



Faculty of Economics and Business

## Total Export and Economic Growth: Evidence in ASEAN-3

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**TOTAL EXPORT AND ECONOMIC GROWTH: EVIDENCE IN ASEAN-3**

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the requirements for the degree of Bachelor of Economics with Honours  
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## **Statement of Originality**

The work described in this Final Year Project, entitled  
**“Total Export and Economic Growth: Evidence in ASEAN-3”**  
is to the best of the author’s knowledge that of the author except  
where due reference is made.

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## **ABSTRACT**

### **TOTAL EXPORT AND ECONOMIC GROWTH: EVIDENCE IN ASEAN-3**

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The objective of this study is to reveal causality pattern between total export and economic growth which is represent by Gross Domestic Product (GDP) in ASEAN-3 countries, namely Malaysia, Thailand and Indonesia, and hence determine the validity of the export-led growth hypothesis in those countries. The data used are from period 1970 to 2005 and was transform in logarithmic form. From the test conducted, the result brings to a few conclusions. A cointegrated relationship between export and economic growth was not detected in all the countries. This means, there is no long run relationship between GDP and total exports and can be said that the variables are drift apart in the long run. Moreover, further analysis showed that there is a bi-directional causality pattern exists in ASEAN-3 countries. Export is found as Granger cause GDP and GDP is found as Granger cause export as well. Government policies towards outward-oriented is welcome to propel economic growth as well as exports.

## **ABSTRAK**

### **JUMLAH EKSPORT DAN PERTUMBUHAN EKONOMI: KAJIAN DI ASEAN-3**

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Objektif kajian ini ialah untuk melihat hubungan penyebab diantara jumlah eksport dan pertumbuhan ekonomi yang diwakili oleh Keluaran Dalam Negara Kasar (KDNK) di negara-negara ASEAN-3, iaitu Malaysia, Thailand dan Indonesia, dan justeru mengetahui kesahan hipotesis “export-led growth” di negara-negara tersebut. Data yang digunakan bermula dari tahun 1970 sehingga 2005 dan telah ditukar kedalam bentuk logaritma. Berdasarkan ujian yang telah dibuat, keputusannya membawa kepada beberapa kesimpulan. Pertama, perhubungan kopengamiran diantara eksport dan pertumbuhan ekonomi tidak dikesan di kesemua negara tersebut. Hal ini bermaksud, tiada hubungan jangka panjang wujud diantara jumlah eksport dan KDNK, dan disimpulkan bahawa pembolehubah-pembolehubah tersebut akan berpisah dalam jangka panjang. Seterusnya, analisis menunjukkan terdapat hubungan penyebab dua hala di negara-negara ASEAN-3. Eksport didapati penyebab Granger kepada KDNK dan KDNK didapati penyebab Granger kepada eksport. Polisi kerajaan terhadap pengaktifan dasar perdagangan dengan negara lain dialukan kerana dapat meningkatkan pertumbuhan ekonomi negara selari dengan pertumbuhan eksport.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 Background of Study**

Association of Southeast Asian Nations (ASEAN) was established on August 1967 with its original members are Malaysia, Thailand, republics of Indonesia, Philippines and Singapore. The ASEAN secretariat, is located at Jakarta, Indonesia, and will administer the organization's activities. ASEAN functional is to promote stability and economic growth in Southeast Asia ([www.aseansec.org](http://www.aseansec.org)). Among the members, perhaps Singapore is the best or a leader in terms of economics. However, Malaysia, Thailand and Indonesia are not far behind, converging towards the remarkable progress. In this regard, it is believed that the growth in economics in these three countries is caused by the export.

#### **1.0.1 Causality: Total Export and Economic Growth**

The relationship between macroeconomics variables and economic growth has been particular importance in any region in this world. Economic growth which was most of the time be represented by the Gross Domestic Product (GDP) is a benchmark or an indicator that used to determine the level of growth or achievement at certain period for the country. There are number of empirical study has been carried out to test

the hypotheses that export promotion strategies speed up the tempo of economic growth, what has become known as Export-led growth (ELG) hypotheses. On the other hand, previous study did mentioned too about growth-led export hypotheses. Remarkable economic growth is assumed able to determine the level of export in such a way that it has positive relationship.

Exports, international trade, efficiency of resource allocation and economic prosperity are interrelated (Choong, Yusop and Khim, 2005). Empirical studies to date by and large support the export-led hypotheses. While the case for an export-led growth is well-established, studies also argue for the potential for growth-led exports. This is a case when growth-induced supply and demand do not give rise to anti-trade bias (Bhagwati, 1988) and when economic growth leads to enhancement of skills and technology that creates comparative advantage for the country facilitating exports (Krugman, 1984). There is also the prospect for a feedback causation between exports and growth (Helpman and Krugman, 1985; Bhagwati, 1988). Finally, there is the potential for no causal relationship between exports and economic growth since other variables in the economic system may determine the growth paths of the time series (Yaghmaian, 1994).

The discussion in this study basically emphasis about one major set. The discussion will focuses on the causality between total export and economic growth, such as revealing answers to the question, is economic growth propelled by export or vice versa? Comparison will be made among the countries concerned; the second group of

Newly Industrialized Country (NIC) in Asian, namely Malaysia, Thailand and Indonesia.

Yi and Yong (2002) mentioned that the *previous estimations of the contribution of export all share a common shortcoming. They estimate only the direct impact of export and ignore the indirect impacts, which include consumption, investment, government expenditure and imports. Because of this shortcoming, previous estimations should not be used to guide for policy formulation, or the policies may be misleading. For example, a typical conclusion is that exports have not generated much economic growth since the start of the reforms. Following this argument, economists tend to emphasize domestic demand and to overlook the importance of exports.*

The ‘discovery’ of the negative relationship has challenged the theoretical foundation of the estimation method. According to the national income identity, GDP is the sum of consumption, investment, government expenditures and net exports. Therefore, net exports and GDP should be positively related. Yi and Yong (2002), in their study however, have list out two exceptional conditions that has resulting these two variables potentially negatively related:

1) every time net exports increase, there comes an exogenous force that could affect other variables in the identity, which finally leads to a decrease in GDP;

2) when independent variables in the identity are correlated. For instance, an increase in investment and consumption may lead to an increase in imports and consequently a decrease in net exports but the GDP as a whole still increases.

It is difficult to believe that an unpredictable exogenous force would take effect whenever net exports increase. Therefore, the second condition might be the major reason for the “negative relation” between net exports and GDP growth (Zhang and Hu, 1999). But the key issue is that since we have realized the existence of the correlation among consumption, investment, imports and exports, we should also acknowledge the limitations of the traditional estimation method, because it only illustrates the direct quantitative relationship between the total exports and GDP, but it fails to reflect the relationship between net exports and other variables. Therefore, the estimated low contribution might be attributable to overlooking such correlations and thus should not be used as the foundation for theoretical research and policy discussion.

### **1.1 Definition of Total Export and Economic Growth**

The idea of “export-led growth” sees the growth of exports as having a stimulating influence across the economy as a whole in the form of technological spillovers and other externalities. As proposed by Gordon (1993), export is goods or services that produced within one country and shipped to another country. Export in developing countries is relatively very important. It contribute about one third of the total world exports. Leading on the commodity export was merchandise export which on average is about 27 per cent of GDP among the developing countries (Microsoft Encarta, 2005). In ASEAN-3 countries, their advantage is often related to its variety of natural resources. Export of timber, fuel, food-based products, and other primary products are frequently reflected in increasing in trade. Besides that, ASEAN-3

countries are quite known as to have less skilled labour. This labour however, can be use in the combination with the natural resources in producing less skilled labour intensive manufactures. Foreign demand for export depends on the foreign income and the price of the product exported into the foreign market.

Economic growth in other hands is the studies of the causes of sustained growth in natural real GDP (Gordon, 1993). In addition, Parkin (1998) defined economic growth as the increase of production possibilities that results from capital accumulation referred to the increasing of capital resources and technological change in the development of new good and the better ways to produce goods and services. The idea “growth-led export” arise through assumption whereas an increasing in GDP will stimulate the pace level of export and also has positive relationship. In conclusion, economic growth is the increase in the total amount of production and wealth in an economy.

In ASEAN, overall economic performance has been very good since 1980s and was expected continuing long-term growth. However, as the economic crisis strike in late 1990s, the value of some ASEAN countries currencies fell dramatically, impeding the ability of certain governments, banks and business to repay their foreign debt (Microsoft Encarta, 2005). Two out of three ASEAN-3 countries, notably Indonesia and Thailand even obtained large loans from the International Monetary Fund (IMF) to meet their debt obligations.

**Table 1: Selected Economic Indicators in ASEAN-3 Countries.**

Average	GDP growth (%)	Merchandise Export Growth (%)	Merchandise Import Growth (%)
<b>Malaysia</b>			
1990-1992	8.70	17.13	21.70
1993-1995	8.93	21.93	25.5
1996-1998	3.30	0.20	-7.90
1999-2001	4.93	8.33	10.47
<b>Thailand</b>			
1990-1992	9.27	17.5	17.23
1993-1995	8.53	20.03	19.67
1996-1998	2.10	1.47	-3.92
1999-2001	3.60	6.67	15.13
<b>Indonesia</b>			
1990-1992	8.37	13.73	18.33
1993-1995	7.47	9.76	14.33
1996-1998	-0.23	2.50	-6.10
1999-2001	3.00	6.50	5.17

Sources: International Financial Statistics and Asian Development Outlook, various issues

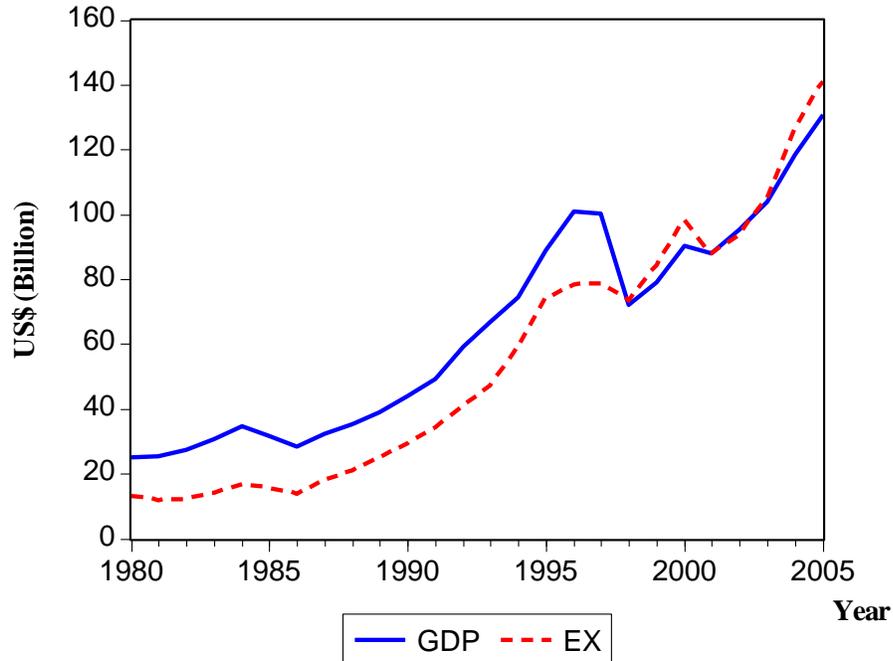
Malaysia, Indonesia, and Thailand have displayed a rapid economic growth with remarkable rates of growth for a sustained period. Table 1 present some economic indicators in these three countries before and after the financial crisis period. In year 1990 to 1992, the average GDP growth rate for Indonesia, Malaysia, and Thailand accounted up to 8.37 per cent, 8.70 per cent, and 9.27 per cent respectively. Moreover, the average GDP growth for ASEAN-3 economies in 1993 to 1995 was around 7 to 8 per cent. During the financial crisis the average GDP growth fell to -0.2 to 3 per cent. There was an increase in average GDP growth rate for the year 1999 to 2001. The increase rate was 3 per cent for Indonesia, Thailand 3.60 per cent and Malaysia about 4.93 per cent. Despite the high economic growth, the inflation rate has been low for the some period.

Malaysia and Thailand are considered stable economies with relatively low inflation rates of 1 to 6 per cent in the period 1990 to 2001. However, during that period Indonesia average inflation rate was about 9 to 24 per cent (Asian Development Bank).

From the Table 1, the merchandise export growth, is at a rate around 9 to 21 per cent for Indonesia, Malaysia, and Thailand in 1990 to 1995. However, for the following years the average rate of merchandise export growth has declined to 0.2 to 3 per cent due to the economic turn down. During that time, most of the developing countries depend heavily on trade with outside world to provide markets for their products. Besides that, developing countries also have to import certain product from other countries. As shown in Table 1, average merchandise import growth for ASEAN-3 is about 14 to 26 per cent in year 1990 to 1995. On the other hand, the percentage has declined to -7 to 15 per cent over the 1998 to 2001 periods. (Asian Development Bank).

## 1.2 The Pattern of Total Export and Economic Growth in ASEAN-3 Countries.

Figure 1: Performance of Total Export and Economic Growth in Malaysia, 1980-2005



Sources: International Monetary Fund Statistics and Asian statistic web, various issues

The economy of Malaysia once relied principally on the production of raw materials for export. For example, petroleum, natural rubber, tin, palm oil, and timber. After Malaysia gained independence in 1957, however, the development of the manufacturing sector took priority. From the mid-1970s to mid-1990s Malaysia had one of the world's fastest-growing economies, mainly due to rapid industrialization. In the late 1980s industry replaced agriculture as the largest contributor to the gross domestic product (GDP). The services sector, especially tourism, also drove growth ([www.state.gov](http://www.state.gov)).

The graphical derivation of total export and economic growth indicator as shown in Figure 1 above serve annually data for Malaysia, taken from period 1980 to 2003. As in the past, the manufacturing sector and export expansion continued to be the driving forces, aided in 1995 by a turnaround in agriculture and mining. Malaysia is considered to be a model of export-oriented growth, in an accounting sense.

Capacity expansion in the manufacturing sector and higher prices of Malaysia's major agriculture exports resulted in further improvement on the strong export performance in 1994. In value terms, exports grew by about 27 per cent in 1995, with manufactured exports increasing by 28 per cent. Agriculture and mineral export earnings also recovered because of higher export unit values as well as increased volumes of palm oil, natural rubber, crude oil, and liquefied natural gas. The growth in manufactured exports was led by electrical and electronic products, which accounted about 65 per cent of Malaysia's manufactured exports. All sub sectors had strong growth, with exports of electronic components increasing by 31 per cent, consumer electronics by 36 per cent, and cables and wires 35 per cent. The second largest foreign exchange earner was chemical industry. Exports of which increased over 50 per cent in 1995 as new capacity continued to come on stream (Asian Development Bank).

Towards achieving its "Vision 2020", Malaysia has invested heavily in modernizing the infrastructure, especially in Kuala Lumpur metropolitan area. The modernization is design to propel Malaysia as a hub for high-tech businesses in Southeast Asia. However, the reliance on exports of manufacturing goods, such as digital microchips and electrical components, has resulting its economy becoming

vulnerable to world economic downturns. Economic crisis in late 1997 causes Malaysia to suffered economic decline. Thus delaying some of infrastructure projects and not impossible its “Vision 2020” (Microsoft Encarta, 2005).

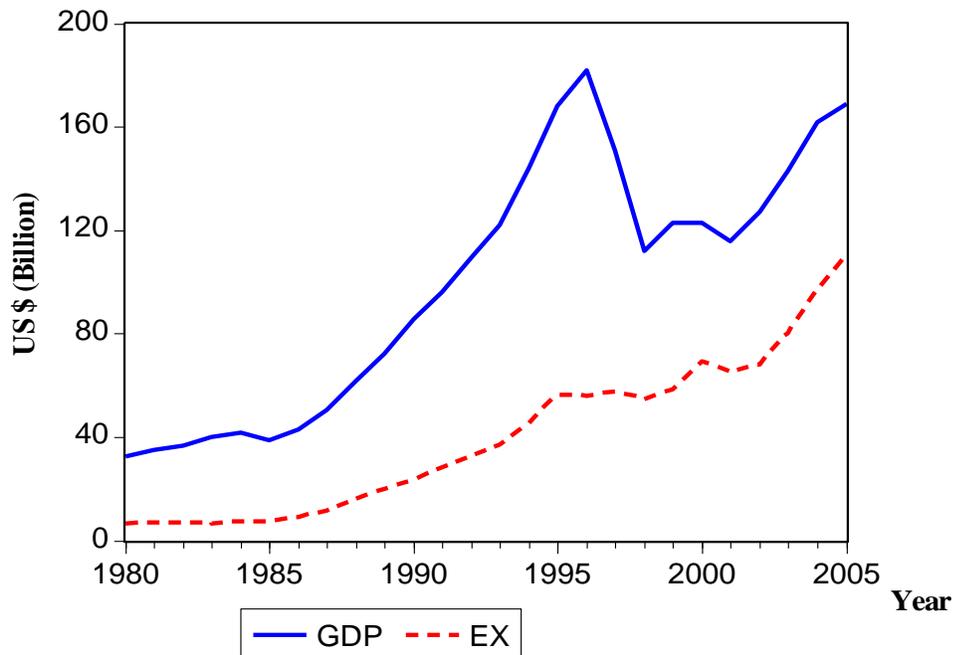
Overall, Malaysia economics expanded at an average of 6.2 per cent annually in the period 1990 to 2002. In 1997 Malaysia’s annual budget included revenues of about US\$23 billion and expenditures of about US\$20 billion. The country’s GDP was US\$94.9 billion in 2002. Industry, including mining and construction, accounted for 47 per cent of the GDP, services at 44 per cent, and agriculture, forestry, and fishing at 9 per cent (Asian Development Bank)

The economy saw a recovery in 2002, led by strong consumption demand and a recovery in exports, though it is still performing below capacity. On the external front, both exports and imports rebounded in 2002. Thanks to a significant recovery of major items such as palm oil, semiconductors, textiles, chemicals, and furniture in the latter half of the year, annual merchandise exports grew by 6.1 per cent in 2002, compared with a fall of 10.6 per cent in the previous year. Exports to ASEAN countries, PRC, and US increased, while markets in the EU and Japan remained weak. Imports rose beginning in the second quarter of 2002 as domestic demand and component inputs for exports began to pick up (Bank Negara Malaysia).

Given higher world commodity prices in 2003, the nominal value of palm oil exports surged by 36.3 per cent, and agricultural products’ share of exports raised from 6.5 per cent in 2002 to 8.4 per cent in 2003. Services grew by 4.4 per cent

(www.aseansec.org), as the damage done by the regional SARS outbreak to the tourism and retail sectors faded in the second half. On the external side, the improvement in the global economic environment in the second half of the year 2003, coupled with the ringgit's depreciation, led to a doubling of growth in merchandise exports to 12.4 per cent (Bank Negara Malaysia).

**Figure 2: Performance of Total Export and Economic Growth in Thailand, 1980-2005**



Sources: International Monetary Fund Statistics and Asian statistic web, various issues

The recent history of Thailand's economy is defined by more than a decade of sustained and rapid economic growth beginning in 1985, followed by a severe recession that started in late 1997. During the boom years, economic growth averaged more than 7 per cent annually, one of the highest rates in the world. The crisis of 1997 and 1998

wiped out some of the gains of the boom and forced major adjustments in Thai industry and economic policy (Microsoft Encarta, 2005).

The revival of growth in the global economy, and the continued strong performance of the East Asian economies, helped Thailand to maintain enthusiastic export growth at nearly 25 per cent in 1995, after growth of 22 per cent in 1994. Agricultural exports, including rubber, tapioca, sugarcane, raw coffee beans, and frozen shrimp, as well as manufactured goods, especially footwear, plastic products, computers and computer parts, and electrical appliances, are the main commodity export and all experienced rapid growth ([www.thailand.com](http://www.thailand.com)).

Many different factors contributed to the rapid growth of Thailand's economy. Low wages, policy reforms that opened the economy more to trade, and careful economic management has all resulted in low inflation and a stable exchange rate. These factors encouraged domestic savings and investment and made the Thai economy an ideal host for foreign investment. Thailand's economy remained deep in recession through 1998, with gross domestic product (GDP) shrinking an estimated 8.5 per cent that year. The economy began to pick up again in early 1999, with GDP growth forecast at 1.5 per cent for the year (Asian Development Bank).

Economic growth moderated in 2001, primarily as a result of the impact of the global slowdown on the industry sector and on exports. In 2001, exports shrank by 7 per cent, because of reduced external demand and the downturn in the electronics business

cycle. Import demand also contracted but by less than exports, causing the trade and current account surpluses to contract. Reduced demand for intermediate goods for exports and lackluster growth in consumer demand were largely responsible for this import demand shrinkage. After dropping by 1.5 per cent in the first half of 2002, exports rebounded strongly in the third and fourth quarters, rising by 11.4 per cent and 15.2 per cent, respectively. This resulted in an overall rise of 5.8 per cent in 2002. Recent growth has been driven by improved demand conditions for electronics and related products, although improved world agricultural prices have also helped boost export income (Asian Development Bank).

First half of 2004 exports grew by 20.9 per cent in the first quarter and 24 per cent in the second, as a result of higher exports of agricultural items and of manufactured products, such as electrical appliances, automobiles, and plastics. Export prices also climbed rapidly, by about 17 per cent in the 6 months to 30 June. At midyear, the trade surplus was down to about US\$100 million, compared with US\$2.5 billion a year earlier, and contributed to a current account surplus of US\$2.8 billion, from US\$3.7 billion previously ([www.thailand.com](http://www.thailand.com)).