (rank 2 on IMD world competitiveness 2007 and rank 5 of WEF GCI 2008-2009), has highest share on export with 44.3% share among intra ASEAN export and 33.45% share on extra ASEAN export in 2006. As reflected on the competitiveness index; Japan and Korea have high competitiveness in general; although Singapore stands out with high competitiveness. On the other hand, China competitiveness is not so different from ASEAN countries.

ASEAN is not the main exports destination for China, Japan, and South Korea. The main importers from those three countries are not ASEAN countries also. However, the value of export and import among ASEAN+3 increases from 2002-2006. China export and import with ASEAN increase 52.41% and 47.88% averaged per year in 2002-2006. Korea trade with ASEAN countries also increase more than 15% per year in the same period. Although intra ASEAN trade is considered more important, it still falls far behind the dominance of trade outside ASEAN nations. The ASEAN market is increasingly becoming important for ASEAN nations both as a market for their products and imports, is discernible from figures on market share in ASEAN in total export market that reached 25 percent in 2006. Japan is an important export market for ASEAN nations, while China and Korea fall in line behind it. ASEAN nations rely on neighboring countries for imports, as indicated by a market share of 25 percent of all imports in 2006. Japan, China, and South Korea are important as sources of ASEAN imports. Such statistics attest to growing interdependency between ASEAN nations and Japan, China, and South Korea. In light of that, it is hoped that APT cooperation will strengthen international trade in the region.

As a developed country, Japan has been involved in developing its industries in other countries. Since 2002, Japan has become the second most important source of foreign investment in ASEAN. ASEAN is the third largest source of investment, while Korea and China are ranked in the seventh and tenth positions respectively. The large foreign investment in ASEAN shows an upward trend during 2004 – 2006 periods, and is likely to become the driver of international trade and economic growth in ASEAN region.



Business community believes that the adoption of free trade agreement will guarantee security in trade and investment. With the implementation of a single rule of origin, the plus three nations can use ASEAN as a production base. For example, Japan established automotive plant in Thailand, with spare parts for the automotives to be produced in Indonesia and Vietnam. The well streamlined cooperation framework such as embodied in ASEAN+3 facilitates investment opportunities. For plus three nations, ASEAN constitutes a region of strategic importance because of the opportunities it offers as a large regional market for selling products. The cooperation would become more important considering currently global crisis (end of 2008). Starting from United States, the crisis has affected ASEAN+3 nations. International trade and FDI in the regional will decrease. So, strengthening economic cooperation in ASEAN+3 is becoming more important.

The study in South Korea, Indonesia, and Thailand which implementing openness economic policy show that international trade and FDI among ASEAN+3 countries in three countries, in general, is lower than extra ASEAN+3 countries. However, signs of an upward trend have become evident over the past several years. There are high prospects for trade and investment among ASEAN+3 countries in the future given the high complementarity among ASEAN nations with Japan, South Korea, and China in areas of international trade and FDI. ASEAN nations such as Indonesia and Thailand in general, are producers of natural resources or low technology products and need external financing to develop their economies. Meanwhile, South Korea requires a lot of natural resources which are available in ASEAN. To that end, products from South Korea are in general high tech, which are on high demand in ASEAN. Besides, South Korea has a lot of funds which can be used in undertaking investments beyond its borders, which will definitely make substantial contribution to ASEAN nations which require FDI to develop their economies.

In general, intra ASEAN+3 trade in the three countries (Indonesia, Thailand, South Korea) depend on the development of economic growth in the area. Thailand and South Korea trade and FDI are more sensitive to GDP growth and real exchange rate, especially on its import. South Korea FDI depends on its economic growth. On the other hand, depreciation of real exchange rate does not increase intra ASEAN+3 trade export in Indonesia, Thailand, and South Korea. The nominal depreciation may increase export but not the real exchange rate. High domestic real interest rate in Indonesia will increase FDI inflow to the country. This may reflect the high rate of return of investment in Indonesia. On the other hand, a higher international interest rate will decrease FDI since it means a higher cost of fund in international market. In general economic crisis does not have significant influence on trade and FDI flows in the countries.

Policy implication in the research finding is that the development of ASEAN+3 framework still relevant to be discussed. The framework should move ahead despite the global economic crises this time, since 1997 crises did not influence significantly trade and FDI flow in general. The economic cooperation under ASEAN+3 is believed could benefit its member countries since the complementary among ASEAN and the plus three

countries is quite high in areas of trade and FDI. Of course, to make the economic cooperation more fruitful, increasing international competitiveness in the developing countries in ASEAN+3 are phenomenon.

# I. INTRODUCTION

## 1.1. Background

Trade and investment among ASEAN countries has experienced growth since ASEAN Free Trade Area (AFTA) was established in 1993. Even the growth of intra ASEAN trade and investment has progressed slowly during 1990s. Other facts show that (i) trade between ASEAN countries and China surge, and (ii) economic growth in Japan and South Korea continuous grow. These conditions will provide strong market (market driven) for the regional economic grouping between ASEAN+3.

Beside international trade, foreign direct investment also shows an upward trend, albeit slowly recently, in the wake of financial and capital market liberalization and deregulation. Causes of this phenomenon (ADB, 2007) are (i) adjustment to the excessive investment prior to the crisis, and (ii) declines in return to investment and growth prospects. The increase in foreign direct investment flows is expected to become the driver for the growth and intensification of intra-regional trade and economic growth in East Asia region.

These underscore the facts that there is need for strengthening economic cooperation within ASEAN+3. Furthermore, another motivation for regionalization in East Asia is the desire to reduce financial risk contagion and exchange rate instability, as well as stave off the potential for a financial crisis in Asia.

The increase in the volume of trade and foreign direct investment (FDI) will have implications for macroeconomic policies of East Asia nations. With the deepening of economic cooperation among East Asia countries, policy makers in each country have to develop comprehensive economic and financial market policies to ensure that fair cooperation at the regional level prevails. Previous study findings (ASEAN, 2005) showed that FDI flows among East Asia countries impacts economies differently. Long term impact of FDI on economic growth is traced to increasing yield on domestic investment. FDI fosters higher yield through higher physical and human capital efficiency. On the contrary, short term money has the converse effect.

Moreover, the economic crisis, especially in East Asia, gives many worth lessons. The currency crisis that started in Thailand (in 1997) spread to the neighboring countries of Southeast Asia and eventually triggered serious crisis in the currency and financial markets of South Korea. Among East Asia countries, South Korea, Indonesia and Thailand were the countries most affected by the crisis. The crisis first emerged in Thailand was fears of loan defaults and foreign short-term creditors withdrew funds from Thailand financial institutions. The Indonesian crisis was largely caused by the currency crisis. The crisis that affected Rupiah began in July 1997 and by August of the same year; the currency was under serious pressure. The Rupiah dropped further when government replaced the managed floating exchange regime to a free-floating exchange rate arrangement. The large number of Indonesian corporations which had borrowed in U.S. dollars had to face higher costs in repaying their obligations. Furthermore, despite having strong macroeconomic fundamentals, the crisis hit South Korea hard. The problem in South Korea lay

in its banking sector, which was suffering from an overburden of non-performing loans, attributed to funding by large corporation of their aggressive expansions.

Ten years have passed since Asia's twin currency and banking crises. Comparing the period 2000–2006 with 1990–1996, growth has slipped by an average of 2.5% a year in the five countries (Indonesia, Korea, Malaysia, Philippines, and Thailand) that were most directly affected (Asian Development Outlook, 2007). This condition underscores the fact that adjustment to the previous economic crisis continues to this day. There is need for new schemes, as well as ASEAN+3 cooperation, to reform and strengthening the economic and financial market. ASEAN+3 economic cooperation is expected to strengthen economic growth and stabilize macroeconomic in ASEAN+3 countries.

In light of the foregoing, it is deemed necessary to carry out an analysis of the latest situation and tendency in trade development and FDI among South Korea, Indonesia and Thailand to ASEAN+3 countries, and determine the implication on macroeconomic policies. This study will provide feedback/inputs to relevant economics authorities, as well as make a significant contribution to efforts tailored toward strengthening the stability of financial markets in East Asian nations.

## **1.2. Objectives**

The study objectives are:

1. Explaining the current situation/trend of the inter and intra regional trade and investment in South Korea, Indonesia and Thailand,
2. Analyzing the trade pattern intra ASEAN+3 in South Korea, Indonesia and Thailand,
3. Analyzing the investment pattern intra ASEAN+3 in South Korea, Indonesia and Thailand,
4. Analyzing the policy implications of the expanding trade, and FDI in ASEAN+3.

## **1.3. The Significance and Policy Relevance of The Research**

The research findings will have a strong relevance to Indonesia, South Korea and Thailand trade and investment policy. The expectation of research output is to acquire a better understanding of determinants of trade and direct investment, as well as input to the policy makers' and business practitioners. Policy makers will understand better regarding the intra trade and FDI flows in ASEAN+3.

## II. LITERATURE REVIEW

### 2.1. International Trade Theory

The analysis which explains international trade among countries, and the pattern of trade, preceded the birth of Economic Science in 1776. At the time ( Mercantilism period), articles on international trade, one of which was postulated by David Hume, relate the emergence of international trade to the desire of nations to obtain as much gold as possible, because by doing so, nations became capable of financing their armies which were vital in taking control of other nations. The motivation underlying trade between nations was the desire to obtain as large surplus as possible, which drove the country to collect as much gold as possible. With such a pattern of trade among nations, there was always some nations that derived more benefits than others, creating a situation of gainers/winners and losers. In other words, such pattern of trade created nations that generated surpluses while other suffered deficits.

In 1776, Adam Smith fundamentally changed such analysis. According to Adam Smith, if international trade always results into a deficit form one party engaged in it, it will not last for long. According to him, trade relations must generate mutual benefits for all parties engaged in it. Using the theory of absolute advantage, Adam Smith postulates that if two countries are endowed with different natural resources, then it is beneficial for each to undertake specialization, after which they engage in trade to meet their needs and requirements. That way, there is certainty that each party engaged in trade derives benefits from the exercise, and eventually enhancing world welfare.

Over time, Adam Smith's theory formed the foundation for subsequent theories on international trade of comparative advantage, which was postulated by David Ricardo, Heckscher-Ohlin theory, and other theories which are base their postulation on the concept that trade is rooted in the differences in endowments countries have. To that end, international trade theories postulate that international trade occurs between advanced and developing countries because they have different endowments.

During the 1970s, international trade theory underwent another pattern, one again. The change was motivated by the reality that until late 1960s, trade among nations was dominated by developed nations which possess the same endowments, and not between developed and developing countries, which do have different resource endowments. It is this reality that motivated the emergence of new trade theories (NTT) which are underpinned by the issue of industrial organization. The emergence of NTT lies in the fact that such theories highlight the importance of specialization, which Adam Smith Philosophy could not, explains new trade patterns, characterized by domination of international trade.

The NTT or industrial organization approach explains the phenomenon of domination of international trade among countries which is increasingly becoming evident today. Maneschi (2008) states that the comparative advantage theory which was postulated by Ricardo does not factor in the profit rate effect. Viewed from the perspective of business behavior, Ricardo's theory which only emphasized the abundance of natural resources as a source of exports-

imports shows some weakness. Using graphical and algebra approaches, when Maneschi included the element of profit maximization by business men, profit decreases whenever businessmen focus on maximizing production in pursuit of specialization. The fall in profits has the implication of cutting production and trade, which in turn will lead to a state of equilibrium (maximum profit) which is only possible if trade occurs between a large country and not a small one.

Besides dynamic developments in trade theory over time, all international trade theories both those that are underpinned by specialization such as Adam Smith, and those that emphasize industrial organization (NTT), they all have something in common, which is that in general trade generates economic efficiency. The theory that is underpinned by specialization postulates that efficiency arises from economies of scale or increasing returns to scale, which form the rationale for trade and the pattern that emerges is inter industry trade. Meanwhile NTT states that efficiency generated by trade arises from product differentiation, adjustments in demand characteristics, economies of scale, re-export, minimization of transaction costs and intra firm trade, and the pattern of trade that emerges is intra industry trade (Kibritcioglu, 2008).

In light of the fact that according to theory international trade generates economic efficiency in the world, many countries still believe that free trade will increase world welfare a view that is postulated by Adam Smith. To that end, reduction and eradication of trade barriers among countries both tariffs and non tariffs will lead to higher efficiency, which will translate into higher welfare. With time, developments in freeing barriers have not been limited to trade in products, but the process has taken the form of economic globalization, which entails the eradication of obstacles to the movement of factors of production, and creating a common currency.

Besides highlighting efficiency, theories of free trade are underpinned by the notion of an optimum tariff. According to tariff theory, the imposing of tariffs generates a double impact: loss to consumers because of price and profit distortions for producers and the government. To that end, the imposition of an optimal tariff which maximizes benefits to all sections of society is no easy feat (Ogawa, 2006). Some of the constraints that need consideration are the elasticity of demand, elasticity of supply, and government revenue. That explains why an optimal tariff can not be imposed on all products at the same time, rather must be done on a product/commodity by commodity basis. Moreover, according to Ogawa, whether the tariff is lump sum or variable will have bearing on the level of tariff considered optimal. For large countries, the imposition of tariffs will impact on terms of trade, and the capacity to derive benefits. Meanwhile, a previous study carried out by Ogawa, which focused on small countries showed that their inability to influence terms of trade means that the imposition of tariffs will create a lot of distortions. This is the more so if the imposition of tariffs is oriented toward government revenue. To that end, the eradication of tariffs will generate more benefits than those created by imposing it.

It is in light of the above arguments that underpin the formation of new regional trade blocks, which are paving the way to free trade in the world. In theory, regional trade cooperation commences as Preferential Trade Area (PTA), subsequently becomes Free Trade Area (FTA), custom unions, common market, and finally economic union. Viewed from the perspective of benefits of free trade generated, the formation of regional trade blocks constitutes a second best

alternative because they do not automatically lead to higher welfare. This is because the formation of the trade blocks can generate the two contradictory impacts, associated with free trade which is trade creation and trade diversion. Trade creation constitutes a positive impact, while trade diversion is the negative impact of a regional trade cooperation arrangement. To that end, the formation of trade blocks can be considered good for trade if they foster more trade creation than trade diversion that emerges in their aftermath. In light of that, the formation of regional trade blocks is considered to be a second best option, and not the best option, which is free trade.

Although the formation of regional trade blocks constitute a second best option, they are better than an autarky system. If observed closely, the five phases of regional trade cooperation, it is only the European Union which been the most advanced as it has created an economic and monetary union. Basing on the European experience, Mongeli conducted a study in 2007 on the impact of creating a monetary union on trade deepening. The study came up with the findings that creation of the monetary Union in Europe generated trade deepening of more than 300%. Meanwhile, a study conducted by Roose in 2004, showed that monetary integration on bilateral framework, generated trade deepening that ranged between 30% to 90% (Mongeli, et.al. 2007). Basing on the study, an inference can be made that RTA (Regional Trade Agreement) is sufficiently effective in promoting the achievement of free trade.

Nonetheless, it must be acknowledged that despite its effectiveness in creating free trade, the major difficulty RTA faces is the addition of new members. Brummer (2008), states that basing on several measures, RTA is in principle a good club for its members, especially in negotiating trade between RTA members and nations outside the cooperation arrangement (third parties). According to Brummer, the bargaining position of members is low if each is to conduct negotiations with third parties on its own. This underscores the importance of conducting collective negotiations with third parties, and since is likelihood that some countries will become free riders in the process, the addition of new members often follows a very stringent evaluation mechanism by existing members. According to Brummer, the evaluation does not only scrutinize the economic performance of aspiring candidate countries, but also the potential benefits each additional new member will contribute to RTA. Such evaluation points to the reality that the addition of new members is not necessarily good because the large the number of members the higher the possibility of conflict of interest emerging from each member, which is why there is a maximum number of members that can be in RTA. Thus, due to the problem of expanding RTA, it is not easy for it to move from being a regional trade cooperation agreement into a free trade world.

Besides obstacles in expanding RTA membership, other constraints toward becoming a free trade on a global basis include the problem of distributing gains from trade among members. It is evident that all the theories of international trade, both those that highlight benefits that arise from specialization, as well as those that emphasize the importance of industrial organization, state the vital importance of trade gains which are postulated to enhance world welfare. Nonetheless, none is explicit on how such gains that are generated in the course of international trade can be distributed among members involved in trade. Palley (2008) explains that according to an analysis carried out by Gomory, Boumol, and Samuelson (GBS) in 2004 and 2006, they found out that expansion of trade may not be the win-win outcome such as is often

hypothesized, rather the emergence of a systemic “country winner” and “country loser”. Additionally, technology transfer which is hypothesized to be an important benefit of trade seems to be hard to achieve. Moreover, according to Vavilov (2008) FDI and trade, depending on the commodities, while can be complementary, can also become substitute of one another. In the case of horizontal commodities (most of footloose industries), most are substitutes, which has the implication that if FDI rises, the volume of trade falls, and the converse is also true. In light of such a condition, according to GBS, there is an absolute need for optimization of trade through trade policy. However, to affect an optimal trade policy requires adequate institutional infrastructure, which has led to the emergence of a new theory known as Institutionalist policy thinking.

Institutionalist policy thinking does not only underpin trade policy, but also accommodates political obstacles which often characterize internal policy negotiations. In some countries, suffering from political uncertainty, businessmen often lobby the government to forestall free trade. This is despite the fact that policy makers have a good understanding that free trade increases entrepreneurship efficiency. It is such condition requires institutions to play a part by analyzing international trade tailored toward supporting the making of optimal policy (Lee, et.al. 2007).

Besides political conditions, basing on a micro analysis, the existence of asymmetric information, Chiang (2007) implies that negotiations play a very important role in sharing the gains generated within a trade cooperation arrangement. In addition, Chiang continues, comparative advantage can emerge for countries that do not have absolute advantage. Nonetheless, gains are largest if trade partners are more divergent than specialists. Under such a condition, negotiations play a crucial role, which makes the institutional approach very important.

## **2.2. Foreign Direct Investment**

FDI refers to an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor. Further, in cases of FDI, the purpose of investors is to gain an effective voice in the management of the enterprise (IMF, 1993). FDI is a particular form of the flow of capital across international boundaries from home countries to host countries. These flows give rise to a particular form of international assets for the home countries, specifically, the value of holdings in entities, typically corporations, controlled by a home country (Lipse, 2002). An alternative definition of direct investment refers to it as a set of economic activities or operations carried out in a host country by firms controlled or partly controlled by firms in some other (home) country.

IMF (1993) stated that FDI bears three broad characteristics:

1. It refers to a source of external financing rather than necessarily net physical investment or real activity per se
2. A matter of convention FDI involves a 10 percent threshold value of ownership.
3. FDI consists of both the initial transaction that creates investments and the direct investment enterprises aimed at maintaining, expanding or reducing investments.

More specifically, FDI is defined as consisting of three broad aspects (IMF, 1993):



1. New foreign equity flows
2. Intra-company debt transactions
3. Reinvested earnings

There are many FDI theories that use various variables and concepts. The simple theoretical studies of FDI state that FDI was motivated mainly by the possibility of high profitability in growing markets. Basing on this concept, the low interest rate in host country, secure sources of material and less trade barriers are the main factors that influence the investment decision. Some previous researches that are related with this concept are Akinkugbe (2003), Benacek et.al. (2000) and Lim (2004). Akinkugbe (2003) showed that the high income per capita, outward-orientation to international trade, high level of infrastructure development, and high rate of return on investment are the significant factors responsible for FDI flows. Benacek et.al. (2000) also found that the primary motive of investors is market seeking. A large number of people and national income are best indicators of market. This finding was corroborated by Lim (2004) finding that found that the market size, infrastructure quality, economic stability and free trade zone are important for FDI. Other factors that affect the investment decisions are fiscal incentives, the business or investment climate, labor cost and trade openness (Lim, 2004).

Market condition in a developed country can influence the amount of funds inflow, because one of primary motives of investors is market seeking (Benacek et.al, 2000). Investors are seeking for a marketable country. Substantial literature has developed confirming empirically the importance of the size of the host market and the growth factor measured by Gross Domestic Product (GDP) or Gross National Income (GNI) per capita or GDP growth. The size of a particular market may indicate the attractiveness of a specific location for the investment, in the case that the multinational corporation aims to produce for the local market (horizontal or market-seeking FDI).

While a few studies indicate that the link between income levels and FDI may not be that close, an overwhelming majority of empirical studies confirms the importance of the link. Likewise, high (GDP or GNI) growth rates may signal high investment returns and, hence, may attract further (foreign) investment. The foreign investors that target the local market are assumed to be more attracted to the country with higher growth rate of GDP as it indicates a larger potential demand for their product (Chantassawat, et.al. 2004). The effect of the variable on their investment incentive therefore is assumed to be larger than the effect on those who are not focusing on the domestic market. For the foreign investors who operate in industries characterized by relatively large economies of scale, the importance of the market size or its growth is magnified.

Openness to trade is usually measured by the ratio of imports and exports to GDP. This ratio is often interpreted as a quantification of trade restrictions. In general, the impact of openness to trade linked to the type of foreign investment (Asiedu, 2002). Higher trade barriers may attract horizontal FDI, as they also protect the output of the foreign investor in the local market against imports of competitors (tariff-jumping hypothesis). Conversely, multinationals engaged in export-oriented investment, called vertical FDI, may favor investing in a relatively open economy, since trade barriers increase transaction costs. The empirical evidence, on the other hand, suggests a positive link (Chakrabarti, 2001).

The rate of inflation as a proxy for the level of economic stability, considering that one of the classic symptoms of loss of fiscal or monetary control is unbridled inflation, investors should prefer to invest in more stable economies, which reflect a lesser degree of uncertainty. Thus, it is reasonable to expect that inflation would have a negative effect on direct investment.

Other theories on FDI are Dunning's OLI paradigm (Dunning, 1993) and the gravity model (Breton and Gros, 1997, Brock, 1998). OLI paradigm considers factors that influence FDI to include: ownership advantages (O) of the firm, locational advantages (L) at a foreign location and internalization incentives (I) favoring a hierarchical organization over a market transaction.

The gravity model tries to predict FDI flows on the basis of macroeconomic variables like the level of GDP, GDP growth and the population size. Gast (2005) used the gravity equation with a fixed-effects panel data approach of 22 OECD countries in 1991-2001. Changes in total and relative market size are significant factors that improve FDI performance, but on the contrary, the stock market booms generate FDI decrease. Hejazi and Safarian (2002) used trade theory approach to modeling FDI. The summary of their FDI model is shown below.

**Table 2.1. Trade Theory Approaches to Modelling FDI**

<b>Theory</b>	<b>Variables Used</b>
Gravity Model	<ul style="list-style-type: none"> <li>• real GDP on a PPP basis</li> <li>• Growth in real GDP</li> <li>• Distance between countries</li> <li>• Language dummies</li> <li>• Nominal exchange rates</li> <li>• Regional Dummies</li> </ul>
Hecksher –Ohlin Theory	<ul style="list-style-type: none"> <li>• GDP per capita</li> <li>• Liquid liabilities, bank deposits, bank credit and claims on non financial private sector</li> </ul>
New Trade theories	<ul style="list-style-type: none"> <li>• openness to trade (exports plus imports relative to GDP)</li> <li>• openness to FDI (inward plus outward FDI relative to FDI)</li> <li>• total expenditures on R&amp;D relative to GDP</li> <li>• secondary school enrollment rates</li> </ul>
Policy	<ul style="list-style-type: none"> <li>• NAFTA dummy</li> <li>• a survey measure of how open a country is to FDI</li> <li>• a survey measure of how generous FDI incentives are</li> <li>• Exchange rate volatility</li> </ul>
Institutions	<ul style="list-style-type: none"> <li>• a survey measure of the quality of country's institutions</li> <li>• a survey measure of country's economic risk</li> <li>• a survey measure of country's political risk</li> </ul>

Source: Hejazi and Safarian (2002)

### III. FOREIGN DIRECT INVESTMENT AND TRADE OVERVIEW

#### 3.1. ASEAN+3 Overview

ASEAN+3 is a cooperation arrangement between ASEAN nations and China, Japan, and South Korea. ASEAN nations have had long economic cooperation arrangements with the three East Asia nations (see table 3.1). Beside bilateral agreement (i.e. Japan-Malaysia, South Korea-Singapore), ASEAN also had economic cooperation arrangements with each of Japan, South Korea, and China (ASEAN+1). In line with increasing intensity of the cooperation, it was deemed necessary to create an umbrella framework, which leads to the formation of ASEAN+3.

**Table 3.1. Trade and Investment Agreement between ASEAN+3 Nations**

Country	Agreements	Take Effect
<b>Japan</b>	▪ Japan-Malaysia Economic Partnership Agreement	July 13, 2006
	▪ Indonesia Japan Economic Partnership Agreement	August 20, 2007
	▪ Japan-Thailand Free Trade Agreement	November 1, 2007
	▪ Japan Singapore Economic Partnership Agreement	January 1, 2008
	▪ Japan-Brunei Economic Partnership Agreement	July 31, 2008
	▪ Japan-ASEAN Comprehensive Economic Partnership Agreement (Singapore, Laos, Vietnam, and Myanmar)	December 1, 2008
	▪ Japan Philippines Economic Partnership Agreement	December 11, 2008
	▪ Japan-Vietnam Economic Partnership Agreement	Under progress
	▪ Japan-South Korea Economic Partnership Agreement	Under progress
<b>Korea</b>	▪ South Korea-ASEAN Free Trade Agreement (minus Thailand)	June 1, 2007
	▪ South Korea-Singapore Free Trade Agreement	Under progress
<b>China</b>	▪ China-Singapore Free Trade Agreement	October 23, 2008
	▪ China-ASEAN Free Trade Agreement	July 2007
	▪ China-Thailand Free Trade Agreement for Agriculture Products	October 2003

Source: www.bilaterals.org; Singapore Government; Ministry of Foreign Affairs Japan

ASEAN+3 framework is inseparable from the economic cooperation of the member nations and the ubiquitous forces of globalization. Economic globalization has been responsible for creating a large market which is ever expanding. Economic integration of nations has led to a surge in export and import activities, especially in the region. The ASEAN markets provides a huge market opportunity for East Asia nations for their industrial exports and vice versa, as ASEAN nations, which are largely endowed with natural resources, have a immense opportunity to export their products to Japan, South Korea, and China.

The large ASEAN market is indicated by the large population in ASEAN nations of 576 millions in 2007, which makes the ASEAN region a very potential market for ASEAN nations themselves and “Plus Three” nations. Total nominal GDP for ASEAN is US\$ 1.3 trillion, with a GDP per capita of US\$ 2200 in year 2007. Nominal GDP and GDP per capita for ASEAN were far behind figures for plus three nations in general and Japan and South Korea, in particular. ASEAN+3 cooperation arrangement is expected to propel developing ASEAN nations into advanced like East Asian nations.

**Table 3.2. Total Population, GDP, and GDP per Capita of ASEAN+3 Countries (2007)**

Country	Total Population (thousand)	GDP at current prices (US\$ million)	Gross domestic product per capita at current prices (US\$)
<b>ASEAN</b>	<b>575,525</b>	<b>1,281,853.9</b>	<b>2,227.3</b>
Brunei Darussalam	396	12,317.0	31,076.1
Cambodia	14,475	8,662.3	598.4
Indonesia	224,905	431,717.7	1,919.6
Lao PDR	5,608	4,128.1	736.1
Malaysia	27,174	186,960.7	6,880.2
Myanmar	58,605	12,632.7	215.6
Philippines	88,875	146,894.8	1,652.8
Singapore	4,589	161,546.6	35,206.1
Thailand	65,694	245,701.9	3,740.1
Vietnam	85,205	71,292.1	836.7
<b>Japan</b>	<b>127,800</b>	<b>4,381,600</b>	<b>34,296</b>
<b>Korea</b>	<b>48,500</b>	<b>969,900</b>	<b>20,015</b>
<b>China</b>	<b>1,321,100</b>	<b>3,280,200</b>	<b>2,483</b>

Source: ASEAN Secretariat (ASEAN data) and APEC (Japan, Korea, China data)

**Table 3.3. Real GDP Growth in ASEAN+3 Countries, 2000 – 2007 (Annual Percent Change)**

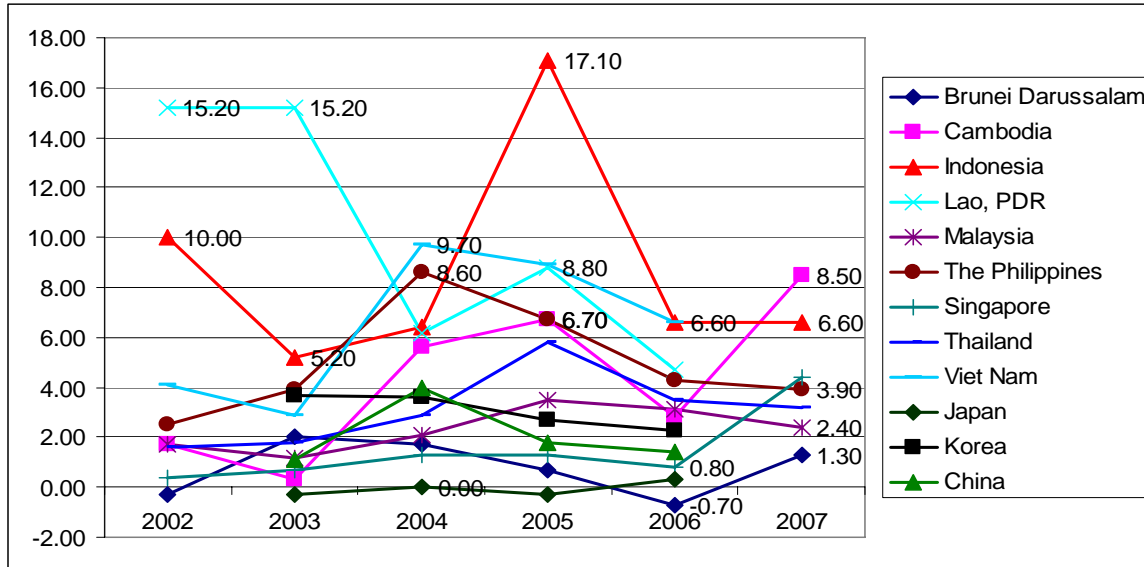
Country	2000	2001	2002	2003	2004	2005	2006	2007
Brunei Darussalam	2.9	2.7	3.9	2.9	0.5	0.4	5.1	0.4
Cambodia	-	-	5.3	12.6	10.0	13.6	10.8	10.1
Indonesia	5.4	3.6	4.5	4.8	5.0	5.7	5.5	6.3
Lao PDR	-	-	5.9	5.9	6.9	7.3	8.3	6.0
Malaysia	8.7	0.5	5.4	5.8	6.8	5.0	5.9	6.3
Myanmar	-	-	5.5	5.1	5.0	4.5	6.9	5.6
Philippines	6.0	1.8	4.4	4.9	6.4	4.9	5.4	7.3
Singapore	10.1	-2.4	4.2	3.5	9.0	7.3	8.2	7.7
Thailand	4.8	2.2	5.3	7.1	6.3	4.5	5.1	4.8
Vietnam	6.8	6.9	7.1	7.3	7.8	8.4	8.2	8.5
China	8.4	8.3	9.1	10.0	10.1	10.4	11.1	11.4
Japan	2.9	0.2	0.3	1.4	2.7	1.9	2.4	2.1
Korea	8.5	3.8	7.0	3.1	4.7	4.2	5.1	5.0

Source: ASEAN Secretariat (ASEAN data) and APEC (Japan, Korea, China data)

In general, from 2001 to 2007, ASEAN+3 countries experienced rapid real economic growth, with Vietnam, China, and Cambodia registering the highest rates. Vietnam and China registered average growth rate of 7.74 and 10.06, during 2001 – 2007 period, respectively, while Cambodia posted 10.4 percent during 2002 – 2007 period. The rapid economic growth posted by China is attributed to a surge in domestic and external demand for its products. Garments exports, construction, and tourism were the main drivers of growth for Cambodia, while investment and

consumption were the main factors behind Vietnam's economic growth. In general, rapid economic growth posted by ASEAN nations was attributed to the increase in exports, investment, and consumption (Asian Development Outlook, 2008).

**Figure 3.1. Inflation Rate (%)**



Source: ASEAN Secretariat and OECD database

High economic growth does not mean much if it is concurrent with high inflation. Several ASEAN nations, for example Cambodia, Singapore, and Brunei experienced inflation in 2007. Basing on Asian Development Bank (ADB) projections, economic growth in East Asia and ASEAN Nations will decline in 2008 and 2009 due to higher than expected inflation (Business News, 2008). High inflation in 2007 is attributed to high petroleum and food prices. Yet the decreasing of commodities price recently will not boost economic growth since there is global economic crisis.

Trade and investment among ASEAN nations have registered substantial growth since the advent of the free market era. Free markets have fostered export and investment growth. China is gradually becoming the largest exporter to ASEAN and East Asian markets. The emergence of China as a key player within the ASEAN+3 cooperation arrangement has paved the way for a decrease in dependency of the region on the United States, fostering more internal integration. Nations that have advanced technology such as Japan and South Korea is still the major sources of automotive and electronics products for ASEAN+3. In general, ASEAN nations exports are largely natural resources and their major imports are products of advanced nations. However, Singapore is the exception as it has a dearth of natural resources. Merchandise exports and services exports play a very significant role in Singapore (Economy Watch, 2008).

**Table 3.4. Intra ASEAN Exports, 2002 – 2006**

Country	Value		Share		Growth	
	2002	2006	2002	2006	2002-2006	Average per year
<b>Brunei</b>	684.2	1887.3	0.79	1	175.84%	43.96%
<b>Cambodia</b>	91.9	235.4	0.11	0.12	156.15%	39.04%
<b>Indonesia</b>	9933.5	18483.1	11.46	9.77	86.07%	21.52%
<b>Lao, PDR</b>	-	289.8	-	0.15	-	-
<b>Malaysia</b>	22127.1	40979.6	25.52	21.66	85.20%	21.30%
<b>Myanmar</b>	1221.3	2149.7	1.41	1.14	76.02%	19.00%
<b>Philippines</b>	5528.7	8192.2	6.38	4.33	48.18%	12.04%
<b>Singapore</b>	33962.6	83801.6	39.17	44.3	146.75%	36.69%
<b>Thailand</b>	13156.4	26944.2	15.17	14.24	104.80%	26.20%
<b>Vietnam</b>	-	6214	-	3.28	-	-
<b>Total</b>	86705.7	189176.9	100	100	118.18%	29.55%

Source: ASEAN Secretariat

Note : value (million US \$), share (% of total), growth (%)

Intra ASEAN trade increases from 2002 to 2006 by 118.18%; higher than 88.97% of extra exports growth at the same period. ASEAN countries that obtain most advantages from ASEAN exports growth are Brunei, Cambodia, Singapore, and Thailand; with growth accordingly 175.8%, 156.15%, 146.75%, and 104.80% from 2002 to 2006.

**Table 3.5. Extra ASEAN Exports, 2002 - 2006**

Country	Value		Share		Growth	
	2002	2006	2002	2006	2002-2006	Average per year
<b>Brunei</b>	2001.7	5732	0.67	1.02	186.36%	46.59%
<b>Cambodia</b>	1824.2	3279.1	0.61	0.58	79.76%	19.94%
<b>Indonesia</b>	47225.3	82315.5	15.89	14.66	74.30%	18.58%
<b>Lao, PDR</b>	-	112.8	-	0.02	-	-
<b>Malaysia</b>	71154.1	116247.3	23.95	20.7	63.37%	15.84%
<b>Myanmar</b>	1234.9	1365	0.42	0.24	10.54%	2.63%
<b>Philippines</b>	29674.5	39217.9	9.99	6.98	32.16%	8.04%
<b>Singapore</b>	91084.1	187806.3	30.65	33.45	106.19%	26.55%
<b>Thailand</b>	52951.8	94635.3	17.82	16.85	78.72%	19.68%
<b>Vietnam</b>	-	30819.7	-	5.49	-	-
<b>Total</b>	297150.6	561530.9	100	100	88.97%	22.24%

Source: ASEAN Secretariat

Note : value (million US \$), share (% of total), growth (%)

ASEAN latest members, Myanmar and Laos, have higher benefit of intra ASEAN trade, since most of their exports go to ASEAN countries. In 2006, 71.98% of Laos total exports are intra ASEAN, while for Myanmar is 61.16% (table 3.6). Exports growth of Myanmar intra ASEAN countries is 76.02% from 2002-2006.

**Table 3.6. Share of ASEAN Exports for Each Country, 2002 - 2006**

Country	2002		2006	
	Intra	Extra	Intra	Extra
<b>Brunei</b>	25.47%	74.53%	24.77%	75.23%
<b>Cambodia</b>	4.80%	95.20%	6.70%	93.30%
<b>Indonesia</b>	17.38%	82.62%	18.34%	81.66%
<b>Lao, PDR</b>	-	-	71.98%	28.02%
<b>Malaysia</b>	23.72%	76.28%	26.06%	73.94%
<b>Myanmar</b>	49.72%	50.28%	61.16%	38.84%
<b>Philippines</b>	15.71%	84.29%	17.28%	82.72%
<b>Singapore</b>	27.16%	72.84%	30.85%	69.15%
<b>Thailand</b>	19.90%	80.10%	22.16%	77.84%
<b>Vietnam</b>	-	-	16.78%	83.22%

Source: ASEAN Secretariat

Based on table 3.4, the biggest exporters among ASEAN countries are Singapore, Malaysia, and Thailand for both exports to ASEAN countries and to outside ASEAN, with share respectively 44.3%; 21.66%; 14.24% on each country intra ASEAN exports to total intra ASEAN exports on 2006, and 33.45%; 20.7%; 16.85% on each country extra ASEAN exports to total extra ASEAN exports on 2006 (table 3.5). Those three countries are also the biggest importers among ASEAN countries.

From 2002-2006 there is 118.18% growth on total intra ASEAN exports and 88.97% growth on total extra ASEAN exports. The highest growth is accomplished by Brunei, Cambodia, and Singapore for intra and extra exports. Imports among ASEAN countries also have a comparatively high growth, even higher than exports growth. From table 3.6, it can be seen that exports to outside ASEAN countries are in general higher than between ASEAN countries. The same case happened on imports (table 3.9), where extra imports are higher than intra on most countries.

**Table 3.7. Intra ASEAN Imports, 2002 - 2006**

Country	Value		Share		Growth	
	2002	2006	2002	2006	2002-2006	Average per year
<b>Brunei</b>	627.5	745.8	0.86	0.46	18.85%	4.71%
<b>Cambodia</b>	598	991.2	0.82	0.61	65.75%	16.44%
<b>Indonesia</b>	6995.5	19379.2	9.56	11.85	177.02%	44.26%
<b>Lao, PDR</b>	-	500.7	-	0.31	-	-
<b>Malaysia</b>	17245.2	32290.7	23.56	19.74	87.24%	21.81%
<b>Myanmar</b>	1190.8	1174.7	1.63	0.72	-1.35%	-0.34%
<b>Philippines</b>	5542	10218.3	7.57	6.25	84.38%	21.09%
<b>Singapore</b>	30441.4	62300.4	41.59	38.08	104.66%	26.16%
<b>Thailand</b>	10561.7	23539.8	14.43	14.39	122.88%	30.72%
<b>Vietnam</b>	-	12453.7	-	7.61	-	-
<b>Total</b>	73202.1	163594.5	100	100	123.48%	30.87%

Source: ASEAN Secretariat

Note : value (million US \$), share (% of total), growth (%)

**Table 3.8. Extra ASEAN Imports, 2002 – 2006**

Country	Value		Share		Growth	
	2002	2006	2002	2006	2002-2006	Average per year
<b>Brunei</b>	972.9	743.1	0.38	0.15	-23.62%	-5.91%
<b>Cambodia</b>	1064.8	1931.8	0.41	0.39	81.42%	20.36%
<b>Indonesia</b>	24293.3	41686.3	9.46	8.5	71.60%	17.90%
<b>Lao, PDR</b>	-	86.8	-	0.02	-	-
<b>Malaysia</b>	61552.7	96025.5	23.97	19.58	56.01%	14.00%
<b>Myanmar</b>	927.3	940.8	0.36	0.19	1.46%	0.36%
<b>Philippines</b>	29884.5	41555.3	11.64	8.47	39.05%	9.76%
<b>Singapore</b>	85894.9	176181.6	33.45	35.92	105.11%	26.28%
<b>Thailand</b>	52164.2	103569	20.32	21.11	98.54%	24.64%
<b>Vietnam</b>	-	27783.1	-	5.66	-	-
<b>Total</b>	256754.6	490503.3	100	100	91.04%	22.76%

Source: ASEAN Secretariat

Note : value (million US \$), share (% of total), growth (%)



**Table 3.9. Share of ASEAN Imports for Each Country, 2002 – 2006**

Country	2002		2006	
	Intra	Extra	Intra	Extra
<b>Brunei</b>	39.21%	60.79%	50.09%	49.91%
<b>Cambodia</b>	35.96%	64.04%	33.91%	66.09%
<b>Indonesia</b>	22.36%	77.64%	31.74%	68.26%
<b>Lao, PDR</b>	-	-	85.23%	14.77%
<b>Malaysia</b>	21.89%	78.11%	25.16%	74.84%
<b>Myanmar</b>	56.22%	43.78%	55.53%	44.47%
<b>Philippines</b>	15.64%	84.36%	19.74%	80.26%
<b>Singapore</b>	26.17%	73.83%	26.12%	73.88%
<b>Thailand</b>	16.84%	83.16%	18.52%	81.48%
<b>Vietnam</b>	-	-	30.95%	69.05%

Source: ASEAN Secretariat

Country with high global competitiveness index and high world competitiveness index tend to have higher share on export intra and extra ASEAN for each country to total intra and extra ASEAN export (table 3.4, table 3.5). Singapore, that have the highest rank among ASEAN (rank 2 on IMD world competitiveness 2007 and rank 5 of GCI 2008-2009), has highest share on export with 44.3% share among intra ASEAN export and 33.45% share on extra ASEAN export in 2006.

**Table 3.10. Global Competitiveness Index in ASEAN+3**

Country	GCI 2005		GCI 2006		GCI 2007-2008		GCI 2008-2009	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Singapore	5.48	6	5.63	5	5.45	7	5.53	5
Japan	5.18	12	5.6	7	5.43	8	5.38	9
South Korea	5.07	17	5.13	24	5.4	11	5.28	13
Malaysia	4.9	24	5.11	26	5.1	21	5.04	21
Thailand	4.5	36	4.58	35	4.7	28	4.6	34
Brunei	-	-	-	-	-	-	4.54	39
China	4.07	49	4.24	54	4.57	34	4.7	30
Indonesia	3.53	74	4.26	50	4.24	54	4.25	55
Philippines	3.47	77	4	71	3.99	71	4.09	71
Vietnam	3.37	81	3.89	77	4.04	68	4.1	70
Cambodia	2.82	112	3.39	103	3.48	110	3.53	109

Source: World Economic Forum

**Table 3.11. World Competitiveness in ASEAN+3**

<b>Country</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Singapore	2	3	3	2
China	22	29	18	15
Malaysia	16	26	22	23
Japan	21	19	16	24
Korea	31	27	32	29
Thailand	26	25	29	33
Philippines	43	40	42	45
Indonesia	49	50	52	54

Source: IMD World Competitiveness Yearbook 2007

Other countries with high competitiveness such as Malaysia and Thailand (rank 31 and 34 on GCI 2008-2009) also have higher share on each country export to total ASEAN export of about 14% until 21%. Meanwhile, growth of intra and extra ASEAN exports is also relatively higher, with averaged per year of more than 15%. While countries with low competitiveness, for instance Philippines, rank 71 on GCI 2008-2009, has lower share on export among extra and intra ASEAN, only about less than 10%, and lower exports growth of about 10% on average from 2002-2006.

As reflected on the competitiveness index; ASEAN countries, Japan, and Korea have high competitiveness in general; although Singapore stands out with high competitiveness. On the other hand, China competitiveness is not so different from ASEAN countries.

**Table 3.12. China, Japan, and South Korea Import, 2002 - 2006**

<b>CHINA</b>						
<b>Import from</b>	<b>Value</b>		<b>Share</b>		<b>Growth</b>	
	<b>2002</b>	<b>2006</b>	<b>2002</b>	<b>2006</b>	<b>2002-2006</b>	<b>Average per year</b>
<b>Japan</b>	53466	115672.6	18.11	14.62	116.35%	29.09%
<b>Korea</b>	28568	89724.1	9.68	11.34	214.07%	53.52%
<b>ASEAN</b>	29668	86487.7	10.05	10.93	191.52%	47.88%
<b>World</b>	295170.1	791460.9	100	100	168.14%	42.03%
<b>JAPAN</b>						
<b>Import from</b>	<b>Value</b>		<b>Share</b>		<b>Growth</b>	
	<b>2002</b>	<b>2006</b>	<b>2002</b>	<b>2006</b>	<b>2002-2006</b>	<b>average per year</b>
<b>China</b>	61783.7	118525.7	18.3	20.47	91.84%	22.96%
<b>Korea</b>	15484.6	27328.4	4.59	4.72	76.49%	19.12%
<b>ASEAN</b>	49976.7	77239.6	14.8	13.34	54.55%	13.64%
<b>World</b>	337608.9	579063.9	100	100	71.52%	17.88%
<b>KOREA</b>						
<b>Import from</b>	<b>Value</b>		<b>Share</b>		<b>Growth</b>	
	<b>2002</b>	<b>2006</b>	<b>2002</b>	<b>2006</b>	<b>2002-2006</b>	<b>average per year</b>
<b>Japan</b>	29855.2	51926.3	19.63	16.78	73.93%	18.48%
<b>China</b>	17399.7	48556.6	11.44	15.69	179.07%	44.77%
<b>ASEAN</b>	15764.7	27492.8	10.36	8.89	74.39%	18.60%
<b>World</b>	152124.4	309379.5	100	100	103.37%	25.84%

Source: UNCOMTRADE (analyzed)

Note: ASEAN including Malaysia, Singapore, Thailand, Philippines, Indonesia for China and South Korea data

ASEAN including Malaysia, Singapore, Thailand, Philippines, Indonesia, Vietnam for Japan data

Note: value (million US \$), share (% of total) , growth (%)

Table 3.12 and 3.13 show that ASEAN is not the main exports destination for China, Japan, and South Korea. The main importers from those three countries are not ASEAN countries also. However, the value of export and import among the ASEAN+3 increase from 2002-2006. China export and import with ASEAN increase 52.41% and 47.88% averaged per year in 2002-2006. Korea trade with ASEAN countries also increase more than 15% per year in the same period.

**Table 3.13. China, Japan, and South Korea Export, 2002 - 2006**

<b>CHINA</b>						
<b>Export to</b>	<b>Value</b>		<b>Share</b>		<b>Growth</b>	
	<b>2002</b>	<b>2006</b>	<b>2002</b>	<b>2006</b>	<b>2002-2006</b>	<b>average per year</b>
<b>Japan</b>	48433.8	91622.7	14.88	9.46	89.17%	22.29%
<b>Korea</b>	15534.6	44522.2	4.77	4.59	186.60%	46.65%
<b>ASEAN</b>	22532.8	69767.7	6.92	7.2	209.63%	52.41%
<b>World</b>	325596	968935.6	100	100	197.59%	49.40%
<b>JAPAN</b>						
<b>Export to</b>	<b>Value</b>		<b>Share</b>		<b>Growth</b>	
	<b>2002</b>	<b>2006</b>	<b>2002</b>	<b>2006</b>	<b>2002-2006</b>	<b>average per year</b>
<b>China</b>	39823.4	92769.6	9.56	14.34	132.95%	33.24%
<b>Korea</b>	28568.8	50270	6.86	7.77	75.96%	18.99%
<b>ASEAN</b>	55215.7	75970	13.25	11.75	37.59%	9.40%
<b>World</b>	416715.3	646725.1	100	100	55.20%	13.80%
<b>KOREA</b>						
<b>Export to</b>	<b>Value</b>		<b>Share</b>		<b>Growth</b>	
	<b>2002</b>	<b>2006</b>	<b>2002</b>	<b>2006</b>	<b>2002-2006</b>	<b>average per year</b>
<b>Japan</b>	15140.4	26533.9	9.32	8.15	75.25%	18.81%
<b>China</b>	23753.2	69459.2	14.62	21.34	192.42%	48.11%
<b>ASEAN</b>	18110.2	31691.1	11.15	9.74	74.99%	18.75%
<b>World</b>	162466.1	325457.2	100	100	100.32%	25.08%

Source: UNCOMTRADE (analyzed)

Note: ASEAN including Malaysia, Singapore, Thailand, Philippines, Indonesia, Vietnam

Note: value (million US \$), share (% of total), growth (%)

Although intra ASEAN trade is considered more important, it still falls far behind the dominance of trade outside ASEAN nations. The ASEAN market is increasingly becoming important for ASEAN nations both as a market for their products and imports, is discernible from figures on market share in ASEAN in total export market that reached 25 percent in 2006 (see table 3.14). Japan is an important export market for ASEAN nations, while China and Korea fall in line behind it. ASEAN nations rely on neighboring countries for imports, as indicated by a market share of 25 percent of all imports in 2006 (see table 3.14). Japan, China, and South Korea are important as sources of ASEAN imports. Such statistics attest to growing interdependency between ASEAN nations and Japan, China, and South Korea. In light of that, it is hoped that APT cooperation will strengthen international trade in the region.

**Table 3.14. Top Ten Export Markets and Import Origins of ASEAN, 2006**

Export Market			Import origin		
Country of destination	Value of exports	Share to total	Country of origin	Value of Imports	Share to total
ASEAN	189,176.8	25.2	ASEAN	163,594.5	25.0
USA	96,943.5	12.9	Japan	80,495.6	12.3
European Union-25	94,471.8	12.6	China	74,950.9	11.5
Japan	81,284.9	10.8	European Union-25	66,118.1	10.1
China	65,010.3	8.7	USA	64,252.5	9.8
Republic of Korea	25,670.0	3.4	Republic of Korea	26,849.7	4.1
Australia	23,148.5	3.1	Australia	13,262.8	2.0
India	18,928.1	2.5	Taiwan	12,876.9	2.0
Hong Kong, SAR	13,784.0	1.8	India	9,774.6	1.5
United Arab Emirates	11,889.2	1.6	Saudi Arabia	8,600.4	1.3
Total top ten destination countries	620,307.1	82.6	Total top ten origin countries	520,776.0	79.6

Source: ASEAN Secretariat

Note : value (million US \$), share (% of total)

As a developed country, Japan has been involved in developing its industries in other countries. Since 2002, Japan has become the second most important source of foreign investment in ASEAN. ASEAN is then third largest source of investment, while Korea and China are ranked in the seventh and tenth positions respectively. The large foreign investment in ASEAN shows an upward trend during 2004 – 2006 periods, and is likely to become the driver of international trade and economic growth in ASEAN region.

**Table 3.15. Top Ten Sources of ASEAN Foreign Direct Investments Inflow**

Country	Value (million US \$)		Share to Total Inflow (%)		Average growth per year
	2004	2006	2004	2006	
European Union (EU)-25	10.046	13.361	28.6	25.5	8.25%
Japan	6	10.803	16.3	20.6	22.12%
ASEAN	2.803	6.242	8	11.9	30.67%
USA	5.232	3.864	14.9	7.4	-6.54%
Other Central & South America	-60	1.035	-0.2	2	-25.43%
Hong Kong	529	1.353	1.5	2.6	-24.94%
Republic of Korea	806	1.099	2.3	2.1	-24.97%
Cayman Island	2.029	476	5.8	0.9	5839.96%
Taiwan, Province of Taiwan	366	668	1	1.3	20.63%
China	731	936	2.1	1.8	7.01%
Total top ten sources	28.217	39.841	80.4	76.1	10.30%

Source: ASEAN Secretariat

Singapore has the largest FDI inflows for 2005 – 2006 periods, followed by Thailand, Indonesia, and Malaysia, in that order. The large number of FDI in Singapore and Malaysia is attributed to legal certainty and security, coupled with the high quality of human resources. Factors which investors put into consideration before they invest in developing countries include the availability of cheap human resources, and large market. Foreign investment plays an important role in developing countries in ASEAN such as Indonesia, Thailand, Laos, Myanmar, Vietnam, Philippines, and Cambodia by providing the means to develop their economies.

**Table 3.16. Foreign Direct Investment Inflow of ASEAN Countries, 2005-2006**

Country	Foreign Direct Investment Inflow		Year-on-year Change	
	US\$ million	US\$ million	US\$ million	Percent
	2002	2006	2002-2006	2002-2006 average per year
Brunei	1,035	433.5	-602	-14.53%
Cambodia	145	483.2	338	58.31%
Indonesia	145	5,556.20	5,411	932.97%
Lao PDR	25	187.4	162	162.40%
Malaysia	3,203.00	6,059.70	2,857	22.30%
Myanmar	191	143	-48	-6.28%
Philippines	1,111.00	2,345.00	1,234	27.77%
Singapore	5,730.00	24,055.40	18,325	79.95%
Thailand	947	10,756.10	9,809	258.95%
Vietnam	1,200.00	2,360.00	1,160	24.17%
ASEAN	13,732.00	52,379.50	38,648	70.36%

Source: ASEAN Secretariat (2006), World Bank (2002)

**Table 3.17. Ease of Doing Business Rank**

Country	2008	2009
Brunei	83	88
Cambodia	150	135
Indonesia	127	129
Lao PDR	162	165
Malaysia	25	20
Philippines	136	140
Singapore	1	1
Thailand	19	13
Vietnam	97	92
China	90	83
Japan	12	12
Korea Rep.of	22	23

Source: International Finance Corporation, World Bank

Business community believes that the full-scale adoption of free trade agreement will guarantee security in trade and investment. With the implementation of a single rule of origin, the plus three nations can use ASEAN as a production base. For example, Japan established automotive

plant in Thailand, with spare parts for the automotives to be produced in Indonesia and Vietnam. The well streamlined cooperation framework such as embodied in ASEAN+3 facilitates investment opportunities. For plus three nations, ASEAN constitutes a region of strategic importance because of the opportunities it offers as a large regional market for selling products.

Information about ASEAN+3 has not generated significant advantage for business. Input from business is essential on the implementation of ASEAN+3. The implication of the relationship of ASEAN with each plus three country is still need to be researched. There is an opinion that the agreement between ASEAN and plus three is still limited, that ASEAN+6 (ASEAN, China, Japan, South Korea, Australia, New Zealand, and India) is considered more beneficial and more open. Integration between the plus three itself is not simple. However, since each plus three country has FTA with ASEAN and ASEAN+1, in the next five years ASEAN+3 could be relevant.

The ASEAN+3 cooperation agreement will assume even greater importance in the long run. Factors to support such a view include: (1) Market driven economic interaction arising from the large regional market with immense trade and investment prospects; (2) North America Free Trade Agreement (NAFTA) and European Union (EU) have been served as good examples for ASEAN+3 countries to form regional integration in the region ; (3) 1997 – 1998 Asia financial crisis served as a warning for ASEAN+3 countries about the importance of harnessing a regional financial cooperation arrangement which can help in preventing the recurrence of the crisis and promote stable economic growth (Young, 2008).

The cooperation would become more important considering currently global crisis (end of 2008). Starting from United States, the crisis has affected ASEAN+3 nations. In 2008 and 2009, East Asia is expected to decelerate to 8.0 percent growth and to 7.7 percent, from 9.6 percent in 2007. Weakening external demand and the impact of policy tightening has trimmed GDP growth in China to a still-rapid 10.4 percent in the first half of 2008. Southeast Asian growth is projected to slow from 6.5 percent in 2007 to 5.4 percent in 2008 and to stay around that rate next year (Asia Development Outlook, 2008). Selective stock exchange index of ASEAN+3 nations had plummeted more than 40 percent on average in 2 January – 31 December 2008 period (table 3.18). The exchange rate of selected ASEAN+3 nations had also dropped (table 3.19). Korea suffers the worst exchange rate drop. During 2 January – 31 December 2008, its exchange rate plummeted to more than 30 percent.

**Table 3.18. Selective Stock Exchange Index of APT Nations (2 January – 31 December 2008)**

No	Stock Exchange	2-Jan-08	31-Dec-08	Change (%)
1	SSEC Shanghai	5,272.81	1,832.91*	-65.24%
2	Nikkei225 Japan	14,691.41	8,859.56	-39.70%
3	KS11 Seoul	1,853.45	1,124.47*	-39.33%
4	STI Singapore	3,461.22	1,761.56	-49.11%
5	KLSE Kuala Lumpur	1,435.68	876.75	-38.93%
6	JKSE Jakarta	2,731.51	1,355.41*	-50.38%

Source: yahoofinance

**Table 3.19. Currency Exchange Rate per US\$ (2 January – 31 December 2008)**

No	Currency	2-Jan-08	31-Dec-08	Change (%)
1	Japan Yen	111.4	90.9008	18.40%
2	Chinese Yuan	7.31	6.8275	6.60%
3	Korean Won	937.21	1254.7052	-33.88%
4	Indonesia Rupiah	9,433.96	11235.9551	-19.10%
5	Thailand Baht	29.7	35.0005	-17.85%
6	Singapore Dollar	1.44	1.4355	0.31%
7	Malaysian Ringgit	3.31	3.46	-4.53%
8	Philippines Peso	41.12	47.4203	-15.32%

Source: yahoofinance

To deal with the crisis, on November, Japan cut interest rates and unveiled a second fiscal stimulus package (The Economist, 2008), while China announced a historic \$586 billion stimulus package aimed at encouraging growth and domestic consumption in ten areas of Chinese society ranging from infrastructure investment to environmental protection and disaster rebuilding (Chiu, 2008). China, Japan, South Korea and ASEAN nations also cope with the crisis by preparing \$80 million as stated in Chiang Mai Initiative October 2008. The negotiation of this agreement is going to be speed up considering the effect of the crisis.

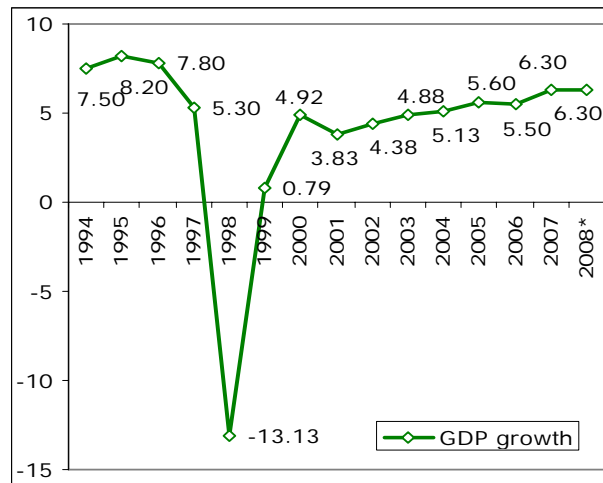
To that end, an analysis will be made in order to obtain a general picture of the economic development, trade, and FDI in three countries. The following section presents the overview:



### 3.2. Indonesia Overview

Indonesia is the largest economy in the ASEAN region with a population of 225 million, nominal GDP of US\$ 431,718 million, and GDP per capita of US\$ 1,919.6 (2007). Despite being the largest economy in the region, Indonesia's GDP per capita falls below the average for ASEAN region, and ranks fifth after Singapore, Brunei, Malaysia, and Thailand.

**Figure 3.2. Indonesia GDP Growth (%)**



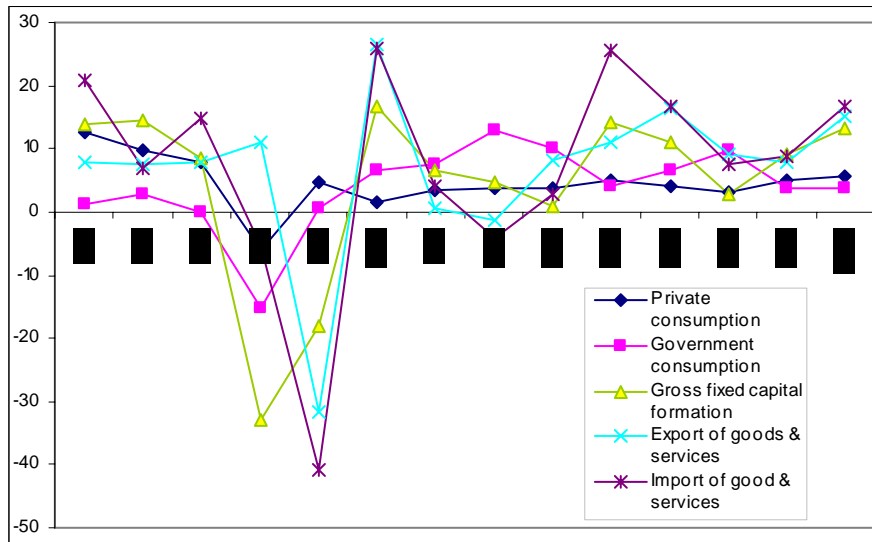
Source: Bank Indonesia, 2008

Notes: \* First Semester of 2008

Besides Thailand and South Korea, Indonesia was one of the countries that were hit hard by 1997-1998 financial and economic crises, a fact that is attributed to weak economic fundamentals. The fundamentals of the country's financial sector are very vulnerable due to weak supervision of the financial sector, large external deficit especially of short term maturity, slugging exports, a decline in investment quality, and excessive expansion of certain sectors (real estate and banking) (Adiningsih, et.al., 2008). The Asian crisis had very severe impact on the Indonesian economy. GDP growth in 1997 was 5.30 percent, lower than 1996 figure by 2.50 percent. The following year, 1998, posted negative growth of -13.13 percent. The economic recovery process in the aftermath of the economic crisis, albeit making some progress, has been overly sluggish, and by 2004 Indonesian economy was declared to have recovered from the economic crisis.

Since 2002 Indonesia economic growth, though still lower than figures registered prior to the economic crisis, has been picking up pace. In general, average economic growth after the economic crisis (2000-2007) was 5 percent per year, far lower than before the economic crisis (1989-1996) which reached 7.3 percent. This leads to the inference that aggregate demand continues to be weak. This has impacted on the economic structure with investment contributing about 20 percent of GDP, far below 30 percent figure prior to the economic crisis (Bank Indonesia, 2008).

**Figure 3.3. Indonesia GDP Growth by Expenditure (%)**



Source: Bank Indonesia, 2008

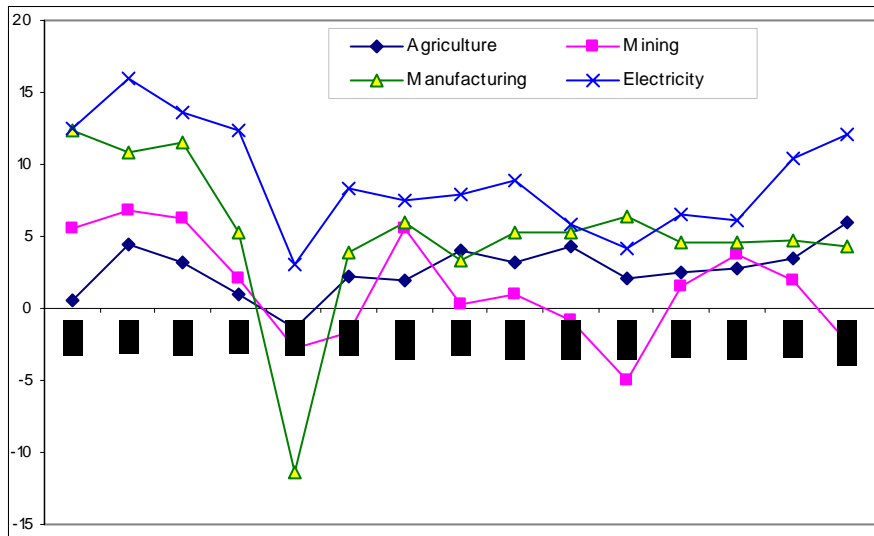
Notes: \* First Semester of 2008

Economic growth reached 6.3 percent in 2007, far above average growth rate for the last past 5 years of 5.5 percent. In fact it is the largest growth rate for the Indonesian economy since 1996. The main drivers of the economic growth were private consumption, investment and total exports. The growth of fixed capital formation rose to 9.2 percent in 2007, while fixed capital investment-to-GDP ratio reached 24.9 percent during the same period, an increase of 5.4 percent in span of four years. Investment growth has been driven by an increase in domestic credit, falling inflation, and interest rate. Low inflation and interest rate have promoted consumption expenditure, which has rose by 5 percent in 2007, becoming the largest contributor to the country's GDP growth. The contribution of net exports to GDP reflects export expansion which was largely caused by high commodity prices on the world market (Asian Development Outlook, 2008).

In the aftermath of the 1997-1998 economic crisis, non tradable sectors such as transportation and communications as well as electricity sector, gas, and water supply experienced rapid growth. Meanwhile, the manufacturing sector registered slow growth, which led to a drop in its contribution to the economy from 28.07 percent (2004) to 27.01 (2007).

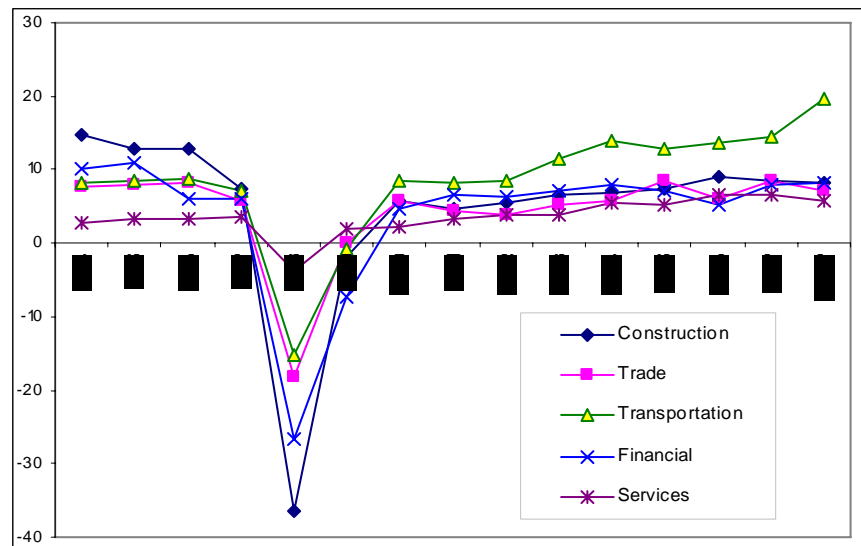
Electricity, gas, water supply, and agricultural sectors experienced growth in 2007, while mining and manufacturing plummeted. The growth of the agricultural sector was attributed to the rise in prices of food commodities in 2007. The mining sector experienced sluggish growth due to no new investors (see figure 3.4). On the contrary, the transportation and communication sector experienced growth. Meanwhile, the financial, construction, trade and services sectors tended to be stable (growth and contraction are modest) for the first half of 2000 - first half of 2008 period (see figure 3.5).

**Figure 3.4. Indonesia GDP Growth by Sector (%)**



Source: Bank Indonesia, 2008  
 Notes: \* First Semester of 2008

**Figure 3.5. Indonesia GDP Growth by Sector (%)**



Source: Bank Indonesia, 2008  
 Notes: \* First Semester of 2008

**Table 3.20. Percentage Distribution of Gross Domestic Product at Current Market Prices by Industrial Origin, 2004- 2007**

	<b>Country</b>	<b>2004 (%)</b>	<b>2005 (%)</b>	<b>2006 (%)</b>	<b>2007 (%)</b>
1	Agriculture, Livestock, Forestry and Fishery	14.34	13.13	12.97	13.83
2	Mining and Quarrying	8.94	11.14	10.97	11.14
3	Manufacturing Industry	28.07	27.41	27.54	27.01
4	Electricity, Gas & Water Supply	1.03	0.96	0.91	0.88
5	Construction	6.59	7.03	7.52	7.71
6	Trade, Hotel & Restaurants	16.05	15.56	15.02	14.93
7	Transport and Communication	6.2	6.51	6.94	6.7
8	Finance, Real Estate and Business Services	8.47	8.31	8.06	7.71
9	Services	10.32	9.96	10.07	10.09

Source: Biro Pusat Statistik, 2008

The year 2000, exports started showing signs of recovering from severe contraction suffered in 1999, caused largely by an increase in non oil exports and oil and gas revenues attributed to world high oil and gas prices. Improvement in non oil exports in 2000 stimulated growth of imports, especially raw materials and intermediate products. Manufactured products dominate export growth and contributed 67 percent on average during 2000-2005 periods. An upward trend in exports and imports is discernible during the period (Adiningsih, et.al. 2008).

Developments in Indonesian exports have a lot to do with free trade agreements, both bilateral and multilateral, the country entered into with other countries. The ASEAN+3 region is still the largest major target non oil export market for Indonesia, contributing 46.01 percent to the country's export market (2002), 49.14 percent (2007), and 120.13 percent growth of 2002 – 2007. If the value of non oil exports for 2005 – 2007 periods is analyzed by country of destination, it becomes apparent that, in 2007, Japan constitutes the largest market for Indonesian non oil exports, followed by United States, Singapore, China, and India, in that order (see table 3.22). The competitive advantage of Indonesia lays in its abundant natural resources, which include crude oil, natural gas, tin, copper, and gold. Mineral products; machinery and equipment; fat, oil, and waxes; textiles; and base metals are the major commodities of Indonesian non oil exports in 2007. Indonesia non oil exports for 2007 surpass its oil and gas exports, contributing 77.1 percent and 22.9 percent, respectively (Bank Indonesia, 2008).

**Table 3.21. Indonesia Non Oil Exports by Country of Destination, 2002 - 2007**

Country of Destination	Value (000 USD)		Share (%)		Growth (%)	
	2002	2007	2002	2007	2002 - 2007	Average
<b>ASEAN+3</b>	<b>20670127</b>	<b>45501283</b>	46.014	<b>49.138</b>	<b>120.131</b>	<b>24.026</b>
Brunei Darussalam	31095	42167	0.069	0.046	35.607	7.121
Malaysia	1871565	4674884	4.166	5.049	149.785	29.957
Philippines	765061	1851141	1.703	1.999	141.960	28.392
Singapore	4966331	8860024	11.056	9.568	78.402	15.680
Thailand	967666	2746450	2.154	2.966	183.822	36.764
Myanmar	49902	269533	0.111	0.291	440.125	88.025
Vietnam	462428	1346958	1.029	1.455	191.280	38.256
Cambodia	58933	120147	0.131	0.130	103.870	20.774
Laos	446	3711	0.001	0.004	732.063	146.413
Japan	6349305	13287158	14.134	14.349	109.269	21.854
South Korea	1847369	3792080	4.112	4.095	105.269	21.054
China	3300026	8507030	7.346	9.187	157.787	31.557
<b>World</b>	<b>44921163</b>	<b>92598084</b>	<b>100</b>	<b>100</b>	<b>106.135</b>	<b>21.227</b>

Source: Bank Indonesia, 2003-2008 (analyzed)

**Table 3.22. Top Ten Non Oil Export Markets of Indonesia**

2002				2007			
Rank	Country	Value	Share	Rank	Country	Value	Share
1	United States	7133904	15,881	1	Japan	13287158	14.349
2	Japan	6349305	14,134	2	United States	11110673	11.999
3	Singapore	4966331	11,056	3	Singapore	8860024	9.568
4	China	3300026	7,346	4	China	8507030	9.187
5	Malaysia	1871565	4,166	5	India	4869501	5.259
6	South Korea	1847369	4,112	6	Malaysia	4674884	5.049
7	Netherlands	1501596	3,343	7	South Korea	3792080	4.095
8	England	1369537	3,049	8	Netherlands	2814932	3.040
9	Germany	1219313	2,714	9	Thailand	2746450	2.966
10	India	1207398	2,688	10	Germany	2310817	2.496

Source: Bank Indonesia, 2003-2008 (analyzed)

Note: Value (000 USD); share (%)

**Table 3.23. Non Oil Exports Value of Indonesia by Group of Commodities, 2002 - 2007**

No	Sector	Value (000 USD)		Share (%)	
		2002	2007	2002	2007
1	Mineral products	4332603	13083851	9.645	14.047
2	Machinery & mechanical application, electrical equipments, part thereof	9480335	12325684	21.104	13.233
3	Fat, oil, and waxes	2506690	9873125	5.580	10.600
4	Textiles & textiles articles	6841948	9768100	15.231	10.487
5	Base metals and articles of base metal	2017859	9595780	4.492	10.302
6	Plastics, rubber & articles thereof	2587585	8111518	5.760	8.709
7	Products of chemical or allied industries	2295565	5405887	5.110	5.804
8	Pulp, paper & article thereof	2369534	4415212	5.275	4.740
9	Vehicles, aircraft, vessels and associated transport equipment	823467	3274275	1.833	3.515
10	Wood, article of wood, wickerwork and other plaiting materials	3014163	3142569	6.710	3.374

Source: BI, 2003-2008 (analyzed)

Indonesian imports decrease at the onset of the 1997-1998 economic crisis, as a direct impact of the depreciation of the exchange rate of the local currency, decline in domestic demand, and absence of new investment. Indonesia main non oil imports consist of machinery and electronic equipment, unprocessed metals and products, chemical industry products, and automotives and accessories (Bank Indonesia, 2008). The ASEAN+3 region is the main source of Indonesian non oil imports, contributing 37.17 percent (2002), 60.54 percent (2007), and 54.72 percent average growth per year of 2002 – 2007 (see table 3.24). China is the largest source of non oil import of Indonesian in 2007. Other countries that serve as major source of Indonesian imports are Singapore, Japan, United States, and Thailand. As is the case with exports, Indonesia non oil imports surpass oil and gas imports, contributing 77.58 percent and 22.42 percent, respectively (Bank Indonesia, 2008). The value of non oil imports for 2002 – 2007 periods is smaller than the value of non oil exports, which enabled Indonesia to record an international trade surplus in ASEAN+3 region. By group of commodity, machinery and mechanical application and electrical equipments is the largest commodity imported in 2007 (33.98 percent); followed by base metals (14.08), product of chemical (12.37), vehicles (8.82 percent), and textiles (5.92 percent) (see table 3.26).

Regarding free and open trade 2010/2020, Indonesia progressively reduces tariffs and enhances the transparency of the tariff regimes. Indonesia's tariff lines ranges between 0 – 10 percent in 2008 for 80.86 percent of all Indonesia's goods. Only about 2.01 percent of the total tariff lines in 2008 are higher than 35 percent. Indonesia also introduces Tariff Harmonizations Program for all products in order to simplify procedure of import export facilitation (APEC Individual Action Plan of Indonesia, 2008). There is hope, by doing so, Indonesia' foreign trade will be increasing.

**Table 3.24. Indonesia Non Oil Imports by Country of Origin, 2002 - 2007**

Country of Origin	Value (000 USD)		Share (%)		Growth (%)	
	2002	2007	2002	2007	2002 - 2007	Average
<b>ASEAN+3</b>	<b>11601450</b>	<b>43344054</b>	<b>37.173</b>	<b>60.537</b>	<b>273.609</b>	<b>54.722</b>
Brunei Darussalam	1600	3881	0.005	0.005	142.563	28.513
Malaysia	741369	2890523	2.375	4.037	289.890	57.978
Philippines	113736	530240	0.364	0.741	366.202	73.240
Singapore	1689500	10466587	5.413	14.618	519.508	103.902
Thailand	1068808	4463474	3.425	6.234	317.612	63.522
Myanmar	33323	32239	0.107	0.045	-3.253	-0.651
Vietnam	155016	654475	0.497	0.914	322.198	64.440
Cambodia	1091	2295	0.003	0.003	110.357	22.071
Laos	229	3291	0.001	0.005	1337.118	267.424
Japan	4205369	9335441	13.475	13.038	121.989	24.398
South Korea	1348740	3746561	4.322	5.233	177.782	35.556
China	2242669	11215047	7.186	15.664	400.076	80.015
<b>World</b>	<b>31328726</b>	<b>71599310</b>	<b>100</b>	<b>100</b>	<b>128.542</b>	<b>25.708</b>

Source: Bank Indonesia, 2008 (analyzed)

**Table 3.25. Top Ten Non Oil Import Markets of Indonesia**

2002				2007			
Rank	Country	Value	Share	Rank	Country	Value	Share
1	Japan	4205369	13.475	1	China	11215047	15.664
2	United States	2465444	7.900	2	Singapore	10466587	14.618
3	China	2242669	7.186	3	Japan	9335441	13.038
4	Singapore	1689500	5.413	4	United States	5445648	7.606
5	South Korea	1348740	4.322	5	Thailand	4463474	6.234
6	Germany	1201020	3.848	6	South Korea	3746561	5.233
7	Thailand	1068808	3.425	7	Malaysia	2890523	4.037
8	Taiwan	957616	3.068	8	Germany	2617445	3.656
9	Malaysia	741369	2.375	9	Taiwan	2161193	3.018
10	India	588314	1.885	10	India	1736993	2.426

Source: Bank Indonesia, 2003-2008 (analyzed)

Note: Value (000 USD); share (%)

**Table 3.26. Non Oil Imports Value of Indonesia by Group of Commodities, 2002 - 2007**

No	Sector	Value (000 USD)		Share (%)	
		2002	2007	2002	2007
1	Machinery & mechanical application, electrical equipments, part thereof	5725140	24332144	24.802	33.984
2	Base metals and articles of base metal	2542805	10083390	11.016	14.083
3	Products of chemical or allied industries	4293239	8853856	18.599	12.366
4	Vehicles, aircraft, vessels and associated transport equipment	1791311	6314792	7.760	8.820
5	Textiles & textiles articles	1616378	4241005	7.002	5.923
6	Plastics, rubber & articles thereof	1407339	4023070	6.097	5.619
7	Vegetable products	1821207	3498227	7.890	4.886
8	Prepared foodstuff, beverages, spirits, and tobacco	1168756	2728458	5.063	3.811
9	Pulp, paper & article thereof	969321	2048436	4.199	2.861
10	Live animals, animal products	383426	1404270	1.661	1.961

Source: Bank Indonesia, 2003-2008 (analyzed)

Although ASEAN+3 market is important for Indonesia, exporters and importers (businesses) in Indonesia have yet to take full advantage of ASEAN+3 cooperation. They consider one country market for instance Thailand, Singapore, or Malaysia, is offers more benefits than a regional one. Government of Indonesia is still in the process of contemplating the implications of ASEAN cooperation with each of plus-three countries. Thus, so far the development of ASEAN+3 framework has not yet to affect businesses directly. The difficulty businessmen face is then stipulation on rule of origin which differs from one country to another.

International bilateral economic cooperation has shown significant growth in Indonesia, a development that is attributable to high and strong commitment. Benefits expected from bilateral relations are difficult to hammer out through regional negotiations. However, Indonesia as one of the founding fathers of ASEAN seems to be keen to conduct multilateral cooperation through ASEAN regional framework.

The difficulty businesses face as far as ASEAN+3 cooperation is concerned, is the fact that there is still uncertainty as to the future direction of the arrangement itself. ASEAN+3 economic cooperation has yet to be formulated because there are still another ASEAN+3 framework involving ASEAN (India, Australia, New Zealand), with the result that what ASEAN+3 can do is to facilitate whatever FTA in place, which are embodied in each ASEAN+1 arrangement. Essentially, there is need for each country involved in plus three to help ASEAN in implementing bilateral FTA successfully for instance by gradually conducting discussions of single rule of origin for ASEAN+3. The adoption of FTA in a serious manner will be benefit to business because such FTA will provide security to the business world in conducting their activities. The existence of single rule of origin can be utilized by business community to take advantage of ASEAN by making it center of production. ASEAN is considered to be of strategic importance given its large regional market.



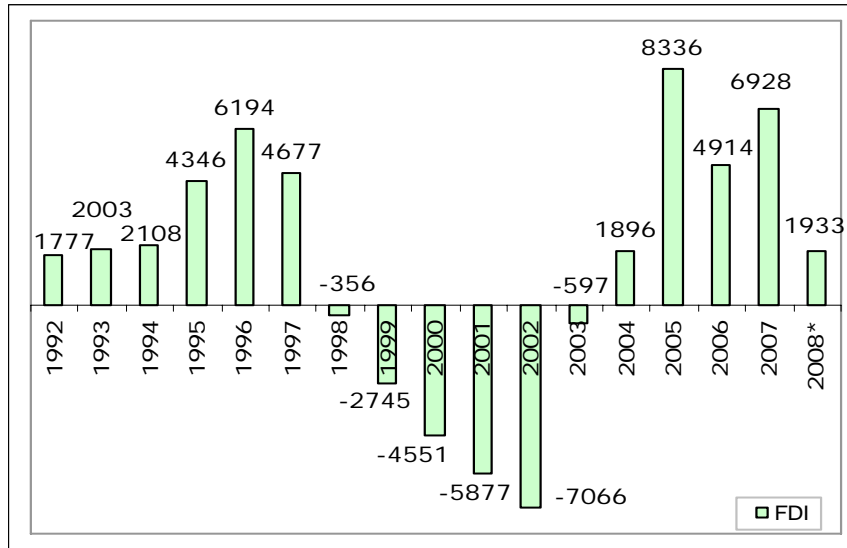
The businessman/woman considers the language used by negotiator in the process of conducting FTA negotiations to lack of what a business needs. If something that is negotiated has the opportunity and liability for business, business is the driver, not government, in the development of international trade. ASEAN+3 would not be the driver, rather the facilitator. ASEAN+3 has huge potential in the long term. However, in the short term, Indonesia is still pre occupied by its domestic activities, reducing its concentration on regional issues. Nonetheless, it must be said that in the short term, preparations are still underway. That said, the little relevancy of ASEAN+3 as far as business goes is discernible from the reality that ASEAN+3 concept as yet is not the driver of business activities, rather by the head office policies. Prior to the coming into being of ASEAN+3, business among countries that are members of ASEAN+3 was already rife, which in part fostered economic integration. The goal of ASEAN+3 is to formulate the existing economic relations. In fact, without ASEAN+3, Thailand companies had already established businesses in South Korea, and the converse is true, which had stimulated mutual interdependent benefits between the two countries. Thus, companies do not have to wait for the coming into being of ASEAN+3, before they embarked on expanding their businesses in plus 3 countries. Perhaps what is needed is an arrangement that facilitates such relations which will enable businesses to run smoothly. The state of preparedness of members of the business community for the cooperation very depends on the state of preparedness of their respective governments. ASEAN+3 is predicted to become more relevant in the coming 5 years through the provision of incentives which will facilitate business. This is the role of ASEAN+3. Exports to many countries required the drafting and signing of many MoUs. ASEAN+3 will become an umbrella that will be used to facilitate the making of MoUs, recently. As regards electronic sector, ASEAN+3 has the potential for more prospects than ASEAN+6.

In the coming two years, ASEAN will be preoccupied with internal reorganization as AFTA will become fully implemented in 2010. Meanwhile, ASEAN and plus three nations are asymmetric because ASEAN derives more benefits than plus three members nations in the arrangement. In light of that, the drive for the implementation of ASEAN+3 cooperation will come largely from the three countries that constitute plus three in the arrangement.

Regional economic integration will only be realized if there is already a single market and customs union covering all ASEAN members. However, the implementation of the two issues above is still far from done due to various hurdles. As regards the existence of a customs union, national tariffs still constitute a very sensitive issue. Customs also seem to be synonymous with protecting national sovereignty. The two issues are still sensitive. Hopefully, with time, hurdles will be overcome to hammer out a solution to the two outstanding issues.

Investment is expected to one of the drivers of Indonesia's economic recovery. However, given low domestic investment, FDI plays an important role. This is because FDI contributes to not only an increase in production, but also enhances the capacity of the economy to generate much need employment, thereby fostering economic growth and the reduction of high unemployment. Since FDI was allowed into the country in 1967, it has made significant contribution to the Indonesian economy over the decades. Moreover, the large number of FDI outflows during the 1997 crisis, has gradually restored by increasing inflows since 2004, which have averaged US\$5 billion per annum (2005 – first half of 2008).

**Figure 3.6. FDI in Indonesia**

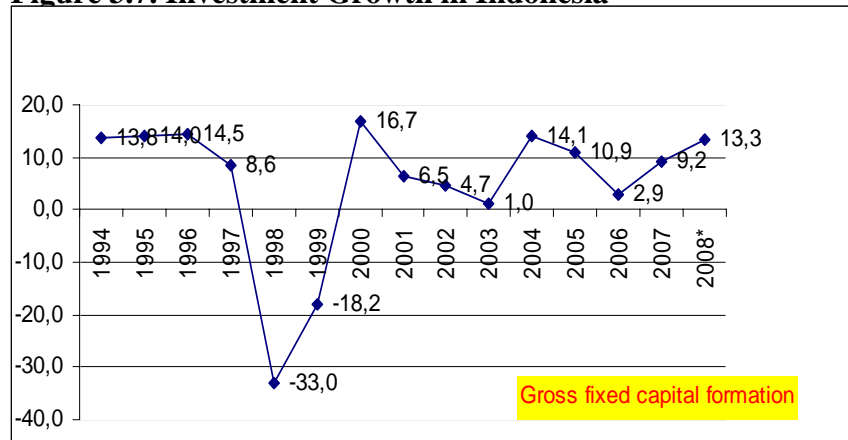


Source: Bank Indonesia, 2008

Notes: \* First semester of 2008

Prior to the economic crisis, Indonesia's high economic growth was attributed to high investment growth, consumption, and exports. Investment growth reached 14% and 14.5% in 1995 and 1996, while consumption growth was 11.1% and 8.9%, and export growth was 7.7% and 7.6%, during the same period. One of the indicators of developments in investment is growth in gross fixed capital formation. During 1994-1996 periods, gross fixed capital formation experienced an average of 14 per cent growth per year. However, during the crisis, the growth in gross capital formation plummeted to 8.57% in 1997, and moved into negative territory during 1998-1999 period with -33.01% and -18.20%, respectively. The aftermath of the crisis, since the year 2000, gross fixed capital formation in Indonesia has gradually experienced growth, albeit with wide variation. In 2000 and 2004, growth of gross domestic fixed capital formation was 16.74% and 14.09%, respectively. However, during 2000-2004 periods, in 2003, to be exact, gross domestic fixed capital formation grew by a mere 1 percent. In 2005 and 2006 the growth in gross domestic capital formation decreased to 10.9% and 2.90%, however rebounded in 2007 (9.2%), and rose in then first half of 2008 (13.3%) (Adiningsih, et.al. 2008).

**Figure 3.7. Investment Growth in Indonesia**



Source: Bank Indonesia, 2008

Notes: \* First semester of 2008

**Table 3.27. The Ranking of Realized FDI in Indonesia by 10 Major Contributor (October 2007)**

No.	Country	Number of Projects	Value of projects ( US\$)	%
1.	Singapore	100	3.453.6	38.0
2.	United Kingdom	59	1.669.2	18.4
3.	Japan	96	562.1	6.2
4.	Taiwan	29	466.0	5.1
5.	South Korea	147	270.0	3.0
6.	Australia	21	189.9	2.1
7.	Brazil	2	165.1	1.8
8.	Mauritius	5	161.8	1.8
9.	Malaysia	47	157.5	1.7
10.	The Netherlands	27	140.8	1.6

Source: National Investment Coordination Board

**Table 3.28. Ranking of Direct Investment Realization by Sector (January 1 - September 30, 2007)**

No	Sector	Project	Value (million US \$)
1	Chemical and Pharmaceutical Industry	26	1,563.70
2	Food Industry	45	572.1
3	Paper and Printing Industry	10	428.5
4	Motor Vehicles & Other Transport Equip.Ind.	29	336.9
5	Metal, Machinery and Electronic Industry	80	265.3
6	Wood Industry	13	125.5
7	Rubber and Plastic Industry	26	116.5
8	Textile Industry	53	114
9	Leather Goods and Footwear Industry	7	33.2
10	Other Industry	21	29.5

Source: National Investment Coordination Board

In order to attract foreign investment, Indonesia has implemented various strategies, especially in the area of harnessing economic cooperation, both bilateral and multilateral, in fields of investment and trade. The multilateral cooperation arrangements which have been intensively pursued are the ASEAN+1 and ASEAN+3 cooperation framework. Indonesia is a recipient of FDI from ASEAN+3 members. Some of the major contributors of Indonesia FDI as by October 2007 which include Singapore, Japan, South Korea and Malaysia are ASEAN+3 members. Over the long term, ASEAN+3 cooperation arrangement will assume even greater importance as it a major source of foreign investment to Indonesia. Though some circles advance the view that bilateral arrangements are more binding than multilateral ones, with the ever increasing integration of ASEAN region, ASEAN+3 will make the conduct of trade and investment easier.

FDI is one of the factors underlying Indonesia's economic growth. In light of that, the government of Indonesia has enacted a number of laws and regulations related to investments have been in order to attract more foreign investors. The newest ones are:

1. Act No. 25/2007 concerning foreign direct investment which:
  - a. applies equal treatment to domestic direct investment and foreign direct investment
  - b. guarantees that no nationalization or confiscation of investment
  - c. gives investors the right to transfer and remit foreign currency
2. Government Regulation No. 7/2007 and Government Regulation No 31/2007 concerning exemption of value added tax on imports/relinquishing certain goods, that are classified as strategic:
  - a. goods that constitute machinery and factory equipment, both fixed or installed or not mobile/loose, with the exception of spare parts;
  - b. livestock, poultry and fishery feedstuff;
  - c. agricultural produce/primary products;
  - d. seeds/seedlings in agriculture, estates/plantations, forestry, livestock, conservancies and fisheries;
  - e. clean water canned through pipes by clean water company;
  - f. electricity, with the exception of for homes that use higher than 600 watts
3. Presidential Regulation No. 1/2007 concerning income tax on investment in certain areas in certain regions, which
  - a. reduces income tax by 30 percent of the total value of investment made
  - b. offers compensation for a longer period which does not exceed 10 years
  - c. imposition of 10 (ten) percent in income tax on dividends paid to foreign taxable entities, or lower tax rate in accordance with prevailing agreement on double tax incidence avoidable
  - d. accelerates depreciation and amortization

Furthermore, in order to improve investment climate in years to come, Indonesia continues to undertake measures as follows (APEC Individual Action Plan of Indonesia, 2008):

1. Investment approval process will be completed by the Indonesian Board of Investment in Jakarta within 10 working days
2. Simplification of Investment requirements .
3. Most sectors are opened for FDI.
4. No minimum requirement on the investment value.

5. 100 percent foreign equity participation is allowed for a number of sectors.
6. FDI companies are free to choose their locations in accordance with local governments' spatial plan.

Considering Indonesia's low competitiveness investment level, ASEAN+3 cooperation arrangement is expected generate benefits for the country. According to data released by International Finance Cooperation (IFC), Indonesia ranks 129 out of 181 countries surveyed with respect to the ease of doing business (ranking for 2009). Worse still, investors consider Indonesia that is not good to start a business, a fact that is evidenced by the 171 position the country gets on the criterion of starting a business. Foreign investor reluctance invests in Indonesia is to a large extent attributed to inconsistencies in the implementation of laws and regulations, employing workers, paying taxes, and enforcing contracts. Nonetheless, Indonesia believed to be an important investment destination in the future. The large market that Indonesia has is a powerful attractive force for foreign investors. However, rampant inconsistency in implementing regulations continues to be a major drawback.

**Table 3.29. Doing Business in Indonesia**

Ease of ...	2006 rank	2007 rank	2008 rank	2009 rank
<b>Doing Business</b>	<b>131</b>	<b>135</b>	<b>123</b>	<b>129</b>
Starting a business	161	163	168	171
Dealing with licenses	129	117	99	80
Employing workers	141	154	153	157
Registering property	118	123	121	107
Getting credit	76	62	68	109
Protecting investors	58	49	61	53
Paying taxes	129	141	110	116
Trading across borders	55	61	41	37
Enforcing contracts	144	142	141	140
Closing a business	126	137	136	139

Source: IFC, World Bank

Notes: 2006 & 2007: from 175 economies. 2008: from 178 economies. 2009: from 181 economies

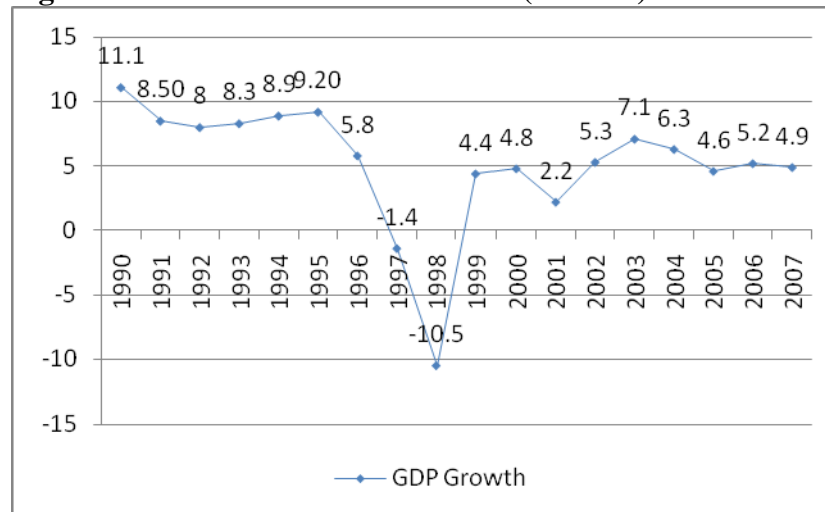
In general, each ASEAN country has bilateral cooperation arrangements with the plus three ASEAN countries. The same can be said about Indonesia. IJEPA (The Indonesia-Japan Economic Partnership Agreement) is one good example. IJEPA constitutes an agreement on trade and investment between Japan and Indonesia. It is the hope that eventually ASEAN+3 cooperation arrangement will become the umbrella framework covering all existing bilateral agreement linking members' countries. Nonetheless, as far as Indonesia in concerned, as long as it has not ratified ASEAN+3 cooperation arrangement, trade and investment agreements will continue to follow existing bilateral and multilateral framework.

### 3.3. Thailand Overview

Thailand has the second largest economy after Indonesia in ASEAN with a population of 66 million people and total nominal GDP US\$ 245,702 billions (2007). However, Thailand enjoys higher economic welfare than Indonesia a fact attested by a higher GDP per capita which stands at US\$ 3,740 (2007). In GDP per capita terms, Thailand is ranked fourth in ASEAN after Singapore, Brunei, and Malaysia. Thailand serves as an anchor economy for neighboring developing countries (Laos, Myanmar, Cambodia).

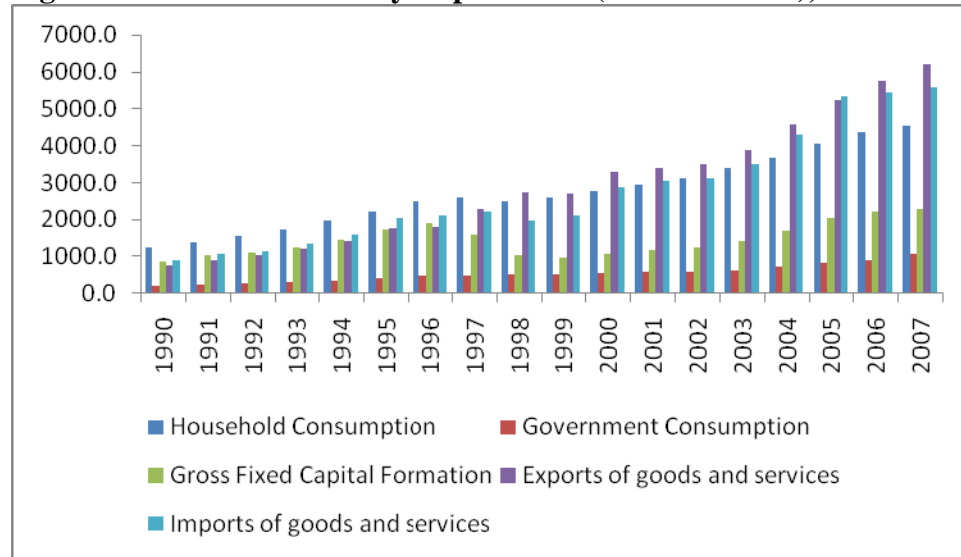
The 1997-1998 financial and economic crises that hit East Asia originated in Thailand. It was initially loan repayment crisis, which however sparked off fears of loan defaults, which induced short term foreign creditors to withdraw their funds financial institutions in Thailand. The 1997 - 1998 crisis severely impacted Thailand. The country that had experienced GDP growth rate of 8.5 percent for 1990 – 1996 period, suffered contraction of -1.4 percent in 1997 and -10.5 percent in 1998. However, Thailand was among the first countries to recover from the economic crisis. In 1999, the country's GDP registered growth once again. During 2000 – 2006 periods, Thailand's GDP grew by about 5.7 percent per year. However, GDP growth dropped once again in 2007 (4.9%), almost one percent lower than the average for the past 5 years. The main cause of the decrease is the political uncertainty affecting the country, which has reduced domestic demand.

**Figure 3.8. GDP Growth of Thailand (Percent)**



Source: Bank of Thailand, 2008

**Figure 3.9. Thailand GDP by Expenditure (nominal value), 1990 - 2007**



Source: IFS, IMF

Thailand GDP growth is mainly attributed to exports of goods and services with 49.78 percent growth in period 2002 – 2007 and 9.96 percent average growth in a year. It is the growth in exports of goods and services that enabled the country to achieve economic recovery from the 1997-1998 economic crises. Household consumption is also major contributors to GDP. Upon recovering from the economic crisis, people purchasing power increased a fact that was largely due to the depreciating of Thailand Baht. This induced an increase in domestic demand, and a reduction of imports. Government consumption shows a stable trend for 2002 – 2007 periods, while gross fixed capital formation after the economic crisis has grown 54.09 percent during 2002 – 2007 and 10.82 percent growth average in a year.

**Table 3.30. GDP by Expenditure of Thailand (real value), 2002 - 2007**

No	Expenditure	Value (billion Baht)		Share (%)		Growth (%)	
		2002	2007	2002	2007	2002-2007	Average
<b>1</b>	<b>Consumption expenditure</b>	3618.84	4600.98	68.32	66.24	27.14	5.43
	- Household	3031.98	3723.38	57.24	53.61	22.80	4.56
	- Government	586.86	877.60	11.08	12.64	49.54	9.91
<b>2</b>	<b>Gross fixed capital formation</b>	1208.13	1861.65	22.81	26.80	54.09	10.82
<b>3</b>	<b>Changes in inventories</b>	52.57	3.12	0.99	0.04	-94.07	-18.81
<b>4</b>	<b>Export of goods and services</b>	3400.29	5093.04	64.19	73.33	49.78	9.96
<b>5</b>	<b>Import of goods and services</b>	3045.88	4562.35	57.50	65.69	49.79	9.96
<b>6</b>	<b>GDP</b>	5296.83	6945.59	100	100	31.13	6.23

Source: IFS, IMF

The United States of America is Thailand's number one export destination, which is followed by Japan. However, the ASEAN+3 region is Thailand's export destination, contributing 41.8 percent (2002), 43.33 percent (2007), and 26.29 percent growth of 2002 – 2007 for its exports (see table 3.31). With economic recovery gathering momentum, Thailand's neighbors have also contributed to the country's export growth. This is because economic recovery in the wake of the economic crisis was largely as a result of an increase in exports to ASEAN+3 regions and United States. Japan and China also become important destinations for Thailand's exports, contributing 11.8 percent and 9.7 percent in 2007 (table 3.32).

**Table 3.31. Thailand Exports Classified by Country, 2002 – 2007**

Country of Destination	Value (million USD)		Share (%)		Growth (%)	
	2002	2007	2002	2007	2002 - 2007	Average
<b>ASEAN+3</b>	<b>28472.06</b>	<b>65900.06</b>	<b>41.775</b>	<b>43.33</b>	<b>131.455</b>	26.291
Brunei						
Darussalam	39.89	90.94	0.059	0.06	127.977	25.595
Malaysia	2835.28	7788.64	4.160	5.12	174.704	34.941
Philippines	1275.12	2897.97	1.871	1.91	127.270	25.454
Singapore	5552.72	9535.77	8.147	6.27	71.732	14.346
Indonesia	1680.18	4751.66	2.465	3.12	182.807	36.561
Myanmar	323.75	957.87	0.475	0.63	195.867	39.173
Vietnam	947.98	3799.84	1.391	2.50	300.835	60.167
Cambodia	516.27	1355.4	0.757	0.89	162.537	32.507
Laos	397.65	1311.08	0.583	0.86	229.707	45.941
Japan	9949.98	17977.22	14.599	11.82	80.676	16.135
South Korea	1398.21	611.72	2.051	0.40	-56.250	-11.250
China	3555.03	14821.95	5.216	9.75	316.929	63.386
<b>World</b>	<b>68156.32</b>	<b>152097.7</b>	<b>100</b>	<b>100</b>	<b>123.160</b>	<b>24.632</b>

Source: Bank of Thailand, 2008

High-tech products are number one product exported in 2002 and 2007, followed by resource-based products, labor intensive products, and agriculture product. High-tech products constitute 58.87 percent (2002) and 64.55 percent (2007) of total product exported. Using a blend of investment incentives and tariffs, Thailand became Southeast Asia's largest vehicle producer, 15th in the world. Its industry employs 300,000 and has doubled production since 2001, with exports rising 40 percent in 2004. Central to that success has been the one-ton pickup truck. Its factories also export all over the world, from Britain and Africa to the Middle East and Australia. Thailand offered the Japanese automotive companies not only cheap labor and raw materials, but also a crossroads location with a relatively stable government and good roads and ports. While Ford, General Motors, Daimler Chrysler and BMW have made big Thai investments in the last decade, Japan's automakers have made Thailand their global base for pickup production. Isuzu, which makes one-ton pickups for G.M., Mazda which manufactures for Ford and Toyota have all relocated pickup production to Thailand. In 2005, Mitsubishi Motors exports its Thai pickups to



139 countries, accounting for 21 percent of Thailand's auto exports. Honda Motors even exports pickups from Thailand to Japan (Global Technology Forum, 2005).

**Table 3.32. Top Ten Export Markets of Thailand, 2002 - 2007**

2002				2007			
Rank	Country of Destination	Value	Share	Rank	Country of Destination	Value	Share
1	United States	13506,5	19,831	1	United States	19372,1	12,614
2	Japan	9946,8	14,604	2	Japan	18133,2	11,808
3	Singapore	5649,4	8,295	3	China	14872,5	9,684
4	Hong Kong SAR	3684,2	5,409	4	Singapore	9580,3	6,238
5	China	3554,4	5,219	5	Hong Kong SAR	8702,2	5,667
6	Malaysia	2833,1	4,160	6	Malaysia	7833,1	5,101
7	United Kingdom	2390,7	3,510	7	Australia	5747,5	3,743
8	Other Asia n.e.s.	1970,5	2,893	8	Indonesia	4858,7	3,164
9	Netherlands	1891,3	2,777	9	Vietnam	3959,9	2,579
10	Indonesia	1678,4	2,464	10	Netherlands	3800,2	2,475

Source: UNCOMTRADE, 2008

Note: Value (million US\$), share (%)

**Table 3.33. Exports of Thailand Classified by Product Group**

No	Product Group	Value (millions US\$)		Share (%)	
		2002	2007	2002	2007
1	High-tech products	40125,11	98175,87	58,87	64,55
2	Resource-based products	7953,98	15596,19	11,67	10,25
3	Labor intensive products	8288,5	13148,93	12,16	8,65
4	Agriculture	5190,34	11852,48	7,62	7,79
5	Other manufactured products	2057,2	7457,29	3,02	4,90

Source: Bank of Thailand, 2008

In order to accelerate the performance of its exports sector, Thailand became a member of the World Trade Organization (WTO) Negotiations on The Cairns Group of Agricultural Exporters ([www.cairnsgroup.org](http://www.cairnsgroup.org)). The country also continues to promote bilateral Free Trade Agreements (FTA). Given the fact that Japan, China, and the ASEAN region constitute the destination market for Thailand exports, ASEAN+3 cooperation should enable the country to increase its international trade as well as intensify its bilateral agreements. Outside ASEAN+3, Thailand has harnessed bilateral cooperation arrangements with APT member nations. For instance, Thailand has signed a bilateral agreement with China and Japan. The China-Thailand FTA was started in 2003, but is still limited to agricultural products. Serious negotiations for a more comprehensive FTA will get underway in 2010. Thailand carried out free trade negotiations with Japan free trade in February 2004, reaching an agreement in principle in September 2005 ([www.bilaterals.org](http://www.bilaterals.org)). Like Indonesia, Thailand still conducts its international trade on the basis of existing bilateral and multilateral agreements because ASEAN+3 has yet to be ratified.

**Table 3.34. Thailand Imports Classified by Country, 2002 – 2007**

Country of Origin	Value (million USD)		Share (%)		Growth (%)	
	2002	2007	2002	2007	2002-2007	Average
<b>ASEAN+3</b>	<b>33029.59</b>	<b>74963.09</b>	<b>51.414</b>	<b>53.56</b>	<b>126.957</b>	<b>25.391</b>
Brunei Darussalam	450.10	111.07	0.701	0.08	-75.323	-15.065
Malaysia	3618.68	8617.48	5.633	6.16	138.139	27.628
Philippines	1070.91	2140.11	1.667	1.53	99.840	19.968
Singapore	2886.24	6280.99	4.493	4.49	117.618	23.524
Indonesia	1547.64	3986.12	2.409	2.85	157.561	31.512
Myanmar	902.51	2301.51	1.405	1.64	155.012	31.002
Vietnam	238.58	1111.96	0.371	0.79	366.074	73.215
Cambodia	11.11	48.75	0.017	0.03	338.794	67.759
Laos	92.91	470.06	0.145	0.34	405.930	81.186
Japan	14804.03	28382.91	23.044	20.28	91.724	18.345
South Korea	2509.18	5286.46	3.906	3.78	110.685	22.137
China	4897.7	16225.67	7.624	11.59	231.292	46.258
<b>World</b>	<b>64242</b>	<b>139965.7</b>	<b>100</b>	<b>100</b>	<b>117.873</b>	<b>23.575</b>

Source: Bank of Thailand, 2008

**Table 3.35. Top Ten Imports Origin of Thailand, 2002 - 2007**

2002				2007			
Rank	Country of Origin	Value	Share	Rank	Country	Value	Share
1	Japan	14889.2	23.032	1	Japan	30032.9	20.891
2	United States	6202.7	9.595	2	China	16979.9	11.811
3	China	4932.1	7.629	3	United States	9610.9	6.685
4	Malaysia	3642.9	5.635	4	Malaysia	8679.8	6.038
5	Other Asia n.e.s	2906.3	4.496	5	Uni Arab Emirates	6842.6	4.760
6	Singapore	2904.7	4.493	6	Singapore	6295	4.379
7	South Korea	2526.8	3.909	7	Asia n.e.s	5855.9	4.073
8	Germany	2455.8	3.799	8	South Korea	5558.7	3.867
9	Indonesia	1558.5	2.411	9	Saudi Arabia	4574.8	3.182
10	Australia	1502.6	2.324	10	Indonesia	3986	2.773

Source: UNCOMTRADE

Note: Value (million US\$), share (%)

**Table 3.36. Imports of Thailand Classified by Economic Classification, 2002 - 2007**

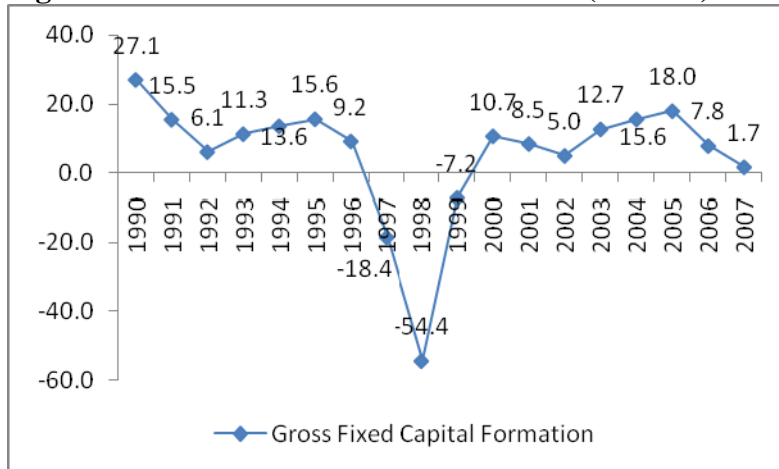
No	Product Group	Value (millions US\$)		Share (%)	
		2002	2007	2002	2007
1	Fuel and Lubricant	7434,59	25725,19	11,573	18,380
2	Mineral and Metal Products	7405,79	19825,98	11,528	14,165
3	Electronic Parts	8637,9	15851,58	13,446	11,325
4	Chemicals and Plastic Materials	6209,12	14038,03	9,665	10,030
5	Electrical Machinery and Parts	5704,44	12630,86	8,880	9,024
6	Industrial Machinery, Tools, and Parts	6463,77	9540,07	10,062	6,816
7	Non-Durable Goods	3477,9	6207,88	5,414	4,435
8	Durable Goods	2259,25	4778	3,517	3,414
9	Computer Parts	1840,34	4421,14	2,865	3,159
10	Vehicles and Parts	2234,72	4377,61	3,479	3,128

Source: Bank of Thailand, 2008

Japan, China, and United States are Thailand's major import sources, contributing almost half of total Thailand export destination in 2002 and 2007. Based on region, the ASEAN+3 is Thailand's number one import origin with share 51.41 percent (2002), 53.56 percent (2007), and 25.39 percent average growth per year of 2002 – 2007 (see table 3.34). Based on product group, fuel and lubricant; mineral and metal products; electronic parts; chemicals and plastic materials; electrical machinery and parts are top five products imported by Thailand in 2007.

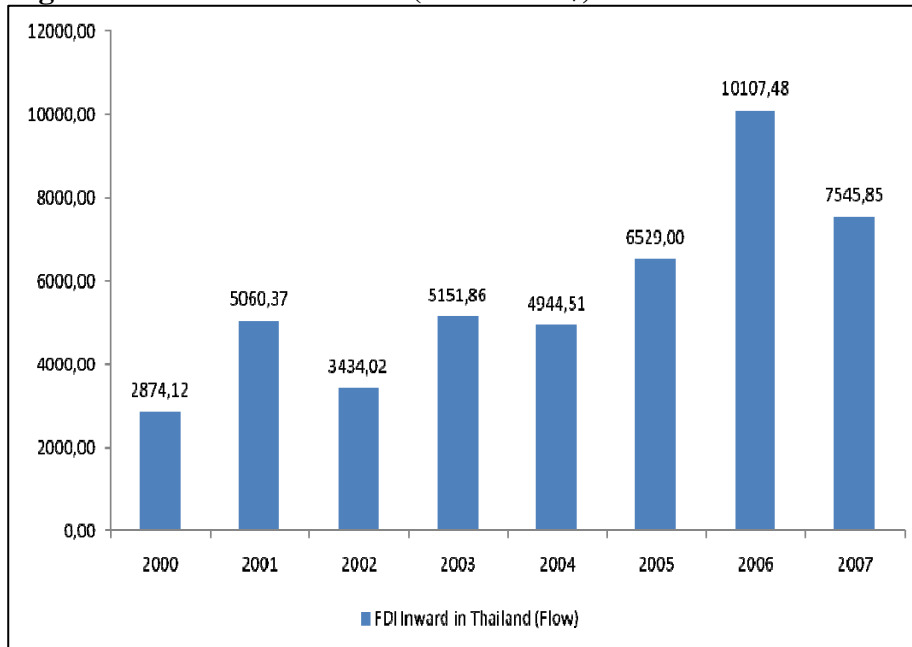
FDI inflows into Thailand increased substantially in the second half of the 1980s after the Plaza Accord, which resulted in currency appreciation in Japan, Taiwan, Hong Kong, and Korea. During 1990s, there were substantial FDI flows into large-scale basic industries such as steel and petrochemical, as well as infrastructure projects. The manufacturing sector has consistently been a large recipient of FDI with an increasing share in net FDI flows. Within the manufacturing sector, the electronics industry relatively consistently attracts large volumes of FDI, amounting to 17.6 percent in 2001. For the period 1998-2000, however, electronics was overtaken by machinery and transport equipment, deriving mainly from the automotive industry, as many Japanese automotive parent companies injected capital to assist their subsidiaries and suppliers in Thailand following the crisis. The chemical industry surged in 2000 as a number of local producers was restructured, accounting for 13.6 percent of FDI, before completely dropping off in 2001 (IMF, 2002).

**Figure 3.10. Thailand Investment Growth (Percent)**



Source: IFS, IMF

**Figure 3.11. FDI in Thailand (million US\$)**



Source: UNCTAD

**Table 3.37. FDI of Thailand Classified by Country**

No	Country	Value (millions Baht)		Share (%)	
		1996	2007	1996	2007
1	Japan	13250,3	108266,08	23,06	30,68
2	Singapore	6968,7	87142,2	12,13	24,69
3	Netherlands	-1024,6	26335,59	-1,78	7,46
4	United States	10870	20383,18	18,91	5,78
5	Hong Kong	5443,9	13578,2	9,47	3,85
6	United Kingdom	1432,5	10510,98	2,49	2,98
7	Switzerland	1315,9	5941,07	2,29	1,68
8	Sweden	245,4	4001,55	0,43	1,13
9	France	760,5	3803,73	1,32	1,08
10	Germany	1063,9	3120,11	1,85	0,88

Source: Bank of Thailand, 2008

**Table 3.38. FDI of Thailand Classified by Sector**

No	Product Group	Value (millions US\$)		Share (%)	
		2002	2007	2002	2007
1	Industry	1844,53	3651,17	54,08	35,80
2	Financial Institutions	67,34	1882,23	1,97	18,45
3	Real Estate	67,58	1207,13	1,98	11,84
4	Services	740,64	1055,78	21,71	10,35
5	Mining and Quarrying	146,61	808,43	4,30	7,93

Source: Bank of Thailand, 2008

The drastic decrease in investment which occurred during 1997 – 1999 period was followed by improvement in investment performance since 2000. However, investment growth decreased once again in 2006 and 2007 due to the fact that on 18 December 2006, Thailand Central Bank implemented unremunerated requirement (URR) policy on short-term capital inflows. The regulation policy was aimed at regulating short-term capital inflows, prevent speculation on the Thai Baht, and avert excessive volatility and appreciation that is not commensurate with economic fundamentals of Thailand at the time. The policy induced an improvement in the stability of the Thai Baht exchange rate, realigning the currency to be linear with currencies in the region. Nonetheless, the policy also has a negative impact on foreign investment. Investment growth grew by a mere 1.7 percent in 2007 (Bank of Thailand, 2007).

To attract foreign investors, the Board of Investment Thailand offers two kinds of incentives to promoted FDI, regardless of location (BOI, 2008):

1. Tax-based incentives include exemption or reduction of import duties on machinery and raw materials, and corporate income tax exemptions.
2. Non-tax incentives include permission to bring in foreign workers, own land and take or remit foreign currency abroad.

Sources of FDI in Thailand have generally been quite diversified, including Japan, the United States, Hong Kong, United Kingdom, and Switzerland as shown in table 3.37. Japan had been the largest source of FDI since the late 1970s with the exception of being overtaken by the US in

1999 and by Singapore in 2001(IMF, 2002). Of all ASEAN+3 nations, Japan is the largest source of investment for Thailand, with China coming second, and ASEAN region taking the third position. Indeed Japan has invested substantially in Thailand's automotive sector. Chinese manufacturing sector also becomes a dominant force as a source of foreign investment in Thailand. Based on sectors, manufacture industry is the number one sector of FDI in Thailand with share 54.08 percent (2002) and 35.8 percent (2007). Automotive industry from Japan is the main contributor for the industry sector.

IFC doing business survey results supports to the huge foreign investment levels in Thailand as it accords the country 20 largest for 2007 – 2009 periods, far higher than Indonesia which is ranked 129 – 135 during the same period (see table 3.39).

**Table 3.39. Foreign Investment From ASEAN+3 Countries in Thailand (millions Baht)**

<b>Country</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Japan	175313	110476	149071
Korea	2332	5230	11568
ASEAN	36295	41169	44704
-Singapore	14129	28921	34126
-Malaysia	20506	13468	5542
-Indonesia	343	482	4486
-Philippines	209	67	204
-Myanmar	120	-	576
China	121959	12306	17175
Total	498860	307668	502432

Source: Board of Investment Thailand

**Table 3.40. Doing Business in Thailand**

<b>Ease of ...</b>	<b>2007 rank</b>	<b>2008 rank</b>	<b>2009 rank</b>
<b>Doing Business</b>	<b>18</b>	<b>15</b>	<b>13</b>
Starting a business	28	36	44
Dealing with licenses	3	12	12
Employing workers	46	49	56
Registering property	18	20	5
Getting credit	33	36	68
Protecting investors	33	33	11
Paying taxes	57	89	82
Trading across borders	103	50	10
Enforcing contracts	44	26	25
Closing a business	38	44	46

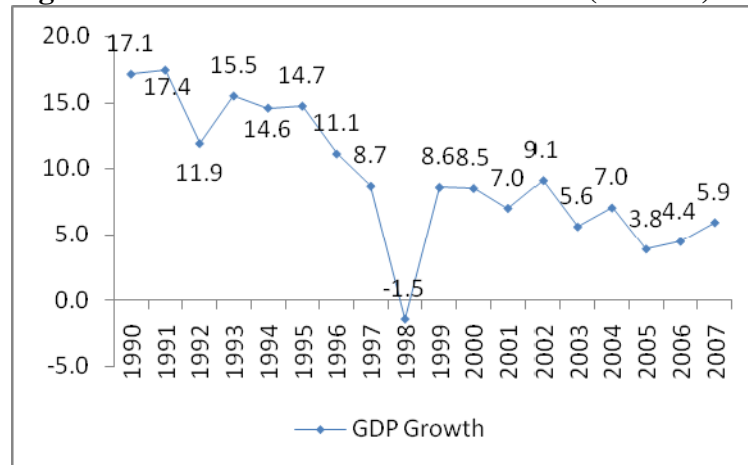
Source: IFC

Notes: 2006 & 2007: from 175 economies. 2008: from 178 economies. 2009: from 181 Economies

### 3.4. South Korea Overview

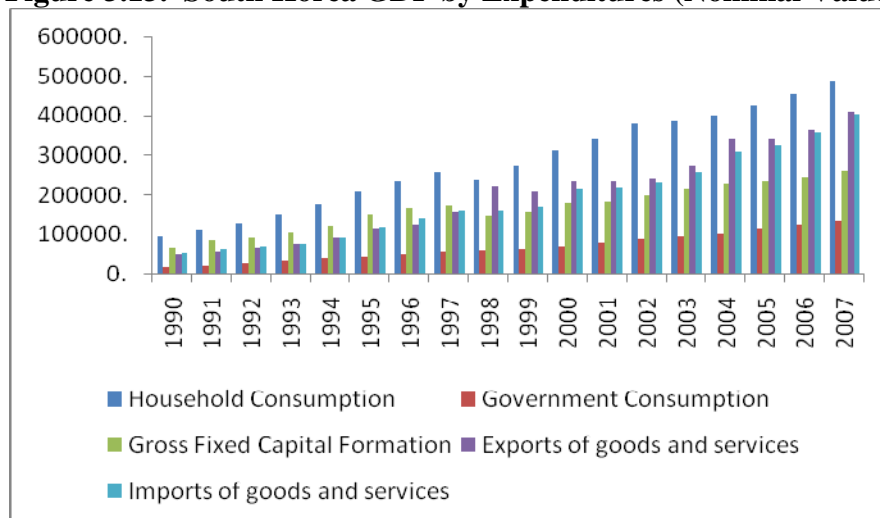
South Korean Economy in 2007 is the fourth largest in Asia and 13<sup>th</sup> in the world (World Development Indicator, World Bank, 2008) with a population of 49 million and nominal GDP of US\$ 969,871 million. South Korea's GDP per capita stands at US\$ 20,015. South Korea is regarded as one of the most successful economies in the world, which was able to sustain a two digit growth rate for 10 years (1986 – 1997). South Korea economy experienced the fastest growth rate of any economy in the 20<sup>th</sup> century. The onset of the Asian financial and economic crisis in 1997 induced contraction in South Korea's economic growth. The lowest GDP growth rate was -1.5 percent registered in 1998. However, South Korea was able to recover from the economic crisis faster. During 1999 – 2004 periods, South Korea economic growth averaged 5 percent. The decline in economic growth experienced in 2005 and 2006 as made good by higher economic growth of 5.9 percent in 2007. High domestic demand lead to a high GDP growth.

**Figure 3.12. GDP Growth of South Korea (Percent)**



Source: IFS, IMF

**Figure 3.13. South Korea GDP by Expenditures (Nominal Value), 1990 - 2007**



Source: IFS, IMF

Domestic consumption is the largest contributor to South Korea during 1990 – 2007, which was followed by gross fixed capital formation. However, since 1998, exports of goods have contributed more to GDP than gross fixed capital formation. Growth of gross fixed capital formation in 2002 – 2007 was 22.84 percent (average 4.57 percent a year), while growth of export was 60.61 percent (average 12.12 percent a year). The 1997-1998 economic crises are the underlying factor for the decline in the contribution of gross fixed capital formation to the economy. This was due to a lot of investment outflow the economy suffered as investors withdrew their investments from South Korea to other economies; they considered being more stable. The high growth in domestic consumption in third quarter of 1999, which was caused an increase in real wages and strengthening of South Korea stock markets, helped in boosting resurgence in consumer confidence (Lee, 2000).

**Table 3.41. GDP by Expenditure South Korea (Real Value), 2002 – 2007**

No	Expenditure	Value (billion Won)		Share(%)		Growth(%)	
		2002	2007	2002	2007	2002-2007	Average
<b>1</b>	<b>Consumption expenditure</b>	441085.30	552219.65	68.62	69.20	25.20	5.04
	- Household	357943.43	431627.75	55.69	54.08	20.59	4.12
	- Government	83141.87	120591.91	12.94	15.11	45.04	9.01
<b>2</b>	<b>Gross fixed capital formation</b>	186971.51	229672.43	29.09	28.78	22.84	4.57
<b>3</b>	<b>Changes in inventories</b>	-39.45	4704.98	-0.01	0.59	-12025.88	-2405.18
<b>4</b>	<b>Export of goods and services</b>	226574.55	363911.69	35.25	45.60	60.61	12.12
<b>5</b>	<b>Import of goods and services</b>	217703.53	357250.52	62.76	44.77	64.10	12.82
<b>6</b>	<b>GDP</b>	642747.91	798056.20	100	100	24.16	4.83

Source: IFS, IMF

South Korea is categorized by the World Bank as a high income economy, while IMF categorizes it as an advanced economy. Rapid industrialization has transformed South Korea into one among 10 largest exporters in the world. South Korea is a producer of advanced technology products such as electronics, automobile, ships, machinery, petrochemicals, and robots. South Korea economic growth very much depends on its exports with major export products such as electronics, textile, ships, automobiles, and steel. China is number one export destination for South Korean goods, contributing 14.62 percent (2002) and 22.07 percent (2007) of the country's total exports. United States and Japan are in second and third rank, respectively (2007). China and Japan's contribution has made ASEAN+3 region the main export destination for South Korea with 29.16 percent share to total world in 2007. However, ASEAN itself is not an a major export destination for South Korean goods as evidenced by the small contribution of just 11.1 percent (2002) and 10.3 percent (2007) to total South Korean exports. Singapore, Malaysia, and Indonesia are the main export destination in ASEAN, in that order. More than half of total South Korea's export (58.3 percent) in 2007 is dominated by machinery and transport equipment, i.e. automobiles, computers, ships. Shipping industry in Korea is listed number one in the world (see table 3.44). There is hope that the ASEAN+3 cooperation arrangement could



boost South Korean exports to ASEAN, which is in line with the pattern set by Japan and China of turning the region into a target market for their exports.

**Table 3.42. South Korea Exports to ASEAN+3 Countries, 2002 – 2007**

Country of Destination	Value (million USD)		Share (%)		Growth (%)	
	2002	2007	2002	2007	2002 - 2007	Average
<b>ASEAN+3</b>	<b>57003.8</b>	<b>146441</b>	<b>35.087</b>	<b>39.421</b>	<b>156.897</b>	<b>31.379</b>
<b>ASEAN</b>	<b>18110.2</b>	<b>38085.7</b>	<b>11.147</b>	<b>10.253</b>	<b>110.3</b>	<b>22.0599</b>
China	23753.2	81985.1	14.620	22.070	245.154	49.031
Japan	15140.4	26370.2	9.319	7.099	74.171	14.834
Singapore	4221.5	11949.5	2.598	3.217	183.063	36.613
Malaysia	3218.3	5704.2	1.981	1.536	77.243	15.449
Indonesia	3144.8	5770.6	1.936	1.553	83.497	16.699
Philippines	2950	4420.3	1.816	1.190	49.841	9.968
Thailand	2335.4	4481	1.437	1.206	91.873	18.375
Vietnam	2240.2	5760.1	1.379	1.551	157.124	31.425
<b>World</b>	<b>162466.1</b>	<b>371477.1</b>	<b>100</b>	<b>100</b>	<b>128.649</b>	<b>25.730</b>

Source: UNCOMTRADE

**Table 3.43. Top Ten Exports Destination of South Korea, 2002 - 2007**

2002				2007			
Rank	Country of Destination	Value	Share	Rank	Country of Destination	Value	Share
1	United States	32942.7	20.277	1	China	81985.1	22.070
2	China	23753.2	14.620	2	United States	45883.9	12.352
3	Japan	15140.4	9.319	3	Japan	26370.2	7.099
4	Hong Kong SAR	10144.9	6.244	4	Hong Kong SAR	18654.4	5.022
5	Asia n.e.s.	6631.6	4.082	5	Asia n.e.s	13027.1	3.507
6	Germany	4287.1	2.639	6	Singapore	11949.5	3.217
7	United Kingdom	4255.5	2.619	7	Germany	11542.5	3.107
8	Singapore	4221.5	2.598	8	Russian Federation	8087.7	2.177
9	Malaysia	3218.3	1.981	9	Mexico	7482	2.014
10	Indonesia	3144.8	1.936	10	United Kingdom	6870	1.849

Source: UNCOMTRADE

Note: value (million US\$); share (%)

**Table 3.44. Export of South Korea Classified by Principal Commodities, 2002 - 2007**

No	Product Group	Value (millions US\$)		Share (%)	
		2002	2007	2002	2007
1	Machinery and transport equipment	159991.2	216735.9	63.027	58.344
2	Manufactured goods classified chiefly by material	36954	52041.3	14.558	14.009
3	Chemical and related products	23125.7	37540.1	9.110	10.106
4	Miscellaneous manufactured articles	14765.8	32232.4	5.817	8.677
5	Mineral fuels, lubricants and related materials	10531.4	24630.9	4.149	6.631

Source: UNCOMTRADE

By country of origin, China is the largest source of South Korean imports, followed by Japan, and United States, in that order (2007). Apparently, South Korean imports still depend heavily on its neighboring countries in East Asia. Indonesia is important source of South Korean import in ASEAN region, contributing around 3 percent (2002) and 2.6 percent (2007) of its total imports. Other ASEAN countries also serving as source of importers of South Korean products are Malaysia, Singapore, and Thailand. By commodities, in 2002 and 2007, machinery and transport equipment is the largest product imported, constituting 33.57 percent and 30.15 percent, respectively (see table 3.47).

**Table 3.45. South Korea Imports Classified by Country, 2002 – 2007**

Country of Destination	Value (million USD)		Share (%)		Growth (%)	
	2002	2007	2002	2007	2002 - 2007	Average
ASEAN+3	63049.6	147460.1	41.446	41.324	133.880	26.776
ASEAN	15764.7	28184.8	10.363	7.898	78.784	15.757
China	17399.7	63025.2	11.438	17.662	262.220	52.444
Japan	29885.2	56250.1	19.645	15.763	88.221	17.644
Singapore	3430	6859.6	2.255	1.922	99.988	19.998
Malaysia	4041.4	8442.2	2.657	2.366	108.893	21.779
Indonesia	4723.4	9113.8	3.105	2.554	92.950	18.59
Philippines	1867.4	N.A.	1.228	N.A.	N.A.	N.A.
Thailand	1702.5	3769.2	1.119	1.056	121.392	24.278
<b>World</b>	<b>152124.4</b>	<b>356841</b>	100	100	134.572	26.914

Source: UNCOMTRADE, 2008

**Table 3.46. Top Ten Imports Origin of South Korea, 2002 - 2007**

2002				2007			
Rank	Country of Origin	Value	Share	Rank	Country	Value	Share
1	Japan	29855.2	19.626	1	China	63025.2	17.662
2	United States	23111.2	15.192	2	Japan	56250.1	15.763
3	China	17399.7	11.438	3	United States	37392.9	10.479
4	Saudi Arabia	7550.8	4.964	4	Saudi Arabia	21163.2	5.931
5	Australia	5973.3	3.927	5	Germany	13534.2	3.793
6	Germany	5472.3	3.597	6	Australia	13232.2	3.708
7	Other Asia n.e.s	4832	3.176	7	Asia n.e.s	9966.5	2.793
8	Indonesia	4723.4	3.105	8	Indonesia	9113.8	2.554
9	United Arab Emirates	4210.2	2.768	9	Kuwait	8746.8	2.451
10	Malaysia	4041.4	2.657	10	Qatar	8453.9	2.369

Source: UNCOMTRADE, 2008

**Table 3.47. Imports of South Korea Classified by Principal Commodities, 2002 - 2007**

No	Product Group	Value (millions US\$)		Share (%)	
		2002	2007	2002	2007
1	Machinery and transport equipment	75361.6	107570.3	33.57	30.15
2	Mineral fuels, lubricants and related materials	50278.5	96503	22.40	27.04
3	Manufactured goods classified chiefly by material	30825.2	51929.1	13.73	14.55
4	Chemical and related products	20654.5	32336.9	9.20	9.06
5	Miscellaneous manufactured articles	19852.9	27941.3	8.84	7.83

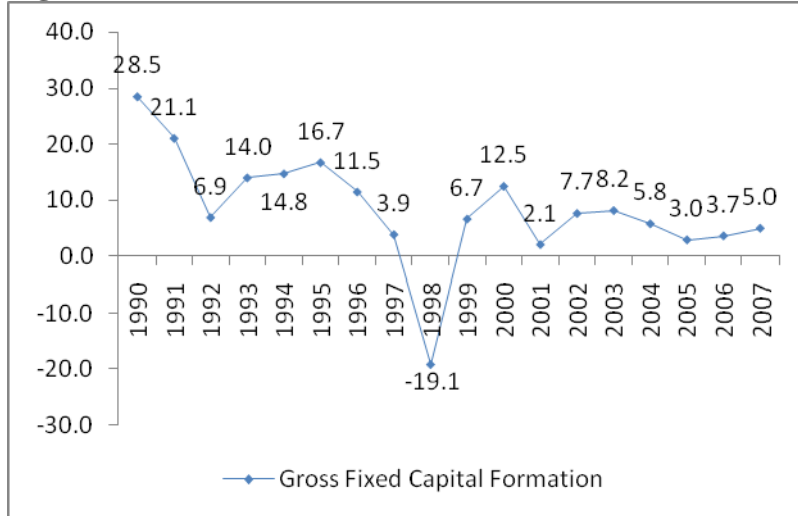
Source: UNCOMTRADE, 2008

Regarding of external trade, ASEAN+3 cooperation is important for South Korean Government. On July 1, 2007; FTA between South Korea and ASEAN in goods had been signed. Negotiations on services and investments are still continuing. Because of disagreement on agricultural product, Thailand does not join the FTA. This disagreement occurs considering the small size of Korean agricultural market, South Korea feels that it does not have strong competitiveness. However, Korea and Thailand have launched bilateral consultations for the joining of Thailand in the FTA (APEC Individual Action Plan of Korea, 2007).

In general, business community is supporting ASEAN+3. There are many association and business communities in South Korea with which South Korean Government working to disseminate information about ASEAN+3. By these associations and communities, government also receives inputs from business in constructing ASEAN+3 frameworks. The government always asks for inputs and suggestions from business community before signing any trade and investment agreement.

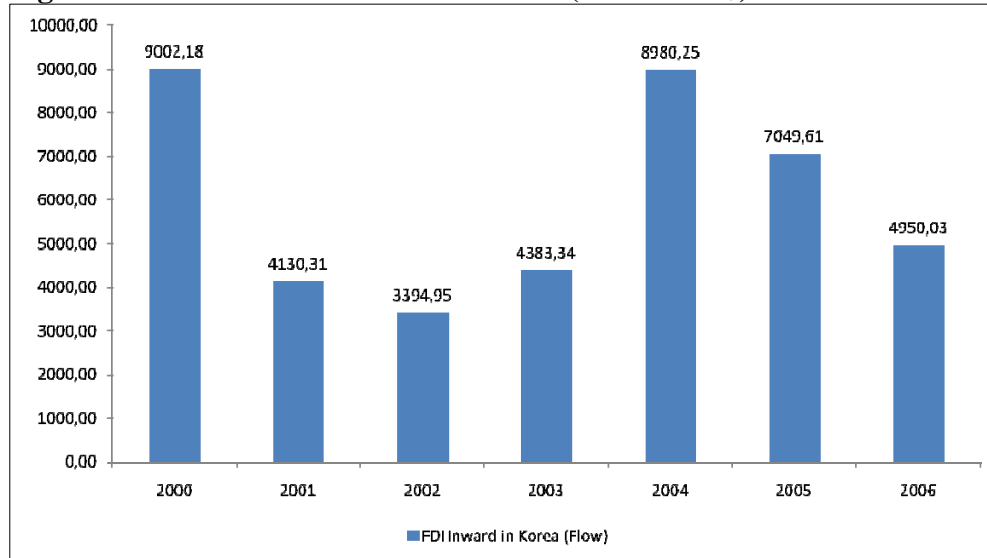
Investment growth experienced a decline for 2003 – 2005 periods, but growth has resumed since 2006. GDP growth in 2007 was 5 percent, which was attributed to an increase in private consumption and exports. Corporate investment in buildings and equipments rose by 11 percent in the first half of 2007. Nonetheless, investment growth decreased in the second half of 2007, reaching 7.6 percent. Semiconductors, precision machinery and transportation equipment were the main drivers of corporate investment. Construction investment grew by 1.2 percent, the first time it has registered a positive figure over the last three years (Asian Development Outlook, 2008).

**Figure 3.14. Investment Growth in Korea (Percent)**



Source: IFS, IMF

**Figure 3.15. FDI Inward in South Korea (million US\$)**



Source: UNCTAD

South Korea adopted a more liberal economic policy one year after the Asian Financial Crisis. South Korea began to open its capital and real estate markets to foreign investors. The

government was able to launch more aggressive campaigns to attract FDI because of the passed of Foreign Investment Promotion Act in 1998. In 2001, there was a downward trend in inward FDI into Korea. However, in 2004, FDI inflows into Korea saw a strong resurgence. In 2006, investment in the manufacturing sector accounted for 19.04 percent of overall FDI into Korea, while service sector investment and financial intermediation totaled 37.3 percent and 50 percent. The largest inward FDI into Korea by region in 2006 are: European Union (EU), Japan, and USA (Invest Korea, 2007). FDI in South Korea is constituted mostly by financial intermediation industry (2007), as a result of the openness of capital markets (including bond and stock markets) to foreign investors in 2006 (APEC Individual Action Plan of Korea, 2006).

**Table 3.48. FDI Flows by Partner Country**

No	Country	Value (millions US\$)		Share (%)	
		2000	2006	2000	2006
1	Japan	996	1431	11.524	28.828
2	France	414	755	4.790	15.210
3	United States	1782	549	20.618	11.060
4	Ireland	-64	546	-0.740	10.999
5	Belgium	158	515	1.828	10.375
6	United Kingdom	15	458	0.174	9.226
7	Singapore	77	308	0.891	6.205
8	Sweden	5	301	0.058	6.064
9	Malta	0	158	0	3.183
10	Central America	2063	130	23.869	2.619

Source: OECD, 2008

**Table 3.49. FDI Flows by Industry**

No	Industry	Value (millions US\$)		Share (%)	
		2000	2006	2000	2006
1	Financial Intermediation	1631	2481	18.871	49.980
2	Total Services	3035	1852	35.115	37.309
3	Manufacturing	3223	945	37.290	19.037
4	Real Estate, Renting, and Business Activities	1113	443	12.877	8.924
5	Construction	11	296	0.127	5.963

Source: OECD, 2008

In order to attract many FDI into Korea, Korean government offers many incentives (Invest Korea, 2007):

1. Tax Relief

Foreign companies engaged in industry support services or sectors involving high technology, or that are based in a foreign investment zone or free economic zone, currently receive varying reduction on corporate, income, and local tax.

2. Cash Grants

Under the cash grant program which is aimed at attracting FDI with potentially high economic effects, eligible companies receive from the government a grant corresponding to 5 percent or more of their total investment in Korea. The exact amount of the cash grant is determined through negotiations between the investor and the government.

3. Supply of Industrial Sites

The Korean government makes available industrial sites within specially-designated zones to all foreign-invested firms meeting a certain minimum set of requirements. Land within these zones is provided either free of charge or at low cost.

4. Financial support refers to financial aid toward the cost of staff education and training, the cost of hiring staff, and projects to build infrastructure within a foreign investment zone or to enhance the living environment within it.

5. Other incentives

To support R&D activities by foreign-invested companies in Korea, the government commissioned Invest Korea to operate the R&D Human Resources Development Program. Through this program, the government contributes toward the wages and compensation of R&D staff employed by eligible companies.

South Korea falls behind Thailand but ahead Indonesia with respect to ranking on Doing Business. The high cost of human resources in Korea is the main factor behind such poor investor ranking of the country on establishing a business, low ranking on employing workers. Korea is not as aggressive as Japan and China in establishing its investments in other countries. It is thus a major challenge for ASEAN nations to try to persuade Korea to invest in the region. Most Korean investments in other countries are in the manufacturing sector.

**Table 3.50. Doing Business in Korea**

Ease of ...	2007 rank	2008 rank	2009 rank
<b>Doing Business</b>	<b>23</b>	<b>30</b>	<b>23</b>
Starting a business	116	110	126
Dealing with licenses	28	22	23
Employing workers	110	131	152
Registering property	67	68	67
Getting credit	21	36	12
Protecting investors	60	64	70
Paying taxes	48	106	43
Trading across borders	28	13	12
Enforcing contracts	17	10	8
Closing a business	11	11	12

Source: IFC

Note: 2006 & 2007: from 175 economies. 2008: from 178 economies.

FDI from Korea to ASEAN will not increase in the foreseeable future considering the ongoing global financial crisis. Bankruptcy that has hit some major institutions in Korea sparked off a 30 percent of depreciation of the Korean won. To avert even graver situation, the Korean government has been forced to mull a major economic stimulus package, which is expected to stimulate economic growth once again (International Herald Tribune, 2008). The Samsung Economic Research Institute (SERI) stated that in 2009, major economic contraction in both industrialized and developing countries will cause Korea's export growth to plummet to 3.2 percent (SERI, 2009).

## IV. DATA ANALYSIS

### 4.1. Methodology

In general, the analysis will be based on time series regression equation for Indonesia, Thailand, and South Korea. The analysis is conducted by in-depth exploration; data analysis is complemented by conducting in-depth interviews with policy makers and business practitioners. But, researcher can not get Thailand in-depth interview data because of technical difficulty.

Analysis of the implications of expanding trade and FDI intra ASEAN+3 in Korea, Indonesia and Thailand will be developed based on previous empirical studies. According to theory on trade and previous research findings that has been explained in chapter II, the export and import equation will be as follows:

$$xr_{ijt} = \alpha_0 + \alpha_1 gdprapt_{jt} + \alpha_2 gdprapt_{jt-1} + \alpha_3 rer_{ijt} + \alpha_4 CRISIS_{it} + \varepsilon_t \quad (1)$$

$$mr_{ijt} = \beta_0 + \beta_1 gdpr_{it} + \beta_2 gdpr_{it-1} + \beta_3 rer_{ijt} + \beta_4 CRISIS_{it} + \nu_t \quad (2)$$

where:

- $xr_{ijt}$  is a real export from country (i) to the rest of ASEAN+3 (j) in time (t),
- $mr_{ijt}$  is a real import from the rest of ASEAN+3 (j) to country (i) in time (t),
- $gdprapt_{jt}$  is real GDP for the the rest of ASEAN+3 (j) in time (t);
- $gdpr_{it}$  is real GDP for the country (i) in time (t);
- $rer_{ijt}$  is real exchange rate
- $crisis_{it}$  is the dummy variable for crisis
- $\varepsilon$  and  $\nu$  is the *error term*.

Lower case figures in the equation indicate the log value. The expected direction of the relationships in the export equation are  $\alpha_1 > 0$ ;  $\alpha_2 > 0$ ;  $\alpha_3 > 0$  and  $\beta_1 > 0$ ;  $\beta_2 > 0$ ,  $\beta_3 < 0$  in the import equation.

Equation for investment pattern is developed from Lipsey (1999), Peichert dan Weinhold (2001), Gounder (2001), Hejazi and Safarian (2002), Chantasasawat, et.al (2004), Gast (2005) framework. The model to be employed in analyzing FDI flows will be the following:

$$fdir_{ijt} = \gamma_0 + \gamma_1 gdpr_{it} + \gamma_2 gdpr_{it-1} + \gamma_3 rer_{ijt} + \gamma_4 (i_{it} - cpi_{it}) + \gamma_5 (libor_{it} - cpius_{it}) + \gamma_6 CRISIS_{it} + \varepsilon_t \quad (3)$$

where:

- $fdir_{ijt}$  is the real FDI outflow from the rest of ASEAN+3 (j) to host country (i) in time (t)
- $gdpr_{it}$  is real GDP for the country (i) in time (t);
- $rer_{ijt}$  is real exchange rate

- $i_{it} - cpi_{it}$  is real domestic interest rate
- $libor_{it} - cpius_{it}$  is LIBOR real international interest rate
- $crisis_{it}$  is the dummy variable for crisis
- $\varepsilon$  is the error term.

Lower case figures in the equation represent log value.

We expect the coefficients of the real GDP destination countries, which are proxies for market size, to be positive. The exchange rate should have a positive sign as a depreciated exchange rate in the destination countries should raise FDI outflows from source countries (due to the wealth effects and pro-competitiveness effects).

The study would cover 1980 – 2007 periods. The data used in this analysis come from many sources. The country data which are available for the study are 8 countries: Indonesia, Thailand, Philippines, Singapore, Malaysia, South Korea, China, and Japan. Data sources of the variables are summarized below.

VARIABLES	PROXY	SOURCE
APT (ASEAN +3)	ASEAN 5: Indonesia, Thailand, Philippine, Singapore, and Malaysia; plus South Korea, China, and Japan	
XR <sub>ijt</sub>	total real export value each countries to ASEAN+3 – million US\$	Direction of Trade, UN
MR <sub>ijt</sub>	total real import value each countries from rest of ASEAN+3 – million US\$	Direction of Trade, UN
GDP <sub>Rit</sub>	GDP domestic – real – billion US\$	IFS IMF
GDP <sub>RAPTjt</sub>	GDP rest of the ASEAN+3– real – billion US\$	IFS IMF
rer <sub>ijt</sub>	real exchange rate of domestic currency to US\$	IFS IMF, calculated by researcher: ER x (CPI <sub>i</sub> /CPI <sub>US</sub> )
FDIR <sub>ijt</sub>	FDI real inward from rest of ASEAN + 3 – million US\$ - flow	UNCTAD Indonesia data is approved FDI from National Investment Coordination Board
Crisis	1= crisis period 0 = other	Crisis period: Indonesia : 1997-2003 Thailand: 1997-2000 Korea: 1997-2000
$i_{it} - cpi_{it}$	real domestic interest rate	Central Bank of each country
$libor_{it} - cpius_{it}$	real international interest rate	IFS IMF

The research used a dynamic simultaneous econometric model. The formation of the dynamic simultaneous model calls for conducting test for stationarity. Subsequently, the formulation of



long term model or cointegration model was done, which is necessary prior to formulating short term model. The short term model used in the research is *Error Correction Model* (ECM).

Stationary data does not have large variance during the observation period and tends to converge to its average. If time series data is not stationary, both the the average and the sample variance will change with time. Stationary data is one of the requirements needed in estimating macroeconomic time series data to avoid spurious regression problem. If the variable has a unit root, then it is non stationary and if combined with other time series will generate an incorrect economic relationship (Harris, 1993). One of the unit root tests often used is the Dickey-Fuller (DF) and Augmented Dickey-Fuller (ADF).

This research will use Engel-Granger ECM- two stage (ECM-EG). If the regression equation cointegrates and has a stationary error ( $\mu_t$ ) or  $I(0)$ , then the ECM-EG equation is written as follows:

$$\Delta Y_t = \beta_0 + \beta_1 \Delta X_t + \beta_3 \mu_{t-1} + \varepsilon_t \quad (4)$$

If  $\mu_t$  (*Error Correction Term* - ECT) is a stationary residual and generates a cointegration that has constant variance, then ECT coefficient in ECM model will be significant. The significant ECT coefficient is a reflection of the fact that the variables in the long term equation are cointegrated. This means that ECT in ECM to ensure that there are no variables that are ignored and is used in estimating the existence of equilibrium among variables in the long term or cointegration among economic variables in accordance with economic theory (Engle and Granger, 1987, and Thomas, 1997). ECT coefficient in ECM-EG indicates the magnitude caused by the influence of the shock to the  $Y_t$  equilibrium or the extent to which the realignment process moved towards equilibrium. ECT coefficient in absolute terms is less than one, that implies that any change or shock in the past of the magnitude of one induced a change in  $Y_t$  with a magnitude that was less than one. The shock was then mitigated toward equilibrium. The magnitude of ECT coefficient indicates the realignment process toward equilibrium. The larger the ECT coefficient (but still less than one), the faster the process toward equilibrium. The time it takes to reach equilibrium is calculated using the formulation  $(1/ect)$  per unit time (depending on the unit of time used in the research) (Engel-Granger, 1987).

Another approach employed in testing cointegration is conducting the Durbin-Watson (CRDW) cointegration test. The CRDW test is based on the fact that linear combination has a integration of one  $I(1)$ , has a autocorrelation coefficient of  $\rho = 1$ . On the other hand, it is known that the value of Durbin-Watson autocorrelation is ,  $d = (2 - 2\rho)$  if  $\rho = 1$ , then  $d = 0$ . The cointegration test is conducted by making the hypothesis  $H_0$  that states that the value of  $d = 0$ . Meanwhile, the alternative hypothesis to indicate the existence of cointegration states that the value of  $d > 0$ . The critical value is obtained from the table issued by Engle and Yoo in 1987, for  $\alpha$  of 1%, 5%, and 10%, having values of 0.511; 0.386; and 0.322, respectively (Gujarati, 2003; 822-824).

## 4.2. Analysis of Indonesia Data

The choice of the sample is from 1980 to 2007, because trade data for exports and imports between China and Indonesia before 1980 show zero figures. For non available (NA) data it is proxied by a trend, because although it is not much, it is available, and can not be assumed to be nonexistent or ignored.

Since the model is short term used in this research is *Error Correction Model* (ECM), testing for data stationarity was prerequisite that had to be met.

**Table 4.1. Unit Root Test Indonesia Variables- Level**

Symbol	Variable	DF	ADF	Inference
Log(xri)	ekspor riil Indonesia to rest of APT 8	-1.088739	-2.867713	unit root
LOG(MRI)	impor riil Indonesia to rest of APT 8	-2.257015	-2.879762	unit root
LOG(GDPRAPT_I)	real GDP rest of APT 8	-0.446979	-1.575937	unit root
LOG(GDPRI)	real GDP Indonesia	-1.210121	-1.724133	unit root
LOG(RERI)	real exchange rate Indonesia (Rp/\$)*(CPIUS/CPI Indonesia)	-1.302298	-2.615219	unit root
log(fdiri)	real FDI Indonesia (US\$)	-2.656299	-2.578190	unit root
(ii-cpii)	real domestic interest rate	-2.433015	-0.173244	unit root
LIBOR	real international interest rate	-1.326602	-3.997389	unit root

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

Unit root test of level data produced unit root for variables used in the research. This implied that there was need for conducting first difference unit root test.

**Table 4.2. Unit Root Test Indonesia Variables - First Difference**

Symbol	Variable	DF	ADF	Inference
Log(xri)	ekspor riil Indonesia to rest of APT 8	-5.049252*	-4.866791*	stationer
LOG(MRI)	impor riil Indonesia to rest of APT 8	-4.212815*	-4.135190**	stationer
LOG(GDPRAPT_I)	real GDP rest of APT 8	-3.268572**	-3.181719***	stationer
LOG(GDPRI)	real GDP Indonesia	-3.206505**	-3.335190***	stationer
LOG(RERI)	real exchange rate Indonesia (Rp/\$)*(CPIUS/CPI Indonesia)	-5.655468*	-5.563967*	stationer
LOG(FDIRI)	real FDI Indonesia (US\$)	-5.836816*	-5.731713*	stationer
(ii-cpii)	real domestic interest rate	-2.847476**	-5.405405*	stationer
LIBOR	real international interest rate	-3.9960585**	-3.903373***	stationer

Source: analyzed data

Note: Significance: \*=1%, \*\*=5%, \*\*\*=10%

Meanwhile, results from unit root tests indicate that first difference unit root test produce significant estimates, leading to the inference that data are stationary. As the level data has unit root, the dynamic regression equation, taking the form of error correction model (ECM), should be used. To ensure that the model produces valid and unbiased estimates, the next step involves cointegration test. Cointegration test was done using Dickey Fuller test (DF), Augmented Dickey Fuller test (ADF) and CRDW.

**Table 4.3. Cointegration Test Indonesia Model**

Symbol	Variable	ADF	CRDW	Inference
E_XRI	residual of export equation	-2.512448**	0.823119*	stationary
E_MRI	residual of import equation	-2.651818**	0.999704*	stationary
E_FDRI	residual of fdi equation	-4.335317*	1.694108*	stationary

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

Table 4.3 presents results of the unit root tests on the cointegration function residuals and CRDW value. The critical value of CRDW is obtained from Engel and Yoo table (1987) which for a sample of 100, and the significance level of 1%, the CRDW statistic is 0.51; at the 5 % significance level the CRDW statistic is 0.39 and at 10% significant level, the CRDW statistic is 0.32. CRDW test results also indicate that the equation has a significant CRDW value, which means that  $H_0$  stating that there is no cointegration is rejected. Estimation of residuals generated by the equations using ADF test at 1%-10 % significance level, all produce stationery outcomes, which clears the way for using the ECM based on Engle-Granger (1977).

#### **4.2.1. Indonesia Export Equation**

To observe the short term and long term models of Indonesian exports to seven (7) ASEAN +3 countries (Singapore, Thailand, Philipina, Malaysia, China, Japan and South Korea), an estimation of equation (1) was done, with results as depicted in table 4.4. According to Table 4.4 results, ECM equation of Indonesia's exports to seven ASEAN + 3 countries produces error corection term or ECT(-1) with a t test that is negative and significant (coefficient of E\_XRI(-1)). To that end, it can be interpreted that the research results are robust.

Upon observing each variable in the estimation, results show that real gross domestic product variable for rest ASEAN+3 in the same year and real gross domestic product for the rest ASEAN+3 in the previous year do not have significant influence on Indonesian exports. The insignificance value of GDP in the short term shows that Indonesia exports do not respond the increasing of economic growth. Because Indonesia export to the rest of ASEAN+3 mostly are resource based, such as oil and gas and mineral product. Therefore, in the short term, the rising of consumer income (GDP of the rest ASEAN+3 countries) has insignificant impact in increasing export of Indonesia.

Based on table 3.21, value of Indonesia's non oil export to ASEAN+3 in 2002 amount 20.67 (billion USD) and 45.5 (billion USD) in 2007. ASEAN+3's share to Indonesia's total world export are 46.01 percent (2002) dan 49.14% (2007) with Japan has the biggest share of 14.13 percent (2007). Other countries included in ASEAN+3 only have share of 20.42 percent.

**Table 4.4. The Result of Estimation in Indonesia Export Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRAPT_I)	3.039234	0.891231	C	23.47493*	17.26954
DLOG(GDPRAPT_I(-1))	-3.555349	-1.017307	LOG(GDPRAPT_I)	-4.435348	-1.320816
DLOG(RERI)	-0.341467	-1.481665	LOG(GDPRAPT_I(-1))	3.716155	1.097295
CRISISI	-0.063218	-0.928231	LOG(RERI)	-0.722458*	-2.861788
(E_XRI(-1))	-0.389141**	-2.644697	CRISISI	0.093826	0.613510

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

Other variables, e.g. the exchange rate and the crisis, apparently do not have significant impact on Indonesian exports to ASEAN+3 in the short term; given the fact that the process of trade between nations is following contract system. Other indication is Indonesia's export commodities have no strong competitiveness in ASEAN+3 markets. As explained in GDP case, ASEAN+3 portion of Indonesia export destination is relatively low. Therefore, when there is change in currency exchange, producer prefers to fulfill major export destination country's demand, reducing exports to ASEAN+3 countries.

In the long run, the behavior of the Indonesian export equation is shown by cointegration equation. As is the case with the short term, in the long run, economic condition does not have significant influence on Indonesian exports to ASEAN+3 countries. The same applies to real GDP of ASEAN+3, either in the same year or in the previous year. This can be inferred to mean that as far as Indonesian exports are concerned, ASEAN+3 market do not constitute the direct destination of its exports rather transitory, with Indonesian exports processed before they are re-exported to other countries since primary goods are important in the export. If that is the case, it is understandable why GDP of ASEAN+3 both in the current year and in the previous year do not have significant influence on Indonesian exports to ASEAN+3 countries.

Contrary to GDP, the real value of the exchange rate rupiah against US dollar has a negative and significant influence on Indonesian exports to ASEAN + 3 countries. This means that the depreciation of the rupiah induces a decrease in Indonesian exports. From the vantage point of the theory of international trade, the finding seems to be contradictory. However, empirically, the depreciation of rupiah against US dollar also affects currencies of other ASEAN+3 countries, with the implication that the negative influence of real exchange rate on Indonesian exports to is a normal phenomenon since in relative terms the real exchange rate of rupiah vis a vis currencies of other ASEAN+3 countries does not automatically experience a depreciation.

From the statistics standpoint, in the long run, the variables GDP rest ASEAN+3, RER and crisis, explain 83.45% of the model.

#### **4.2.2. Indonesia Import Equation**

As regards the Import model, estimation was made using equation (2), with the results depicted in table 4.5. According to table 4.5, it is apparent that the ECM equation can be analysed further because ECT (-1) value is significant, which implies that the equation is cointegrated and therefore can generate robust estimates.

According to table 4.5, it is shown that Indonesian imports, both in the short and long term, produce similar pattern or behavior with GDP and crisis variables having no significant influence. The 1997 – 2003 economic crises did not impact Indonesia’s imports significantly. This indicated that Indonesia’s strong dependency to import causing its import value not weakened by crises. The insignificance of real GDP indicated Indonesian imports from ASEAN+3 countries are basic goods that are insensitive to income. Besides, there is also a possibility that Indonesian imports are intermediate goods which are then processed and exported to other countries, hence making no significant contribution to Indonesian GDP both in the short run and long run.

As seen in table 3.22, Indonesia still considers import from one country, not ASEAN+3 as a group. Government of Indonesia is still in the process of contemplating the implications of ASEAN cooperation with each of plus-three countries. Thus, so far the development of ASEAN+3 framework has not yet to affect businesses directly. Three major commodities of Indonesia’s import in 2007 are machinery and mechanical application, electrical equipments (33.98 percent); base metals (14.08 percent); and products of chemical (12.4 percent)

**Table 4.5. The Result of Estimation in Indonesia Import Equation**

Variable	ECM		Variable	Long run	
	Coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRI)	1.503338	1.209293	C	14.66930*	9.182469
DLOG(GDPRI(-1))	-0.645604	-0.515453	LOG(GDPRI)	0.300263	0.203023
DLOG(RERI)	-0.611218***	-1.921312	LOG(GDPRI(-1))	0.279473	0.179356
CRISISI	-0.056217	-0.658742	LOG(RERI)	-1.285685*	-4.224157
E_MRI(-1)	-0.407712**	-2.127906	CRISISI	0.179882	1.082082

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

In contrast with GDP, the exchange rate has a negative and significant influence both in the short run and long run on Indonesian imports. In the short run, the exchange rate has significant influence at  $\alpha$  10%, while in the long run it has significant influence at  $\alpha$  of 1%. Such a condition indicates that Indonesian imports from ASEAN+3 countries are sensitive to prices. This strengthens the argument that Indonesia imports from other ASEAN+3 countries are inputs which are very sensitive to prices, which may be due to business considerations. Long term effect of import depreciation is stronger than its short term effect.

#### **4.2.3. Indonesia FDI Equation**

Observing the pattern of FDI from 7 ASEAN+3 countries to Indonesia, an estimation of equation (3) was done. The results are depicted in table 4.6. Table 4.6 shows that the ECM equation can be analyzed further because the value of ECT (-1) is negative and significant, which implies that the equation is cointegrated and can generate robust estimates.

In the short run, it is apparent that GDP and crisis do not have significant influence on FDI from ASEAN+3 countries to Indonesia. This is understandable given the FDI process that requires along institutionalization process, which reduces the short run influence that GDP and crisis have

on the process. On the other hand, domestic interest rate posits a positive and significant influence. In light of that, it is evident that the possibility of raising domestic interest rate is an important consideration for investors in making decision to invest in Indonesia as it indicates high return on Indonesian investments. Meanwhile, foreign interest rate is found to have negative and significant influence on FDI to Indonesia at  $\alpha$  10%. This means that if the international interest rate is raised, in the short run, investors reduce their investment in Indonesia due to the higher cost of funds.

**Table 4.6. The Result of Estimation in Indonesia FDI Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRI)	1.823311	0.614457	C	-41.24938	-1.556481
DLOG(GDPRI(-1))	-1.192720	-0.426023	LOG(GDPRI)	5.421162	1.387019
DLOG(RERI)	-1.135112	-1.531372	LOG(GDPRI(-1))	-0.391142	-0.124755
D(II-CPII)	0.033094**	2.758400	LOG(RERI)	-0.716886	-0.850093
D(LIBOR-CPIUS)	-0.101482***	-1.765906	II-CPII	0.016769**	2.459878
CRISISI	-0.107674	-0.444006	LIBOR-CPIUS	0.029554	0.519518
E_FDIRI(-1)	-0.856713*	-4.161282	CRISISI	-0.048249	-0.140604

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

The domestic interest rate also has significant influence on Indonesian FDI in the long run. This means that, domestic interest rate is an important fact that is put into consideration by investors whereby when it is raised, expectations are that return on investment increases, inducing investors to invest their capital into Indonesia. By country of origin, in 2007, Singapore and United Kingdom are two major sources of approved inward FDI in Indonesia with share of 38 percent and 18.4 percent, respectively. It means more than 52 percent of approved inward FDI is from those countries. Other countries' shares, including Japan, are less than 10 percent. Singapore and UK have no significant historic relation with Indonesia, causing their FDI sensitive to return. It reflects from the significant value of domestic rates (in short and long term) and international rates (in short term).

What is also interesting is the fact that in the long run, GDP, exchange rate, foreign interest rate, and crisis, do not have significant influence. This shows that FDI to Indonesia is not market oriented, given the reality that GDP does not have significant influence on it. There is a possibility that FDI to Indonesia is mainly driven by natural resources, given the fact that Indonesia has vast natural resources potentiality. Chemical industry is the number one sector of FDI inward in Indonesia. This industry is based on oil (Adiningsih, et al., 2008). It can be inferred that FDI in Indonesia is natural resource oriented, thus other variables than return are not significantly relevant.

FDI policy in Indonesia also supports the finding. Since Law no. 25 Of 2007 implemented, there is equal treatment between foreign and domestic investment. Several incentives are not differentiated by domestic or foreign. Thus, it is logical to conclude that FDI in Indonesia is return oriented.

### 4.3. Analysis of Thailand Data

As is the case with the Indonesian model, analyzing Data on Thailand, was preceded by conducting stationarity test on data using unit root test and cointegration test. Unit root test of level data generated unit root condition on variables used in the research. It is thus necessary to conduct unit root test for first difference data. The results of the unit root test are depicted in Table 4.7 and table 4.8.

**Table 4.7. Unit Root Test Thailand Variables – Level**

Symbol	Variable	DF	ADF	Inference
LOG(XRT)	ekspor riil Thailand to rest of APT 8	-0.088142	-2.949449	unit root
LOG(MRT)	impor riil Thailand to rest of APT 8	-0.868570	-2.606719	unit root
LOG(GDPRAPT_T)	real GDP rest of APT 8	-1.371207	-2.033154	unit root
LOG(GDPRT)	real GDP Thailand	-1.202781	-1.652946	unit root
LOG(RERT)	real exchange rate Thailand (Bath/\$)*(CPIUS/CPI Thailand)	-1.426274	-2.762176	unit root
LOG(FDIRT)	real FDI Thailand (US\$)	-1.802757	-3.232268	unit root
(it-cpit)	real interest rate	-0.276513	-1.382072	unit root

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

The following DF-ADF test for first difference shows that the variables used in the equation are stationary.

**Table 4.8. Unit Root Test Thailand Variables - First Difference**

Symbol	Variable	DF	ADF	Inference
LOG(XRT)	ekspor riil Thailand to rest of APT 8	-3.279447**	-3.343904***	stationer
LOG(MRT)	impor riil Thailand to rest of APT 8	-4.292119*	-4.209617*	stationer
LOG(GDPRAPT_T)	real GDP rest of APT 8	-4.373168*	-4.404843*	stationer
LOG(GDPRT)	real GDP Thailand	-3.204786**	-3.481835***	stationer
LOG(RERT)	real exchange rate Thailand (Bath/\$)*(CPIUS/CPI Thailand)	-3.926687**	-3.822906**	stationer
LOG(FDIRT)	real FDI Thailand (US\$)	-6.205680*	-6.089666*	stationer
(it-cpit)	real interest rate	-5.891496*	-5.626159*	stationer

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

As the level data has unit root, the dynamic regression equation, taking the form of error correction model (ECM), should be used. To ensure that the model produces valid and unbiased estimates, the next step involves cointegration test. Cointegration test was done using Dickey Fuller test (DF), Augmented Dickey Fuller test (ADF) and CRDW.

**Table 4.9. Cointegration Test Thailand Model**

Symbol	Variable	ADF	CRDW	Inference
E_XRT	residual of export equation	-2.965371*	0.725245*	stationery
E_MRT	residual of import equation	-4.332150*	1.480201*	stationery
E_FDIRT	residual of fdi equation	-4.459328*	1.715959*	stationery

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

Table 4.9 presents results of the unit root tests on the cointegration function residuals and CRDW value. The critical value of CRDW is obtained from Engel and Yoo table (1987) which for a sample of 100, and the singicance lecel of 1%, the CRDW statistic is 0.51; at the 5 % significance level the CRDW statistic is 0.39 and at 10% significant level, the CRDW statistic is 0.32. CRDW test results also indicate that the equation has a significant CRDW value, which means that Ho stating that there is no cointegration is rejected. Estimation of residuals generated by the equations using ADF test at 1%-10 % significance level , all produce stationery outcomes, which clears the way for using the ECM based on Engle-Granger (1977).

#### **4.3.1. Thailand Export Equation**

Thailand exports to other 7 ASEAN+3 countries (Indonesia, Singapore, Malaysia, Philipina, China, Japan and South Korea) was estimated using equation (1), which produced the results that can be seen in table 4.10. According to table 4.10, the Error Correction Model short run equation can be analyzed further since the value of ECT equation is negative and significant. In the short run, real GDP of 7 ASEAN+3 countries has positve and significant influence on the value of Thailand exports, while the value of GDP for the previous year does not have statistical significance on Thailand exports. This finding is an indication that Thailand exporters respond quickly to changes in demand. The increase in GDP rest ASEAN+3 by 1% induces an increase in Thailand exports to the magnitude of 3.41%.

Based on table 3.31, Thailand export to ASEAN+3 in 2002 and 2007 are 41.78 percent and 43.33 percent. Among ASEAN+3 countries, Japan has the biggest share (11.82 percent), followed by China (9.75 percent). Most likely, GDP of these countries have long-term significancy on Thailand export, not GDP of ASEAN+3. The fact that Thailand has signed a bilateral agreement with China and Japan, thus bilateral trading between Thailand and the two countries become stronger, also supports this finding. Two major commodities of Thailand export in 2007 are high-tech product (64.55 percent) and reresource-based product (10.25 percent).

As is the case with Indonesia, the value of exchange rate has a similar influence on Thailand exports, with real exchange rate having a negative and significant influence. The depreciation of the Baht decreases the value of Thailand exports to ASEAN+3, both in the short run and long run. It appears this is a regional phenomenon, as the same pattern is observed in the case of Indonesia.



**Table 4.10. The Result of Estimation in Thailand Export Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRAP <sub>T</sub> )	3.415276**	2.642762	C	-12.99007*	-17.67009
DLOG(GDPRAP <sub>T</sub> (-1))	-0.867652	-0.658048	LOG(GDPRAP <sub>T</sub> )	0.973189	0.537495
DLOG(RERT)	-0.726481**	-2.392538	LOG(GDPRAP <sub>T</sub> (-1))	2.017533	1.113094
CRISIST	0.003428	0.064661	LOG(RERT)	-0.873175*	-4.195777
E_XRT(-1)	-0.392356**	-2.625937	CRISIST	-0.002536	-0.031934

Source : analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

Crisis does not have significant influence on the value of Thailand exports both in the short run and long run. This may be interpreted to mean that even with the onset of the crisis; the value of Thailand exports has remained stable. On the contrary, GDP of the rest of ASEAN+3 countries have positive influence on Thailand exports in the short run, but not in the long run. This means that as is the case with the Indonesia export model results, Thailand exports to the rest of ASEAN+3 do not constitute final products but primary or intermediate products which are then re exported to markets outside ASEAN+3. In that case, it is understable if GDP of ASEAN+3 does not have influence on Thailand exports in the long run.

#### 4.3.2. Thailand Import Equation

In the short run, real GDP Thailand and real exchange rate variables have a positive and significant influence on changes in the value of imports, with any increase of 1% in real GDP Thailand generating an increase of 2.519% in imports; while the depreciation of Thai Baht against the US\$ of 1% decreases the value of Thailand imports to the tune of 0.897%. This findings show that Thailand imports are very sensitive to the value of the exchange rate.

**Table 4.11. The Result of Estimation in Thailand Import Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRT)	2.519790*	3.824462	C	-6.345301*	-12.06191
DLOG(GDPRT(-1))	-0.767353	-1.196239	LOG(GDPRT)	3.283152*	5.076952
DLOG(RERT)	-0.895904**	-2.259780	LOG(GDPRT(-1))	-1.606041*	-2.465607
CRISIST	-0.002802	-0.044195	LOG(RERT)	-0.830059*	-4.905897
E_MRT(-1)	-0.732974*	-3.830360	CRISIST	-0.084505	-1.086698

Source : analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

In the long run, current year real GDP Thailand has positive and significant influence, while previous year real GDP posts a negative influence. This indicates that Thailand income influence fast/quickly to change in import demand, in which case previous year income is not an important factor that is put into consideration. Based on product group, fuel and lubricant (18.38 percent); mineral and metal products (14.17 percent); and electronic parts (11.32 percent) are top three products imported by Thailand in 2007. China, Japan, and United States constitute three major country of import origin in Thailand with share 17.66 percent; 15.76 percent; and 10.48 percent, respectively.

Such a condition is only possible if the good or product in question is basic. If the finding is corroborated with economic reality, it is noted that Thailand has competitive advantage in agriculture in general and food products in particular, which is why its main imports consist of secondary or tertiary products which are sensitive to current income levels. Considering the fact that the exchange rate has significant influence on Thailand imports, it is thus evident Thailand imports are very sensitive to prices, both in the short run and long run. This strengthens the argument that Thailand imports are in general non basic products.

### 4.3.3. Thailand FDI Equation

Results of the estimation model of FDI Thailand are presented in table 4.12. Statistically, foreign direct investment Thailand equation can be analyzed further since it is stationary and cointegrated.

**Table 4.12. The Result of Estimation in Thailand FDI Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRT)	-1.616215	-0.334932	C	-45.58054	-1.544110
DLOG(GDPRT(-1))	5.471118	1.214672	LOG(GDPRT)	5.328681	1.185684
DLOG(RERT)	-2.329717	-0.793871	LOG(GDPRT(-1))	-1.216947	-0.267872
D(IT-CPIT)	0.052615	0.781519	LOG(RERT)	2.848133	1.477690
D(LIBOR-CPIUS)	0.006428	0.077347	IT-CPIT	-0.018458	-0.498154
CRISIST	0.609085	1.089921	LIBOR-CPIUS	0.072565	0.840830
E_FDIRT(-1)	-0.806813*	-3.914980	CRISIST	-0.487767	-0.711780

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

Table 4.12 shows that there is no variable that has significant influence on Thailand FDI both in the short run and long run. Real GDP points to a large market potential, real exchange rate and interest rate; do not show any indication of significantly influencing investment. The results may be attributed to the fact that as is the case with other developing countries, economic factors, are not sufficient enough for investors to reach decision to undertake foreign direct investment. In general, this phenomenon happens when FDI inflow is not driven by market potential, but by international business strategy. In this case, many foreign companies invest in Thailand in automobile industry as basis for region production.

Manufacture and financial institutions are main sectors of Thailand FDI inward in 2007 with share 35.8 percent and 18.45 percent. It looks like that financial institutions sector is supporting manufacture sector. Regarding the fact that Thailand number one export is high-tech product (64.55 percent share to total export in 2007), it could be inferred that Thailand inward FDI mostly are in product manufacturing directed to re-export, especially in automobile industry. Considering United States is the number one Thailand export destination, it is logical that economic variable (e.g. domestic market, return, or exchange rate) has no significance on Thailand FDI. Thailand FDI could be directed to increase value added of products to be re-exported to other countries, thus investors considers more to institutionally variables than to economic variables.

#### 4.4. Analysis of South Korea Data

Unit root test of level data generates unit root condition for variables used in the research. In light of that, there is need for conducting first difference of the data as unit root test.

**Table 4.13. Unit Root Test South Korea Variables- Level**

Symbol	Variable	DF	ADF	Inference
LOG(XRK)	ekspor riil Korea to rest of APT 8	-0.332436	-2.396231	unit root
LOG(MRK)	impor riil Korea to rest of APT 8	-0.623673	-3.609495	unit root
LOG(GDPRAPT_K)	real GDP rest of APT 8	-0.360869	-1.669471	unit root
LOG(GDPRK)	real GDP Th Korea ailand	-1.253841	-0.774067	unit root
LOG(RERK)	real exchange rate Korea (won/\$)*(CPIUS/CPI Thailand)	-2.323787	-2.465353	unit root
LOG(FDIRT)	real FDI Korea (US\$)			unit root
(ik-cpik)	real interest rate	-1.293091	-3.201241	unit root

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

The following DF-ADF test for first difference shows that variables used in the equation are stationary.

**Table 4. 14. Unit Root Test South Korea Variables - First Difference**

Symbol	Variable	DF	ADF	Inference
LOG(XRK)	ekspor riil Korea to rest of APT 8	-3.712936**	-3.670793**	stasioner
LOG(MRK)	impor riil Korea to rest of APT 8	-3.915023*	-4.035736**	stasioner
LOG(GDPRAPT_K)	real GDP rest of APT 8	-3.218020**	-3.104354***	stasioner
LOG(GDPRK)	real GDP Korea	-3.628438**	-3.887368**	stasioner
LOG(RERK)	real exchange rate Korea (Bath/\$)*(CPIUS/CPI Thailand)	-3.022603**	-4.382917*	stasioner
LOG(FDIRT)	real FDI korea (US\$)	-3.544956**	-3.458223***	stasioner
(ik-cpik)	real interest rate	-7.199141*	-6.894395*	stasioner

Source : analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

As the level data has unit root, the dynamic regression equation, taking the form of error correction model (ECM), should be used. To ensure that the model produces valid and unbiased estimates, the next step involves cointegration test. Cointegration test was done using Dickey Fuller test (DF), Augmented Dickey Fuller test (ADF) and CRDW.

**Table 4.15. Table Cointegration Test South Korea Model**

Symbol	Variable	ADF	CRDW	Inference
E_XRK	residual of export equation	-2.186901**	0.860725*	Stasionary
E_MRK	residual of import equation	-2.886471*	0.832610*	Stasionary
E_FDIRK	residual of fdi equation	-2.947483*	0.965647*	Stasionary

Source : analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

Table 4.15 presents results of the unit root tests on the cointegration function residuals and CRDW value. The critical value of CRDW is obtained from Engel and Yoo table (1987) which for a sample of 100, and the significance level of 1%, the CRDW statistic is 0.51; at the 5 % significance level the CRDW statistic is 0.39 and at 10% significant level, the CRDW statistic is 0.32. CRDW test results also indicate that the equation has a significant CRDW value, which means that  $H_0$  stating that there is no cointegration is rejected. Estimation of residuals generated by the equations using ADF test at 1%-10 % significance level, all produce stationary outcomes, which clears the way for using the ECM based on Engle-Granger (1977).

#### 4.4.1. South Korea Export Equation

Estimation results of South Korea exports to ASEAN+3 countries are depicted in table 4.16. Table 4.16 shows that South Korea export equation indicates that South Korean exports are not significantly influenced by GDP rest of ASEAN+3 both in the short run and long run. This is normal and therefore understandable given the fact that to this day, South Korea trade is mainly done with industrialized countries such as United States and Europe. Table 3.42 shows that, in 2002, ASEAN+3' share (7 countries) to total South Korea export is 35.09 percent and rising to 39.24 percent in 2007. Among ASEAN+3 countries, in 2007, China has the biggest share (22.07 percent). It can be inferred that real GDP of ASEAN+3 has no significance because South Korea more considers to export to China (or to one individual country) than to ASEAN+3 as a region. United States is second largest export destination after China with share 12.35 percent. By commodity, two major exported commodities of South Korea in 2007 are machinery and transport equipment (58.34 percent) and manufactured goods classified chiefly by material (14.09 percent)

The exchange rate of the won against US\$ does not have significant influence on South Korea exports, in the short run but have negative and significant influence in the long run. In the event of depreciation, exports should increase. However, as is the case with Indonesia and Thailand, it appears real depreciation does not stimulate South Korea exports significantly. On the contrary, the depreciation of the Won induces a decrease in South Korean exports in the long run.

**Table 4.16. The Result of Estimation in South Korea Export Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRACT_K)	4.764207	1.189817	C	-2.140501	-0.697738
DLOG(GDPRACT_K(-1))	-3.058067	-0.781930	LOG(GDPRACT_K)	-0.917344	-0.241973
DLOG(RERK)	-0.649940	-1.041275	LOG(GDPRACT_K(-1))	3.203709	0.846047
CRISISK	-0.003015	-0.026358	LOG(RERK)	-0.992969**	-2.512431
E_XRK(-1)	-0.310653**	-1.869641	CRISISK	0.126756	0.783824

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

The finding is understandable considering the small portion of South Korean exports that go to the rest of ASEAN+3. This implies that whenever a depreciation of the won occurs, South Korea concentrates its exports to its large trading partners such as United States and Europe.

#### 4.4.2. South Korea Import Equation

Results of the estimation equation of South Korean imports are shown in table 4.17. In contrast with export equation results, real South Korea GDP, and real exchange rate have significant influence on imports, both in the short run and long run. In the short run, an increase of 1 % in real GDP induces an increase of 1.153%, in imports, while a depreciation of 1% induces a decrease of 1.287% in imports. Meanwhile, in the long run an increase of GDP by 1% induces an increase of 1.46% in imports, and depreciation of Won by 1% induces a reduction of imports by 0.75%.

**Table 4.17. The Result of Estimation in South Korea Import Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRK)	1.153988**	2.437094	C	2.577302***	1.715757
DLOG(GDPRK(-1))	-0.157781	-0.356545	LOG(GDPRK)	1.462277**	2.009671
DLOG(RERK)	-1.287787*	-5.707907	LOG(GDPRK(-1))	-0.417517	-0.579710
CRISISK	0.038958	0.809056	LOG(RERK)	-0.757120*	-3.729264
E_MRK(-1)	-0.376480**	-2.579365	CRISISK	-0.167839**	-2.051379

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

South Korea's imports to ASEAN+3 are higher than its exports. In 2002 and 2007, South Korea's imports from the rest of ASEAN+3 reach 41.45 percent and 41.32 percent to total world. Among ASEAN+3 countries, China has the biggest share (2007), followed by Japan. Two major commodities of South Korea import in 2007 are machinery and transport equipment (30.15 percent) and mineral fuels, lubricants and related materials (27.04 percent).

Contrary to Indonesia and Thailand, the crisis variable for South Korean import equation is shown to have a significant influence in the long run. This is an indication that South Korea suffers severely from an economic crisis, inducing a negative and significant reaction in its imports in the long run.

#### 4.4.3. South Korea FDI Equation

In order to observe the pattern of South Korea FDI, an estimation of equation (3) was done, with results shown in table 4.18. According to table 4.18, the FDI equation results show that domestic GDP has a significant influence on FDI inward into South Korea, both in the short run and long run. An increase in real domestic GDP manifests a rise in the potential market of buyers for investors who want to invest in the country. An increase of 1% in South Korean GDP induces an increase of 10.2% and 9.79% in FDI flows to South Korea, in the short run and long run, respectively.

Domestic interest rate and crisis do not show statistically significant influence on FDI inflow, both in the short run and long run. Meanwhile, international interest rate only has a slightly significant influence on FDI inflow in the short run (at the 90 % significance level). The same applies to the exchange rate variable, which produces a significant influence on FDI inflow both in the short run and long run but at 90 percent significance level.

**Table 4.18. The Result of Estimation in South Korea FDI Equation**

Variable	ECM		Variable	Long run	
	coefficient	t Statistic		coefficient	t Statistic
DLOG(GDPRK)	10.20170*	2.930631	C	-80.68752**	-2.456813
DLOG(GDPRK(-1))	-2.871692	-1.146575	LOG(GDPRK)	9.797441**	2.651951
DLOG(RERK)	0.957113	0.605083	LOG(GDPRK(-1))	-3.483108	-1.032209
D(IK-CPIK)	0.011323	0.351083	LOG(RERK)	2.093049***	1.994486
D(LIBOR-CPIUS)	0.135620***	1.997365	IK-CPIK	0.003644	0.125401
CRISISK	0.111589	0.402703	LIBOR-CPIUS	0.102187	1.233546
E_FDIRK(-1)	-0.578507*	-2.903255	CRISISK	-0.076127	-0.149152

Source: analyzed data

Note: significance: \*=1%, \*\*=5%, \*\*\*=10%

In several cases, FDI inflow from industrialized nations is shown to be oriented toward economic efficiency both with respect to R&D and technology as well as input –output. To that end, the real exchange rate, interest rate, and crisis do not have significant influence on FDI, rather GDP which proxies the South Korean market.

Financial and services are main sectors of South Korea FDI in 2006 with share 49.98 percent and 37.31 percent. Based on the fact, it is logical that South Korea FDI positively affected by its GDP, in the short and long term. Regarding that services sector is one of main FDI in South Korea, which is R&D and technology included, it is logical that (in the short and long term) South Korea FDI is not sensitive to domestic or international return.

Compared to other ASEAN+3 countries, South Korea investment policy has strong competitiveness on bureaucracy efficiency, labour policy, and financial incentives. Investment institutions in South Korea directed to attract more foreign investors. These facts could be investor’s consideration to invest in South Korea, causing insensitiveness of FDI to return or exchange rate.

#### IV. CONCLUSION AND POLICY IMPLICATION

The ASEAN+3 region which is home to 2 billion people and almost US\$10 trillion GDP in 2007 is an important economic force in the world today. With such economic force, the region has a high bargaining power in the world economy and possesses the potential to intensify the economic cooperation among its member nations. In light of that, ASEAN+3 framework which is currently underway, is a huge attractive force for its members, especially those countries that have implemented economic openness such as South Korea, Thailand, and Indonesia. Such countries should derive a lot of benefits from even higher levels of economic cooperation among ASEAN+3 countries. This is the more so given the fact that economic cooperation in the area in South Korea, Thailand, and Indonesia on one hand and ASEAN+3 countries on the other, especially in areas of international trade and investment among countries in the FDI form.

International trade and FDI among ASEAN+3 countries in three (3) countries covered by this research, in general, is lower than extra ASEAN+3 countries. However, signs of an upward trend have become evident over the past several years. There are high prospects for trade and investment among ASEAN+3 countries in the future given the high complementarity among ASEAN nations with Japan, South Korea, and China in areas of international trade and FDI. ASEAN nations such as Indonesia and Thailand in general, are producers of natural resources or low technology products and need external financing to develop their economies. Meanwhile, South Korea requires a lot of natural resources which are available in ASEAN. To that end, products from South Korea are in general high tech, which are on high demand in ASEAN. Besides, South Korea has a lot of funds which can be used in undertaking investments beyond its borders, which will definitely make a substantial contribution to ASEAN nations which require FDI to develop their economies.

In general, intra ASEAN+3 trade in the 3 analyzed countries (Indonesia, Thailand, South Korea) depend on the development of economic growth in the area. Thailand and South Korea trade and FDI are more sensitive to GDP growth and real exchange rate, especially on its import. South Korea FDI depends on its economic growth. On the other hand, depreciation of real exchange rate does not increase intra ASEAN+3 trade export in Indonesia, Thailand, and South Korea. The nominal depreciation may increase export but not the real exchange rate. High domestic real interest rate in Indonesia will increase FDI inflow to the country. This may reflect the high rate of return of investment in Indonesia. On the other hand, a higher international interest rate will decrease FDI since it means a higher cost of fund in international market. In general, crises do not have significant impact on trade and FDI in the countries.

Policy implication in the research finding is that the development of ASEAN+3 framework still relevant to be discussed. The framework moves ahead despite the global economic crises this time, since 1997 crises did not influence significantly trade and FDI flow in general. The economic cooperation under ASEAN+3 is believed could benefit its member countries since the complementarity among ASEAN and the plus three countries is quite high in areas of trade and FDI. Of course, to make the economic cooperation more fruitful, increasing international competitiveness in the developing countries in ASEAN+3 are a phenomenon.

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## ANNEX. TABLE OF DATA ANALYSIS

### INDONESIA FDI

Dependent Variable: LOG(FDIRI)

Method: Least Squares

Date: 01/21/09 Time: 14:12

Sample: 1980 2007

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-41.24938	26.50170	-1.556481	0.1345
LOG(GDPRI)	5.421162	3.908500	1.387019	0.1800
LOG(GDPRI(-1))	-0.391142	3.135268	-0.124755	0.9019
LOG(RERI)	-0.716886	0.843304	-0.850093	0.4049
II-CPII	0.016769	0.006817	2.459878	0.0227
LIBOR-CPIUS	0.029554	0.056888	0.519518	0.6088
CRISISI	-0.048249	0.343156	-0.140604	0.8895
R-squared	0.758673	Mean dependent var	8.308940	
Adjusted R-squared	0.689723	S.D. dependent var	0.937950	
S.E. of regression	0.522462	Akaike info criterion	1.751789	
Sum squared resid	5.732299	Schwarz criterion	2.084840	
Log likelihood	-17.52505	F-statistic	11.00316	
Durbin-Watson stat	1.694108	Prob(F-statistic)	0.000014	

ADF Test Statistic	-4.335317	1% Critical Value*	-2.6522
		5% Critical Value	-1.9540
		10% Critical Value	-1.6223

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(FDIRI)

Method: Least Squares

Date: 01/21/09 Time: 14:12

Sample(adjusted): 1981 2007

Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRI)	1.823311	2.967353	0.614457	0.5458
DLOG(GDPRI(-1))	-1.192720	2.799663	-0.426023	0.6746
DLOG(RERI)	-1.135112	0.741239	-1.531372	0.1413
D(II-CPII)	0.033094	0.011997	2.758400	0.0121
D(LIBOR-CPIUS)	-0.101482	0.057467	-1.765906	0.0927
CRISISI	-0.107674	0.242507	-0.444006	0.6618
E_FDIRI(-1)	-0.856713	0.205877	-4.161282	0.0005
R-squared	0.646271	Mean dependent var	0.057343	
Adjusted R-squared	0.540153	S.D. dependent var	0.682126	
S.E. of regression	0.462564	Akaike info criterion	1.514349	
Sum squared resid	4.279302	Schwarz criterion	1.850306	
Log likelihood	-13.44371	F-statistic	6.090082	
Durbin-Watson stat	1.489023	Prob(F-statistic)	0.000933	

## INDONESIA IMPORT

Dependent Variable: LOG(MRI)  
 Method: Least Squares  
 Date: 01/20/09 Time: 14:49  
 Sample: 1980 2007  
 Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	14.66930	1.597533	9.182469	0.0000
LOG(GDPRI)	0.300263	1.478962	0.203023	0.8409
LOG(GDPRI(-1))	0.279473	1.558199	0.179356	0.8592
LOG(RERI)	-1.285685	0.304365	-4.224157	0.0003
CRISISI	0.179882	0.166237	1.082082	0.2904
R-squared	0.606970	Mean dependent var	10.14540	
Adjusted R-squared	0.538617	S.D. dependent var	0.386277	
S.E. of regression	0.262379	Akaike info criterion	0.322380	
Sum squared resid	1.583384	Schwarz criterion	0.560273	
Log likelihood	0.486686	F-statistic	8.879939	
Durbin-Watson stat	0.999704	Prob(F-statistic)	0.000173	
ADF Test Statistic	-2.651818	1% Critical Value*	-2.6522	
		5% Critical Value	-1.9540	
		10% Critical Value	-1.6223	

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(MRI)  
 Method: Least Squares  
 Date: 01/20/09 Time: 14:50  
 Sample(adjusted): 1981 2007  
 Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRI)	1.503338	1.243154	1.209293	0.2394
DLOG(GDPRI(-1))	-0.645604	1.252498	-0.515453	0.6114
DLOG(RERI)	-0.611218	0.318125	-1.921312	0.0677
CRISISI	-0.056217	0.085340	-0.658742	0.5169
E_MRI(-1)	-0.407712	0.191603	-2.127906	0.0448
R-squared	0.515040	Mean dependent var	-0.031320	
Adjusted R-squared	0.426866	S.D. dependent var	0.286386	
S.E. of regression	0.216810	Akaike info criterion	-0.054015	
Sum squared resid	1.034145	Schwarz criterion	0.185955	
Log likelihood	5.729199	F-statistic	5.841153	
Durbin-Watson stat	1.453965	Prob(F-statistic)	0.002326	

## INDONESIA EXPORT

Dependent Variable: LOG(XRI)

Method: Least Squares

Date: 01/20/09 Time: 14:51

Sample: 1980 2007

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.47493	1.359326	17.26954	0.0000
LOG(GDPRACT_I)	-4.435348	3.358037	-1.320816	0.1996
LOG(GDPRACT_I(-1))	3.716155	3.386651	1.097295	0.2839
LOG(RERI)	-0.722458	0.252450	-2.861788	0.0088
CRISISI	0.093826	0.152933	0.613510	0.5456
R-squared	0.834450	Mean dependent var	10.79571	
Adjusted R-squared	0.805659	S.D. dependent var	0.502709	
S.E. of regression	0.221615	Akaike info criterion	-0.015321	
Sum squared resid	1.129600	Schwarz criterion	0.222572	
Log likelihood	5.214497	F-statistic	28.98278	
Durbin-Watson stat	0.823119	Prob(F-statistic)	0.000000	

ADF Test Statistic	-2.512448	1% Critical Value*	-2.6522
		5% Critical Value	-1.9540
		10% Critical Value	-1.6223

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(XRI)

Method: Least Squares

Date: 01/20/09 Time: 14:52

Sample(adjusted): 1981 2007

Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRACT_I)	3.039234	3.410154	0.891231	0.3824
DLOG(GDPRACT_I(-1))	-3.555349	3.494862	-1.017307	0.3201
DLOG(RERI)	-0.341467	0.230461	-1.481665	0.1526
CRISISI	-0.063218	0.068106	-0.928231	0.3634
E_XRI(-1)	-0.389141	0.14714	-2.644697	0.0228
R-squared	0.364010	Mean dependent var	-0.063618	
Adjusted R-squared	0.248375	S.D. dependent var	0.190843	
S.E. of regression	0.165453	Akaike info criterion	-0.594678	
Sum squared resid	0.602246	Schwarz criterion	-0.354708	
Log likelihood	13.02816	F-statistic	3.147933	
Durbin-Watson stat	1.831814	Prob(F-statistic)	0.034457	

## THAILAND FDI

Dependent Variable: LOG(FDIRT)

Method: Least Squares

Date: 01/21/09 Time: 14:18

Sample: 1980 2007

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-45.58054	29.51897	-1.544110	0.1375
LOG(GDPRT)	5.328681	4.494184	1.185684	0.2490
LOG(GDPRT(-1))	-1.216947	4.543015	-0.267872	0.7914
LOG(RERT)	2.848133	1.927422	1.477690	0.1543
IT-CPIT	-0.018458	0.037053	-0.498154	0.6236
LIBOR-CPIUS	0.072565	0.086301	0.840830	0.4099
CRISIST	-0.487767	0.685278	-0.711780	0.4844
R-squared	0.755054	Mean dependent var		6.764233
Adjusted R-squared	0.685069	S.D. dependent var		1.300473
S.E. of regression	0.729808	Akaike info criterion		2.420247
Sum squared resid	11.18501	Schwarz criterion		2.753298
Log likelihood	-26.88346	F-statistic		10.78887
Durbin-Watson stat	1.715959	Prob(F-statistic)		0.000017

ADF Test Statistic	-4.459328	1% Critical Value*	-2.6522
		5% Critical Value	-1.9540
		10% Critical Value	-1.6223

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(FDIRT)

Method: Least Squares

Date: 01/21/09 Time: 14:19

Sample(adjusted): 1981 2007

Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRT)	-1.616215	4.825508	-0.334932	0.7412
DLOG(GDPRT(-1))	5.471118	4.504196	1.214672	0.2386
DLOG(RERT)	-2.329717	2.934629	-0.793871	0.4366
D(IT-CPIT)	0.052615	0.067324	0.781519	0.4437
D(LIBOR-CPIUS)	0.006428	0.083108	0.077347	0.9391
CRISIST	0.609085	0.558834	1.089921	0.2887
E_FDIRT(-1)	-0.806813	0.206084	-3.914980	0.0009
R-squared	0.495961	Mean dependent var		0.111759
Adjusted R-squared	0.344749	S.D. dependent var		0.837598
S.E. of regression	0.678015	Akaike info criterion		2.279119
Sum squared resid	9.194083	Schwarz criterion		2.615077
Log likelihood	-23.76810	F-statistic		3.279909
Durbin-Watson stat	2.180927	Prob(F-statistic)		0.020626

## THAILAND IMPORT

Dependent Variable: LOG(MRT)  
 Method: Least Squares  
 Date: 01/20/09 Time: 14:54  
 Sample: 1980 2007  
 Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.345301	0.526061	-12.06191	0.0000
LOG(GDPRT)	3.283152	0.646678	5.076952	0.0000
LOG(GDPRT(-1))	-1.606041	0.651377	-2.465607	0.0216
LOG(RERT)	-0.830059	0.169196	-4.905897	0.0001
CRISIST	-0.084505	0.077763	-1.086698	0.2884
R-squared	0.979453	Mean dependent var	9.954797	
Adjusted R-squared	0.975880	S.D. dependent var	0.713772	
S.E. of regression	0.110853	Akaike info criterion	-1.400788	
Sum squared resid	0.282634	Schwarz criterion	-1.162895	
Log likelihood	24.61104	F-statistic	274.1006	
Durbin-Watson stat	1.480201	Prob(F-statistic)	0.000000	
ADF Test Statistic	-4.332150	1% Critical Value*	-2.6522	
		5% Critical Value	-1.9540	
		10% Critical Value	-1.6223	

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(MRT)  
 Method: Least Squares  
 Date: 01/20/09 Time: 14:54  
 Sample(adjusted): 1981 2007  
 Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRT)	2.519790	0.658861	3.824462	0.0009
DLOG(GDPRT(-1))	-0.767353	0.641472	-1.196239	0.2443
DLOG(RERT)	-0.895904	0.396456	-2.259780	0.0341
CRISIST	-0.002802	0.063400	-0.044195	0.9651
E_MRT(-1)	-0.732974	0.191359	-3.830360	0.0009
R-squared	0.777440	Mean dependent var	0.075717	
Adjusted R-squared	0.736975	S.D. dependent var	0.194427	
S.E. of regression	0.099714	Akaike info criterion	-1.607453	
Sum squared resid	0.218742	Schwarz criterion	-1.367483	
Log likelihood	26.70061	F-statistic	19.21248	
Durbin-Watson stat	1.382351	Prob(F-statistic)	0.000001	

## THAILAND EXPORT

Dependent Variable: LOG(XRT)

Method: Least Squares

Date: 01/20/09 Time: 14:55

Sample: 1980 2007

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.99007	0.735145	-17.67009	0.0000
LOG(GDPRAPT_T)	0.973189	1.810603	0.537495	0.5961
LOG(GDPRAPT_T(-1))	2.017533	1.812545	1.113094	0.2772
LOG(RERT)	-0.873175	0.208108	-4.195777	0.0003
CRISIST	-0.002536	0.079410	-0.031934	0.9748
R-squared	0.978041	Mean dependent var	9.649350	
Adjusted R-squared	0.974222	S.D. dependent var	0.787816	
S.E. of regression	0.126488	Akaike info criterion	-1.136899	
Sum squared resid	0.367984	Schwarz criterion	-0.899006	
Log likelihood	20.91659	F-statistic	256.0997	
Durbin-Watson stat	0.725245	Prob(F-statistic)	0.000000	

ADF Test Statistic	-2.965371	1% Critical Value*	-2.6522
		5% Critical Value	-1.9540
		10% Critical Value	-1.6223

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(XRT)

Method: Least Squares

Date: 01/20/09 Time: 14:56

Sample(adjusted): 1981 2007

Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRAPT_T)	3.415276	1.292313	2.642762	0.0149
DLOG(GDPRAPT_T(-1))	-0.867652	1.318523	-0.658048	0.5173
DLOG(RERT)	-0.726481	0.303645	-2.392538	0.0257
CRISIST	0.003428	0.053016	0.064661	0.9490
E_XRT(-1)	-0.392356	0.149416	-2.625937	0.0154
R-squared	0.650881	Mean dependent var	0.081993	
Adjusted R-squared	0.587405	S.D. dependent var	0.131908	
S.E. of regression	0.084729	Akaike info criterion	-1.933143	
Sum squared resid	0.157938	Schwarz criterion	-1.693173	
Log likelihood	31.09743	F-statistic	10.25396	
Durbin-Watson stat	1.655400	Prob(F-statistic)	0.000077	



## SOUTH KOREA FDI

Dependent Variable: LOG(FDIRK)

Method: Least Squares

Date: 01/21/09 Time: 14:20

Sample: 1980 2007

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-80.68752	32.84235	-2.456813	0.0228
LOG(GDPRK)	9.797441	3.694428	2.651951	0.0149
LOG(GDPRK(-1))	-3.483108	3.374420	-1.032209	0.3137
LOG(RERK)	2.093049	1.049418	1.994486	0.0592
IK-CPIK	0.003644	0.029056	0.125401	0.9014
LIBOR-CPIUS	0.102187	0.082840	1.233546	0.2310
CRISISK	-0.076127	0.510397	-0.149152	0.8829
R-squared	0.771899	Mean dependent var	6.174317	
Adjusted R-squared	0.706727	S.D. dependent var	1.078471	
S.E. of regression	0.584043	Akaike info criterion	1.974633	
Sum squared resid	7.163223	Schwarz criterion	2.307684	
Log likelihood	-20.64486	F-statistic	11.84406	
Durbin-Watson stat	0.965647	Prob(F-statistic)	0.000008	

ADF Test Statistic	-2.947483	1% Critical Value*	-2.6522
		5% Critical Value	-1.9540
		10% Critical Value	-1.6223

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(FDIRK)

Method: Least Squares

Date: 01/21/09 Time: 14:21

Sample(adjusted): 1981 2007

Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRK)	10.20170	3.481058	2.930631	0.0083
DLOG(GDPRK(-1))	-2.871692	2.504584	-1.146575	0.2651
DLOG(RERK)	0.957113	1.581788	0.605083	0.5519
D(IK-CPIK)	0.011323	0.032252	0.351083	0.7292
D(LIBOR-CPIUS)	0.135620	0.067899	1.997365	0.0596
CRISISK	0.111589	0.277099	0.402703	0.6914
E_FDIRK(-1)	-0.578507	0.199262	-2.903255	0.0088
R-squared	0.526245	Mean dependent var	0.095818	
Adjusted R-squared	0.384119	S.D. dependent var	0.614146	
S.E. of regression	0.481970	Akaike info criterion	1.596544	
Sum squared resid	4.645901	Schwarz criterion	1.932502	
Log likelihood	-14.55334	F-statistic	3.702656	
Durbin-Watson stat	2.043885	Prob(F-statistic)	0.012242	

## SOUTH KOREA IMPORT

Dependent Variable: LOG(MRK)  
 Method: Least Squares  
 Date: 01/20/09 Time: 14:58  
 Sample: 1980 2007  
 Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.577302	1.502137	1.715757	0.0996
LOG(GDPRK)	1.462277	0.727620	2.009671	0.0563
LOG(GDPRK(-1))	-0.417517	0.720217	-0.579710	0.5677
LOG(RERK)	-0.757120	0.203021	-3.729264	0.0011
CRISISK	-0.167839	0.081818	-2.051379	0.0518
R-squared	0.951301	Mean dependent var	10.59654	
Adjusted R-squared	0.942832	S.D. dependent var	0.554707	
S.E. of regression	0.132629	Akaike info criterion	-1.042082	
Sum squared resid	0.404583	Schwarz criterion	-0.804189	
Log likelihood	19.58915	F-statistic	112.3230	
Durbin-Watson stat	0.832610	Prob(F-statistic)	0.000000	

ADF Test Statistic	-2.886471	1% Critical Value*	-2.6522
		5% Critical Value	-1.9540
		10% Critical Value	-1.6223

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(MRK)  
 Method: Least Squares  
 Date: 01/20/09 Time: 14:59  
 Sample(adjusted): 1981 2007  
 Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRK)	1.153988	0.473510	2.437094	0.0234
DLOG(GDPRK(-1))	-0.157781	0.442527	-0.356545	0.7248
DLOG(RERK)	-1.287787	0.225615	-5.707907	0.0000
CRISISK	0.038958	0.048152	0.809056	0.4271
E_MRK(-1)	-0.376480	0.145958	-2.579365	0.0171
R-squared	0.802545	Mean dependent var	0.065935	
Adjusted R-squared	0.766644	S.D. dependent var	0.177774	
S.E. of regression	0.085877	Akaike info criterion	-1.906217	
Sum squared resid	0.162248	Schwarz criterion	-1.666247	
Log likelihood	30.73392	F-statistic	22.35443	
Durbin-Watson stat	1.206235	Prob(F-statistic)	0.000000	

## SOUTH KOREA EXPORT

Dependent Variable: LOG(XRK)

Method: Least Squares

Date: 01/20/09 Time: 14:59

Sample: 1980 2007

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.140501	3.067773	-0.697738	0.4923
LOG(GDPRACT_K)	-0.917344	3.791105	-0.241973	0.8109
LOG(GDPRACT_K(-1))	3.203709	3.786679	0.846047	0.4062
LOG(RERK)	-0.992969	0.395223	-2.512431	0.0195
CRISISK	0.126756	0.161715	0.783824	0.4411
R-squared	0.893033	Mean dependent var	10.42809	
Adjusted R-squared	0.874430	S.D. dependent var	0.702949	
S.E. of regression	0.249096	Akaike info criterion	0.218478	
Sum squared resid	1.427125	Schwarz criterion	0.456371	
Log likelihood	1.941314	F-statistic	48.00486	
Durbin-Watson stat	0.860725	Prob(F-statistic)	0.000000	

ADF Test Statistic	-2.186901	1% Critical Value*	-2.6522
		5% Critical Value	-1.9540
		10% Critical Value	-1.6223

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Dependent Variable: DLOG(XRK)

Method: Least Squares

Date: 01/20/09 Time: 14:59

Sample(adjusted): 1981 2007

Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDPRACT_K)	4.764207	4.004151	1.189817	0.2468
DLOG(GDPRACT_K(-1))	-3.058067	3.910921	-0.781930	0.4426
DLOG(RERK)	-0.649940	0.624177	-1.041275	0.3091
CRISISK	-0.003015	0.114380	-0.026358	0.9792
E_XRK(-1)	-0.310653	0.166156	-1.869641	0.0946
R-squared	0.351183	Mean dependent var	0.058597	
Adjusted R-squared	0.233216	S.D. dependent var	0.231884	
S.E. of regression	0.203052	Akaike info criterion	-0.185136	
Sum squared resid	0.907060	Schwarz criterion	0.054833	
Log likelihood	7.499341	F-statistic	2.976967	
Durbin-Watson stat	1.816713	Prob(F-statistic)	0.041711	