

**THE LINKAGES BETWEEN DOMESTIC
INVESTMENT, FOREIGN DIRECT
INVESTMENT AND ECONOMIC GROWTH
IN ASEAN FIVE COUNTRIES**

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UNIVERSITI SAINS MALAYSIA

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IN ASEAN FIVE COUNTRIES**

by

TAN BEE WAH

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LIST OF ABBREVIATIONS

ACIA	-ASEAN Comprehensive Investment Policy
AFTA	-ASEAN Free Trade Area
AIA	-ASEAN Investment Area
AIC	-Akaike's Information Criteria
AITIS	-Approved International Trader Scheme
ADF	-Augmented Dickey-Fuller
AR	Autoregressive
ARCH	-Autoregressive Conditional Heteroskedasticity
ASEAN	-Association of Southeast Asian Nations
BOI	-Board of Investment
ECM	-Error-Correction Model
FDI	-Foreign Direct Investment
FIC	-Foreign Investment Committee
GDP	-Gross Domestic Product
IA	-Infrastructure Allowance
IAA	-Industrial Adjustment Allowance
ICA	-Industrial Coordination Act
IISD	-International Institute for Sustainable Development
IPP	-Investment Priorities Plan
ITA	-Investment Tax Allowance
MIDA	-Malaysian Industrial Development Authority
MITI	-Ministry of International Trade and Industry
NEDA	- National Economic Development Authority

ODA	-Official Development Assistance
PP	-Phillips-Perron
R&D	-Research and Development
SMEs	-Small and Medium-sized Enterprises
TFP	-Total Productivity Function
UNCTAD	-United Nations Conference on Trade and Development
VAR	-Vector Autoregression
VECM	-Vector Error-Correction Model

HUBUNGAN ANTARA PELABURAN DOMESTIK, PELABURAN ASING DAN PERTUMBUHAN EKONOMI DI LIMA NEGARA ASEAN

ABSTRAK

Kajian ini merupakan analisis empirikal bagi hubungan antara pelaburan domestik, pelaburan asing dan pertumbuhan ekonomi di lima negara ASEAN iaitu Indonesia, Malaysia, Filipina, Singapura dan Thailand. Di samping itu, kajian ini juga mengkaji hubungan jangkamasa panjang dan hubungan kausaliti (*casuality*) antara pembolehubah-pembolehubah tersebut. Tambahan lagi, kajian ini juga menentukan kesan pelengkap dan kesan penggantian daripada pelaburan asing kepada pelaburan domestik di lima negara ASEAN.

Kajian ini menggunakan analisis ekonometrik sirimasa dalam menentukan hubungan antara pembolehubah-pembolehubah berdasarkan tempoh sampel dari tahun 1970 hingga 2009. Model teori adalah berdasarkan model pertumbuhan Solow (1956) dalam menjelaskan tingkah laku ekonom di lima negara ASEAN. Kajian ini menggunakan ujian kointegrasi (*cointegration*) Johansen dan Juselius (1990) untuk mencari hubungan keseimbangan jangkamasa panjang antara pembolehubah-pembolehubah dalam kajian tersebut. Selain itu, ujian kausaliti *Granger* juga digunakan dalam menentukan hubungan sebab dan akibat antara pembolehubah-pembolehubah dalam kajian ini.

Penemuan utama kajian ini boleh diringkaskan seperti berikut: (i) keputusan ujian kointegrasi mendedahkan kehadiran hubungan jangkamasa panjang bagi semua pembolehubah-pembolehubah dalam kajian ini di lima negara ASEAN; (ii) ujian kausaliti menunjukkan bahawa pelaburan domestik menyebabkan pertumbuhan ekonomi

di Indonesia manakala terdapat hubungan kausaliti dwiarah yang kukuh di antara pelaburan domestik dan pertumbuhan ekonomi di Malaysia, Filipina, Singapura dan Thailand, iaitu menyokong hipotesis bahawa pelaburan domestik menjadi penyumbang penting kepada pertumbuhan ekonomi dalam negara-negara ini; (iii) hubungan kausaliti daripada pelaburan asing kepada pertumbuhan ekonomi di Indonesia, Singapura dan Thailand menunjukkan bahawa kemasukan pelaburan asing yang tinggi dapat meningkatkan pertumbuhan ekonomi, manakala hubungan kausaliti dwiarah didapati di antara pelaburan domestik dan pelaburan asing di Malaysia and Filipina; (iv) hubungan kausaliti satu arah didapati daripada pelaburan domestik kepada pelaburan asing di Singapura dan Thailand, sedangkan terdapat hubungan kausaliti dwiarah antara pelaburan domestik dan pelaburan asing di Malaysia dan Filipina, iaitu membuktikan bahawa kerjasama antara pelaburan domestik dan pelaburan asing adalah penting untuk pembangunan negara. Di samping itu, hubungan kausaliti di antara pelaburan domestik dan pelaburan asing tidak dapat dikesan bagi negara Indonesia dalam kajian tersebut; (iv) hubungan penggantian daripada pelaburan asing terhadap pelaburan domestik di Singapura dan Thailand mendedahkan bahawa pengembangan aliran masuk pelaburan asing dapat merangsangkan pertumbuhan pelaburan domestik. Sebaliknya, hubungan neutral didapati di negara Indonesia, Malaysia dan Filipina. Secara kesimpulannya, keputusan kajian ini mendedahkan bahawa lima negara ASEAN ini boleh bergantung kepada pelaburan domestik dan juga pelaburan asing sebagai instrumen pertumbuhan ekonomi.

THE LINKAGES BETWEEN DOMESTIC INVESTMENT, FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN ASEAN FIVE COUNTRIES

ABSTRACT

This study is an empirical analysis of the linkages between domestic investment, FDI and economic growth in ASEAN-5 countries namely Indonesia, Malaysia, the Philippines, Singapore and Thailand. The objectives of this study are to examine the cointegration and causal relationships between the variables. Furthermore, this study also determines the complementary or substitution effects of FDI on domestic investment in the ASEAN-5 countries.

This study used the time series econometric analysis in determining the linkages between the variables for a sample period from 1970 to 2009. The theoretical model is based on the Solow's (1956) growth model in explaining the behaviour of ASEAN-5 economies. This study utilized the Johansen and Juselius (1990) cointegration test to find the potential long-run equilibrium relationship among the variables. In addition, the Granger causality test was using in determining the causal relationship among the variables.

The major findings of this study are summarized as follows: (i) the results of cointegration test revealed the presence of long-run relationship among the variables in ASEAN-5 countries; (ii) the causality test indicated that domestic investment Granger causes economic growth in Indonesia while there is strong bidirectional causality relationship between domestic investment and economic growth in Malaysia, the Philippines, Singapore and Thailand, which support the hypothesis that domestic investment is a significant contributor to economic growth among these countries; (iii) FDI Granger causes economic growth in Indonesia, Singapore and Thailand indicated

that influx of FDI will stimulate economic growth among these countries, while bidirectional causality relationship between domestic investment and FDI was found in Malaysia and the Philippines; (iv) the unidirectional causal relationship running from FDI to domestic investment in Singapore and Thailand, while bidirectional causality relationship between domestic investment and FDI in Malaysia and the Philippines, which proved that the collaborating between domestic investment and FDI are important for the economic development. Besides, domestic investment and FDI are found to have neutral causality; (iv) FDI crowds in domestic investment in Singapore and Thailand affirmed that the expansion of FDI inflows are associated with an incredible boost in domestic investment. In contradict, the neutral crowding effects of FDI on domestic investment was found in Indonesia, Malaysia and the Philippines. As a conclusion remarks, the results revealed that ASEAN-5 can rely on domestic investment and FDI as instruments of economic growth.

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Defining the determinants of economic growth is an important obligation across different economies (Parjiono, 2009). Hence, rapid and sustainable economic growth is a modern phenomenon and is of paramount importance for economic wellbeing. Thus, policymakers, governments and researchers are interested in knowing how to generate high economic growth, especially in developing countries. This is because developing countries aim to upgrade their statuses to developed countries. Thus, both theoretical and empirical researches have discussed the role of various factors in determining economic growth.

According to economic literature, the most important support for sustainable growth is investment or capital accumulation (Romer, 2001). Investment plays a crucial role in economic growth, especially in determining the long-run productive capacity of an economy. Investment creates new capital goods. A high rate of investment means capital stock grows fast. Investment spending is volatile and thus responsible for much of the fluctuation in gross domestic product (GDP) across the business cycle. In addition, investment is recognized as a central issue in macroeconomic theory, as it can increase the productive capacity in a country and encourage technological progress through the embodiment of new production techniques (Ahmad and Qayyum, 2008).

Hence, the main purpose of this study is to discover whether domestic investment or/and foreign direct investment (FDI) have been the driving force in the high economic growth in the Southeast Asian region over the past few decades. In

order to address this issue, this study uses theoretical and empirical tools to analyze the relationship between domestic investment, FDI and economic growth in five members of the Association of Southeast Asian Nations (ASEAN), or the so-called ASEAN-5 countries.

Initially, ASEAN was formed in 1967 by five countries, comprising of the Philippines, Indonesia, Malaysia, Singapore and Thailand. Then, membership expanded to Brunei, Burma (or Myanmar), Cambodia, Laos and Vietnam. In addition, Lim (2004) added that Southeast Asian countries were rich in natural and human resources. A large amount of land and labor could be brought into higher productivity through investment. Hence, the weight of foreign capitals is switching to Asia after the recent global financial crisis while the ASEAN-5 countries then became increasingly popular investment destinations, and they attracted more projects than developed economies since the 1990s. For these reasons, the ASEAN-5 countries could remain as the most influential members of ASEAN, and thus they were chosen as the subjects of this study.

1.2 Concept and Investment Classifications

From a macroeconomic perspective, there are two main reasons to study investment (Abel and Bernanke, 2005). First, the fluctuation in investment is huge in the business cycle, namely slumping during recessions while rising in booms, compared with other components of aggregate spending such as consumption, government spending and trade. For example, even though investment is only about one-sixth of GDP, in the typical recession half or more of the total decline in spending is owing to reduced investment spending. Second, investment plays a crucial role in determining the long-run productive capacity of the economy because

it creates new capital goods, and capital stock will grow quickly. Hence, the study of the relationship between investment and economic growth is important for understanding the wellbeing of a country.

1.2.1 Meaning of Macroeconomic Investment

In ordinary parlance, investment refers to the buying of shares (stocks), bonds and securities that already exist in the stock market. However, this is not real investment because it is simply the transfer of existing assets. This is called financial investment, which does not affect aggregate spending. In Keynesian terminology, investment refers to real investment, which adds capital equipment. This leads to increases in the levels of income and production through the purchase of capital goods. Investment thus includes new plants and equipment, the construction of public works such as dams, roads and buildings, net foreign investment, inventories and the stocks and shares of new companies.

Based on *The World Bank Group* glossaries, investment can be defined as the outlays made by individuals, firms or governments to add to their capital. In addition, buying property rights for existing capital is considered to be an investment. By contrast, from the viewpoint of the economy as a whole, investment is only counted if new capital is created. Furthermore, investment is a necessary condition for economic growth. However, based on *World Bank National Account Data* and the *Organization for Economic Co-operation and Development's National Account* data files, gross fixed capital formation (formerly gross domestic fixed investment) is used to determine a country's aggregate investment. This includes land improvements (fences, ditches, drain and so on), plants, machinery and equipment

purchases and the construction of public works, private residential dwellings and commercial and industrial buildings.

Moreover, Abel and Bernanke (2005) added that investment was the second major component of spending in the circular flow of income. In addition, total investment includes the purchase or construction of capital goods, including residential and non-residential buildings, equipment and software used in production and additions to inventory stocks. The amount of investment largely depends on expectations about the economy's future. The trade-off of investment is between the present and the future, which shares the same ideas as consumption and savings. In processing capital investment, a firm pledges its current resources to increasing its capacity to produce and thus earn profits in the future.

1.2.2 Investment Classifications

Macroeconomic investment can be classified into domestic investment, foreign direct investment (FDI), private investment and public investment. Figure 1 shows a clear picture of these classifications. As asserted by Morgan (1969), income is consumption and investment; investment contributes to future potential income, whereas consumption does not. He added that gross investment can be grouped into four classifications: (a) newly produced durable goods acquired by their ultimate business users, including new residence construction; (b) change in business inventories valued at current replacement cost; (c) government investment is also estimated separately and they may be convenience from adding in (d) foreign investment.

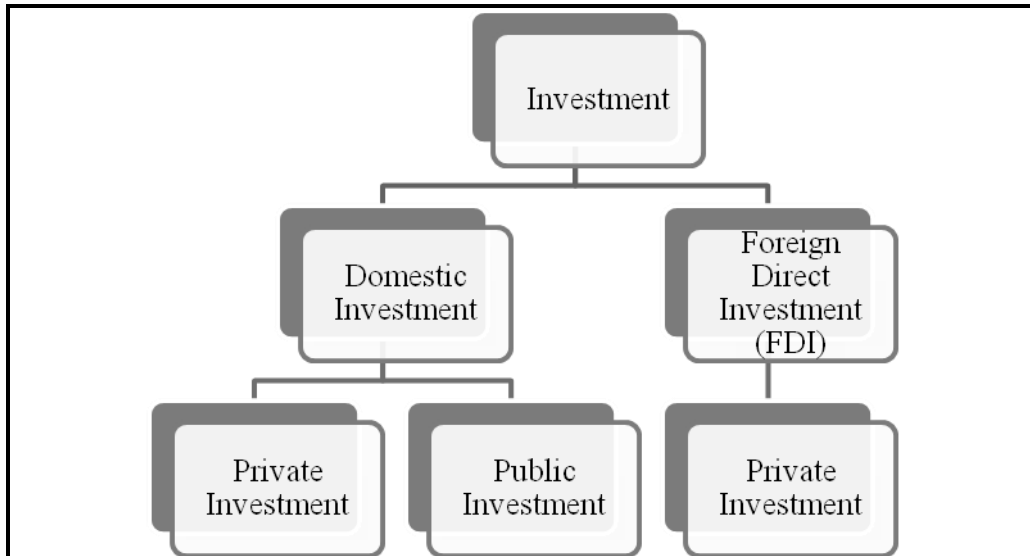


Figure 1.1: Investment Classifications

Based on the *UNCTAD FDI/TNC Database*, FDI is made to serve the business interests of the investor in a company and it is in a different nation distinct from the investor's country of origin.¹ However, FDI may be classified as inward or outward. Inward FDI is a typical form of what is termed ‘inward investment.’ Inward investment means that the investment of foreign capital occurs in local resources. The factors driving the growth of inward FDI comprise tax breaks, the relaxation of existent regulations, low interest rate loans and specific grants. The idea is that the long-run gains from such funding far outweigh the disadvantages of the income loss incurred in the short run. The flow of inward FDI may face restrictions from factors such as restraint on ownership and disparity in the performance standard.

In contrast, outward FDI is also referred to as ‘direct investment abroad.’ In this case, it is the local capital that is invested in some foreign resource, or in other words, a domestic firm expands its operations to a foreign country. In addition,

¹ UNCTAD stands for the United Nations Conference on Trade and Development, while TNC stands for transnational corporations. The UNCTAD prepared the economic manual with the aim of helping developing countries enhance the capacity of their agencies to compile and disseminate data on FDI and the operations of TNCs based on internationally recommended standards (UNCTAD, 2009).

outward FDI may also find use in the import and export dealings of a foreign country. However, outward FDI most likely flourishes under government-backed insurance at risk coverage. This also implies that if the investors have a plan but cannot afford the rate increase, some insurers under the consideration of government will allow the investors to keep it by reducing the benefits gain. It is not a happy choice but perhaps better than losing all the money that has been invested so far.

On the other side, domestic investment is that made by local companies in the domestic market. At the same time, it is also defined as the difference between gross fixed capital formation and FDI inflows in the *World Investment Report* (UNCTAD, 2004). By the same token, gross domestic investment is also defined as the additions to the capital stock located within the country, without any deductions for the depreciation of capital that had been previously produced (Economics-Dictionary.com).

Meanwhile, private investment is the name given to investment by private investors such as Dell, Intel, Mercedes, Nike and Apple. This is influenced by profit expectations and is said to be profit elastic. Private investment depends upon two factors: the interest rate and the marginal efficiency of capital. It is encouraged when the marginal efficiency of capital is high or the interest rate is low. Thus, private investment is induced investment.

By contrast, private investment is expenditure on capital goods to be used for productive activities in the domestic economy that are undertaken by the business sector during a given time period, after deducting capital depreciation. More specifically, net private investment is found by subtracting the capital consumption adjustment from gross private domestic investment. Its primary function is to

measure the net increase in capital stock resulting from investment (Economics Glossary).

Thus, investment made by the different layers of government is public investment. Tellingly, the government investment in the five ASEAN countries is classified in a similar manner, which is classified under two sub-sections: (1) government operating expenditures; and (2) government development expenditures. Investment on buildings, factories, laying railway lines, the means of communications, power projects and so on made by central government in a federation are all instances of public investment. Expenditure on hospitals, schools, canals and roads is also referred to public investment. Similarly, investments made in providing civil amenities such as street lighting and sewage works come under this category. However, it is wrong to think that public investment is not motivated by profit. The present trend is generally to make all public investment earn profits like private investment. The only exception is public utility investment in some services such as postal services, water facilities and so on. Thus, not all public investment is autonomous; it is generally induced.²

1.3 The Difference between Crowding In and Crowding Out

In terms of definition, crowding in refers to an economic principle in which private investment increases as debt-financed government spending increases. This is caused by government spending boosting the demand for goods, which in turn

² The Malaysia *Economic Planning Unit* publishes annual data on total government expenditures categorized into (1) expenditures on emoluments; (2) pension and gratuities; (3) debt service charges; (3) supplies and services; (4) subsidies; (5) asset acquisition; (6) grants and transfer; (7) agriculture and rural development; (8) trade and industry; (9) transport; (10) education; (11) health; (12) housing; (13) social and community services; and (14) other expenditures. When government investment is defined broadly, including both human and nonhuman capital, some items in most of these 14 categories would probably be classified as investment.

increases private demand for new output sources, such as factories. This is in contrast to crowding out. Additionally, Wang (2010) claimed that crowding in can also occur due to the spillover effects of FDI. For example, if the entry of MNCs in the final product industry increases the demand for domestically produced intermediate inputs, we could observe an increase in the number of domestic firms providing intermediate inputs. Thus, this would also happen when foreign firms' more advanced technology spillover to domestic firms, further enhancing their competitiveness.

On the other side, crowding out refers to a decline in investment, which is caused by expansionary fiscal policy. When government counteracts a recession (or excessive government borrowing) with an increase in spending or a reduction in taxes (both resulting in an increase in the federal deficit), interest rates tend to increase. Hence, higher interest rates then impede business investment in capital goods. Or in other words, FDI can crowd out the host country's domestic investment if MNCs are replacing the domestic firms. Harrison and McMillian (2003) also stated that crowding-out can also happen if MNCs finance their investment by borrowing in the host country, which would lead to increasing interest rates. In the event that crowding out occurs, economic growth is reduced if the government does not see to the loss in business investment with public investment in infrastructure, education, or other promoting expenditures. In addition, crowding out may also come from the state spending on things that might be provided more efficiently by the private sector, such as health care, or even through charity, redistribution (Bishop, 2004).

In most theoretical and empirical work, domestic investment or/and FDI has been identified as a key determinant of economic growth. However, FDI inflows may reduce, rather than increase, the host country's economic growth. This is the reason that if FDI crowds out domestic investment, this will inject long-term costs to

the host country, which will restrain the development of domestic capabilities and delay the growth of local firms (Wang, 2010). Hence, it is paramount to understand the impact of FDI inflows on domestic investment in the host country. Tellingly, FDI is claimed to be either crowding in or crowding out domestic investment in the economic theory. Furthermore, Ang (2008, 2009, and 2010) claimed that, when FDI crowd in domestic investment, this also means that there is a substitution of FDI on domestic investment. On the other hand, when FDI tends to crowd out domestic investment, FDI is found to have complementary effect on domestic investment.

There are dozens of empirical studies which study the crowding effect of FDI on domestic investment, for instances, Borensztein et al. (1988), Agosin and Mayer (2000), Mišun and Tomšik (2002), Backer and Sleuwaegen (2003), Kim and Seo (2003), Agosin and Machado (2005), Wang (2010), and other. Among others, Agosin and Mayer (2000) is the first paper that theoretically and empirically discussed about the crowding effect of FDI on domestic investment. They verified that *the relationship between FDI and domestic investment is likely to be complementary (crowding-in) when investment is in an undeveloped sector of the economy* (owing to technological factors or to the lack of knowledge of foreign markets). In contrast, there is a substitution (crowding-out) effect of FDI on domestic investment when FDI come into the sectors that contain plenty of domestic firms. FDI will also substitute domestic investment when domestic firms already have access to the technology that the MNEs bring into the country.

Furthermore, the crowding effects of FDI on domestic investment will be further explained in the subsequent chapter, under the theory in literature review.

1.4 An Overview of Domestic Investment, FDI and Economic Growth in ASEAN-5

The rapid rise in the economies of Southeast Asian countries has occurred for three decades. As reported by the World Bank (1993), the best eight performers in East and Southeast Asia – Hong Kong, Singapore, Taiwan, South Korea, China, Malaysia, Thailand and Indonesia – grew at an average rate of over 5.5 per cent per year in per capita terms over the 1965–1990 period. However, not all Asian countries can cope with their lead. For example, the Philippines, Burma, Cambodia, Central Asia countries and many of the Pacific Island nations all recorded average or below average growth in comparison.

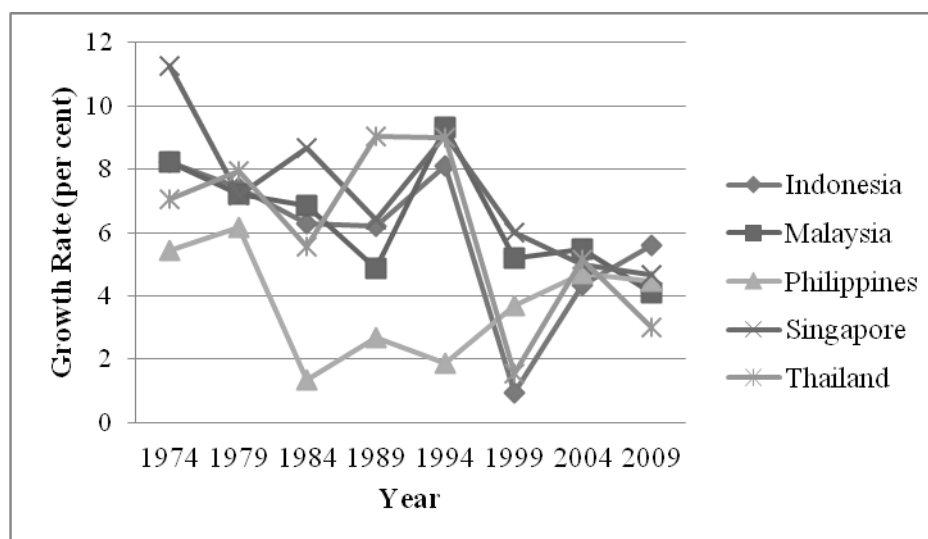
This section further explores the pattern of economic growth in ASEAN countries. ASEAN was formed because of the regional proximity and economic and political cooperation among member countries. For the past 40 years, each ASEAN-5 country has experienced substantial industrial diversification and economic growth for various factors (such as the adoption of export-oriented trade policies, Free Trade Agreement policies, the rapid flow of FDI and financial and economic crises). Selected indicators for the ASEAN-5 countries in 2009 are shown in Table 1.1. Among the ASEAN-5 countries, Singapore has the smallest land area and population, but the highest GDP per capita and the lowest debt. Indonesia is the largest country in terms of area and population but it has the highest debt and lowest real GDP per capita. The sources of rapid and sustainable growth, and the shared characteristics among the ASEAN-5 countries over the past three decades, were higher levels of FDI, physical and human capital accumulation and export growth as well as macroeconomic stability (Lim, 1999).

Table 1.1: Key Economic Indicators of the ASEAN-5 Countries in 2009

Indicators	Indonesia	Malaysia	Philippines	Singapore	Thailand
Area ('000 sq.km)	1,811,570	328,550	298,170	700	510,890
Population (millions)	229,964.72	27,467.84	91,983.10	4897.60	67,764.03
Population Growth (%)	1.1	1.7	1.8	3.0	0.6
Real GDP (US\$ billions)	258.58	137.13	119.87	144.20	173.91
Real GDP Per Capita (US\$)	4155,45	13733.31	3515.94	49763.96	8488.70
Real GDP Growth (%)	4.6	-1.7	1.1	-0.8	-2.3
Exports (US\$ billions)	110.68	147.25	54.19	477.93	116.12
Imports (US\$ billions)	84.14	128.60	51.43	427.29	94.09
Inflation – CPI (%)	6.4	0.6	3.2	0.6	-0.8
Total External Debt (US\$ billions)	157.52	66.39	62.91	21.66 est.	58.75

Source: World Bank World Tables (EconData).

Note: est stand for estimation.



Source: World Bank, World Development Indicators and Global Development Finance (<http://data.worldbank.org/indicator>).

Figure 1.2: Growth Rates of the ASEAN-5 Countries from 1970 to 2009

This study explores the economic growth (GDP), FDI and domestic investment growth in the ASEAN-5 countries over the period of 1970 to 2009. Using the data published by the World Bank Indicators, Figure 1.2 presents average GDP over the past four decades. Since the 1970s, the ASEAN-5 countries have experienced solid growth with an annual rate of 6 per cent during the period 1970 to 2009, except for the Philippines, which recorded below 3 per cent growth. Indonesia, Malaysia, Singapore and Thailand all showed at least 7 per cent growth rates before

the Asian financial crisis in 1997/98. Thailand achieved an average GDP rate of 0.93 per cent from 1995 to 1999, which is lower compared with the previous five years.

On the other side, Malaysia, Singapore and Thailand also suffered from the crisis with average GDP rates at 5.19 per cent, 6.02 per cent and 1.54 per cent from 1995 to 1999. These were the lowest GDP rates that had ever been achieved by these countries. Since then, economic growth has recovered slowly and inconsistently, with an average growth rate of 4.24 per cent (Indonesia), 5.47 per cent (Malaysia), 4.98 per cent (Singapore) and 5.14 per cent (Thailand) from 2000 to 2004. Average GDP from 2005 to 2009 for Indonesia grew to 5.61 per cent. However, the other four countries showed slight decreases (4.08 per cent for Malaysia, 4.46 per cent for the Philippines, 4.65 per cent for Singapore and 2.99 for Thailand). Figure 1.1 presents the average real GDP growth rates in the ASEAN-5 countries between 1970 and 2009.

Table 1.2: Average of FDI Inflows from 1970 to 2009 in ASEAN-5 (US\$ million)

Year	Indonesia	Malaysia	Philippines	Singapore	Thailand
1970-1974	292.22	210.16	42.94	212.62	83.28
1975-1979	583.67	442.22	117.10	389.98	76.35
1980-1984	234.42	1130.76	39.20	1386.67	284.28
1985-1989	442.20	708.71	389.00	2426.92	731.69
1990-1994	1693.00	4172.34	826.20	5180.53	1948.22
1996-1999	2622.12	4090.36	1550.20	11772.39	4343.21
2000-2004	-1216.70	2928.47	1031.20	13962.49	4570.90
2005-2009	6874.88	5450.56	2208.4	22627.68	8905.01
1970-2009	1440.73	2402.95	775.53	7244.91	2617.88

Source: World Bank, World Development Indicators and Global Development Finance (<http://data.worldbank.org/indicator>).

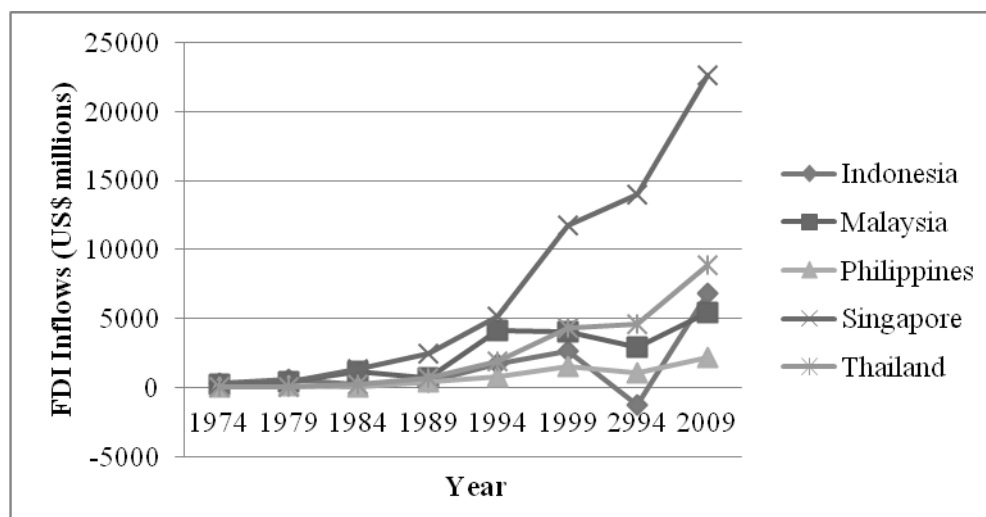
In the new millennium, FDI has become an important contributor to the growth and transformation of Southeast Asian economies, particularly in improvements to technological progress, production capacity and trade. Due to the global crisis since 2007, ASEAN FDI has declined from US\$69.9 billion to US\$59.7

billion. Table 1.2 presents the average FDI inflows for the ASEAN-5 countries between 1970 and 2009. FDI inflows have spurred Singapore's growth among Southeast Asian countries since the 1970s. Singapore received US\$212.62 million from FDI inflows between 1970 and 1974, which grew to US\$11772.39 million from 1996 to 1999. Singapore was immune to the Asian financial crisis and its FDI inflows increased at a rapid pace from 2000 to 2004 and from 2005 to 2009, recorded as US\$13962.49 million and US\$22627.682 million, respectively.

By contrast, FDI inflows to Indonesia, Malaysia, the Philippines and Thailand from 1970 to 2009 were US\$1440.73 million, US\$2402.95 million, US\$775.53 million and US\$2617.88 million, respectively. These FDI inflows slowed down from 1997 to 2001 because of the Asian financial crisis and increased at a slow pace thereafter. Total FDI inflows started to recover from 2005. At an individual country level, the sharpest increase in net inflows was experienced by Singapore, whereas the average FDI inflows for Indonesia, Malaysia, the Philippines and Thailand amounted for US\$6874.88 million, US\$5450.56 million, US\$2208.40 million and US\$8905.01 million, respectively. The uneven distribution of FDI inflows between the ASEAN-5 countries is caused in part by a number of challenges that restrain further inflows. In fact, the ASEAN-5 countries all face the common challenges of high rates of inflation, slow implementation of privatization programs and global economic crises (see also Figure 1.3).

By contrast, in Thailand, domestic investment accounted for more than 30 per cent of total GDP from the 1970s to the 2000s. This share declined to 2.6 per cent (2001 to 2004) before picking up again to 25.1 per cent between 2005 and 2009. Domestic investment in Malaysia was less than 20 per cent during the 1970s and

1980s. This number surged to 33.3 per cent between 1995 and 1999, making it the highest from the 1970s to now.



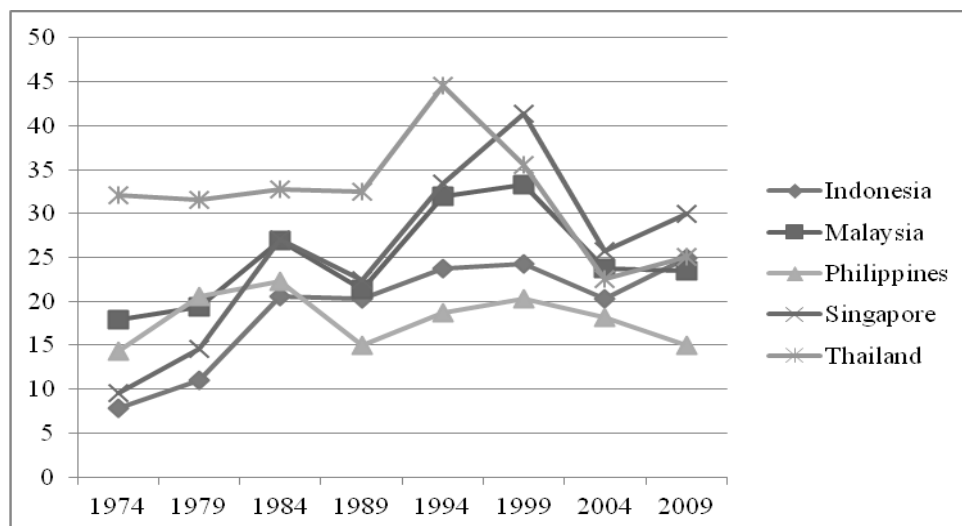
Source: World Bank, World Development Indicators and Global Development Finance (<http://data.worldbank.org/indicator>).

Figure 1.3: FDI Inflows into the ASEAN-5 Countries from 1970 to 2009

Table 1.3: Domestic Investment as a Proportion of GDP in ASEAN-5

Year	Indonesia	Malaysia	Philippines	Singapore	Thailand
1970-1974	7.8	17.9	14.4	9.6	32.1
1975-1979	11.0	19.4	20.5	14.6	31.6
1980-1984	20.6	26.9	22.3	27	32.8
1985-1989	20.3	21.3	15	22.4	32.5
1990-1994	23.7	31.9	18.7	33.4	44.5
1995-1999	24.3	33.3	20.3	41.4	35.5
2000-2004	20.3	23.7	18.2	25.8	22.6
2005-2009	25.0	23.5	15	30	25.1
1970-2009	19.2	24.7	18.1	25.50	32.1

Source: World Bank, World Development Indicators and Global Development Finance (<http://data.worldbank.org/indicator>).



Source: World Bank, World Development Indicators and Global Development Finance (<http://data.worldbank.org/indicator>).

Figure 1.4: Domestic Investment as a Proportion of GDP in the ASEAN-5 Countries

Nevertheless, domestic investment in Singapore contributed 41.4 per cent to GDP for the period 1995–1999, which is the highest of all periods. By contrast, the share in Indonesia was 7.8 per cent in the early 1970s, which grew to 24.3 per cent in 1995 to 1999 (see, for Figure 1.4). Therefore, it is important to examine the relationship between domestic investment, FDI and economic growth in the ASEAN-5 countries because this could contribute to better investment and economic policy implementation.

1.5 Problem Statement

Most developing countries – including ASEAN countries – rely heavily on the influx of foreign capital to generate economic growth. However, in the wake of recent financial crises, foreign capital may not be a sustainable source for long-term

economic growth.³ Griffin and Enos (1970) described the influx of foreign capital from developed to less developed countries as an attempt to exploit the recipient country's natural resources. Therefore, they concluded that the influx of foreign capital is no longer a reliable source for sustainable long-term economic growth.

For this reason, the Economic Transformation Program was launched in 2010 through the New Economic Model – in the case of Malaysia – to emphasize the role of domestic investment in stimulating economic growth. Specifically, the primary objective of this transformation program is to propel the private sector to step up and make a full contribution to upgrade Malaysia to a developed nation by 2020. Furthermore, an Investment Board has been assigned to assist the Indonesian government in handling foreign and domestic investment matters in Indonesia. Domestic investment activity is claimed to be increasing and this trend is expected to continue, largely as a result of the Indonesian industry's positive attitude towards the election of President Susilo Bambang Yudhoyono and the expectation of political stability and effective government (AFS, 2005).

In Thailand, from 2001 to 2006, the administration of former Prime Minister Thaksin embraced a "dual track" economic policy that combined domestic stimulus programs with Thailand's traditional promotion of open markets and foreign investment to stimulate domestic investment. The Philippines Quarterly Update in 2011 ascertained that the early gains of President Aquino's administration in tackling corruption and improving the investment climate have aimed to boost domestic

³ In recent years, ASEAN investment has faced several issues and challenges such as a decline in FDI following the Asian financial crisis, the September 11 incident in the United States in 2001 and the global financial crisis 2007. Since 1997, Southeast Asian countries have recovered slowly from the Asian financial crisis. Most ASEAN countries depend on the capital inflows running from developed countries such as the US, European countries and some Asian countries (Japan, Korea, and China).

investment. Motivated by the abovementioned program and the vulnerability of relying on foreign capital, it is important to analyze the dynamic relationship between investment and economic growth in the ASEAN-5 countries.

Dozens of studies have discussed the relationship between FDI and economic growth, domestic investment and economic growth. However, few have focused on how domestic investment and FDI increases economic growth in the ASEAN-5 countries; and on the influence of FDI on domestic investment in the ASEAN-5 countries. FDI is an important instrument to boost economic growth, but the switching of the economic climate has allowed us to focus on domestic investment. As noted in the previous section, investment is one of the fastest growing tools in the global economy and currently the most important mission for the ASEAN countries in terms of domestic investment. From 1970 to 2009, domestic investment grew among the ASEAN five countries, which helped ASEAN nations rebound from the Asian financial crisis. This rebound produced strong economic growth in the early 2000s. However, many challenges are looming and the sustained recovery of the ASEAN economy depends not just on prudent investment or/and macroeconomic policies but also on structural reforms (according to a WTO report on the trade policies and practices of Malaysia). The former Prime Minister of Malaysia, Datuk Seri Mahathir Mohamed, further stated that Malaysia should not just concentrate on attracting foreign investors, but even more importantly, it should attract domestic investors as well in order to convince the sluggish economy. Given the aforementioned scenario of domestic investment in the ASEAN-5 countries and the various efforts by governments to develop domestic investment, the following are the relevant issues:

- (i) Since domestic investment and FDI seems to contribute to the national economy, is there a statistically significant relationship between domestic investment, FDI and economic growth in the ASEAN-5 countries?
- (ii) Since the contribution of domestic investment to the national economy is to some extent influenced by FDI, is there substitution or complementary effect from FDI to domestic investment?

In addition, the review of related literature suggests that domestic investment, FDI, interest rate and total trade explain the economic growth in a particular country.

1.6 Objectives of the Study

The main objective of the study is to determine the linkages between domestic investment, FDI and economic growth in the ASEAN-5 countries. The specific objectives are set out below:

- (1) To investigate the presence of long-run relationships between domestic investment, FDI and economic growth in the ASEAN-5 countries.
- (2) To determine the causal relationship between domestic investment, FDI and economic growth in the ASEAN-5 countries.
- (3) To determine the complementary or substitution effects of FDI on domestic investment in the ASEAN-5 countries.

1.7 Scope of the Study

This study aims to identify linkages between domestic investment, FDI and economic growth in the ASEAN-5 countries by using time series econometrics models. In addition, it also investigates the presence of short-run and long-run relationships between domestic investment, FDI and economic growth by employing

the Johansen co-integration test based on vector autoregressive models. Furthermore, by using the Granger causality test, this study examines the causal relationships between domestic investment, FDI and economic growth in the ASEAN-5 nations. Finally, it aims to find out the complementary or substitution effects from FDI to domestic investment in these countries. The dependent variable is economic growth, which is proxy by the real GDP of the ASEAN-5 countries. The selection of these countries is based on the top five emerging markets in Southeast Asia. Several limitations were placed on the selection of countries, and this resulted in Vietnam being excluded from the sample even though it is the new emerging economy in ASEAN (data unavailability from 1994 also played a role in this decision). The independent variables in this study are domestic investment, FDI, interest rate and total trade. In addressing the three objectives, this study uses yearly data from 1970 to 2009.

1.8 Significance of the Study

Given the objectives of the study, the justification of this study is as follows:

- (i) For domestic investors and policymakers:

If the results of this study provide evidence of linkages between domestic investment, FDI and economic growth in the ASEAN-5 countries, this would give an insight to policymakers and domestic investors, so that they can equip themselves with strategies and policies for overcoming the negative economy scenario. Hence, this would help stimulate the growth in domestic investment and improve economic growth in the ASEAN countries as well as in other developing countries.

(ii) Contribution to the body of knowledge:

To the best of our knowledge, published works on domestic investment, FDI and economic growth in ASEAN countries, especially in Indonesia, Malaysia, the Philippines, Singapore and Thailand are limited, especially works using country specific econometric approaches. Indeed, previous empirical studies have conducted panel data analyses to define the linkages between domestic investment and economic growth. However, the findings of these studies are more relevant for formulating regional policies rather than country-specific policies. Panel data studies are based on a restrictive assumption of homogeneity in the observed relationship across countries (Athukorala and Sen, 2002). In practice, the economic relationship tends to be heterogeneous, however, because of differences in economic, income and demographic factors. Therefore, this study provides a meaningful contribution to the body of knowledge by investigating the linkages between domestic investment and economic growth in the ASEAN-5 nations.

1.9 Organization of the Study

The remainder of this thesis is organized into six chapters. Chapter 2 explores the investment policies within the ASEAN-5 countries to help address the different policy implementations. In addition, the five countries' investment incentives are summarized in order to find out the best policy for them. This chapter also shows the different investment policies by country, and compares and identifies the best one to implement in order to stimulate economic growth.

Chapter 3 explores how domestic investments and FDI influence economic growth in developed, developing and third world countries. This chapter has two parts: the first provides a theoretical background of domestic and foreign investment, and economic growth since the 1900s. In addition, the theoretical background on the crowding in and out effects will also be discussed under the same session. The second part reviews empirical studies of the relationship between domestic investment, FDI and economic growth; and the crowding effects of FDI on domestic investment.

Chapter 4 uses statistical and econometrical analysis to examine the relationship between domestic investment, FDI and economic growth in the ASEAN-5 countries. Firstly, a brief theoretical framework is summarized. Secondly, the methodological and analytical framework is presented.

Chapter 5 provides the main findings from the analytical procedures. The outcome of this chapter leads to policy implications for increasing economic growth in the ASEAN-5 countries.

Chapter 6 summarizes the whole study and adds policy implementations. This chapter also outlines the contributions of the research to the body of knowledge, limitations and suggestions for future research.

CHAPTER 2

INVESTMENT POLICIES IN ASEAN-5 COUNTRIES

2.1 Introduction

Over the past few decades, Southeast Asia has become a vigorous region with vast investment opportunities. The fluctuating investment trend of Southeast Asia regions have been documented in investment reports. For instance, the World Investment Report (UNCTAD, 2005) claimed that the ASEAN-5 grew at a faster average rate than all other regions in the world over the study period (1970–2009). Nevertheless, high-performing Southeast Asian economies such as Singapore, Malaysia and Thailand have grown as fast as the rest of the ASEAN countries since the 1990s. Therefore, with an abundance of natural resources and strategic location within Southeast Asia, the ASEAN-5 countries are appealing to foreign investors. In addition, the Asian financial crisis has generated investment far below the ASEAN-5 potential. Thus, country-specific investment policy is being formulated to ensure stable growth within the ASEAN-5 countries, enhance domestic investors' confidence and renew interest in FDI among the ASEAN countries.⁴ This chapter offers a clear picture of various FDI and domestic investment policies and incentives that have been formed by the ASEAN-5 governments.

⁴ Based on the ASEAN Investment Report 2006, in view of the challenges and opportunities globally, ASEAN is rapidly responding with individual and unilateral FDI policy initiatives to improve its investment climate and facilitate its regional integration efforts. The succeeding portion enumerates FDI updates; the various policy thrusts and actions that have been undertaken by the ASEAN members toward the attainment of the said objectives. Briefly, these updates include the latest FDI trends, the identification of priority areas and the provision of new incentives.

2.2 Overview of Investment Policy in the ASEAN-5 Countries

A number of policies have been designed to attract foreign capital and technology to ensure growth in ASEAN countries. Typically, these investment policies are more focused on attracting foreign capital (FDI) relative to domestic investment. In addition, ASEAN has claimed that FDI plays an important role in the rapid economic development of newly industrializing and developing economies in Southeast Asia. Thus, this has allowed foreign investors to enjoy the advantages of certain investment incentives in order to improve FDI in ASEAN countries. These investment incentives include the ASEAN Free Trade Area (AFTA), ASEAN Investment Area (AIA) and ASEAN Comprehensive Investment Policy (ACIA). These economic integrations are discussed in the sub-sections below.

2.2.1 AFTA

According to the Ministry of International Trade and Industry (MITI) in Malaysia, AFTA was formulated in January 1992. It was declared that a free trade area would be established by 2008. The main objectives of AFTA are to create a single market and an international production base, attract FDI and expand intra-ASEAN trade and investment in order to attract local and foreign investors and make the manufacturing sector more efficient and internationally competitive within a liberalizing global market. An integrated regional market is expected to produce economic benefits such as greater consumer welfare, the exploitation of economies of scale, competition-induced efficiency, industrial rationalization and inter-industry and intra-industry linkages (Reinert et al., 2009).

To realize the benefits of AFTA, Malaysia and the other ASEAN-5 members formed a complete free trade area. According to the ASEAN official website,

AFTA's implementation has reduced tariffs on manufactured imports from ASEAN countries through the Common Effective Preferential Tariff scheme.⁵ The implications of such an arrangement are important. In addition, the purpose of establishing AFTA is also to leverage the huge potentials and complementarities that exist in the region in order to strengthen and deepen intra-ASEAN industrial linkages, including creating competitive in small and medium-sized enterprises. The liberalization of trade in the region through the elimination of both intra-regional tariffs and non-tariff barriers has contributed to making ASEAN's manufacturing sectors more efficient and competitive in the global market. As a result, consumers are able to source goods from more efficient producers in ASEAN, thus creating robust intra-ASEAN trade.

2.2.2 AIA

Officially signed in October 1998, the AIA covers all direct investments, excluding portfolio investment and investment matters covered by other ASEAN agreements such as the ASEAN Framework Agreement on Services. It aims to make ASEAN a competitive, conducive and liberal investment area by, among others, implementing coordinated ASEAN investment cooperation and facilitation programs; implementing a coordinated promotion program and investment awareness activities; immediately opening up most industries to all investors by 2020; actively involving the private sector in the AIA development process; promoting freer flows of capital, skilled labor, professional expertise and technology among member countries; providing transparency in investment policies, rules, procedures and administrative

⁵ This scheme is an agreed effective tariff, preferential to ASEAN, which requires that tariff rates levied on a wide range of products traded within the region be reduced to no more than 5 per cent. Furthermore, all import duties have been eliminated for the six original member countries and will be by 2015 for the four newer member countries of ASEAN (<http://www.asean.org/>).