

The Impact of ASEAN International Trade on Economic Growth of Thailand

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Abstract: The research objectives were to (1) investigate the situation of ASEAN international trade and (2) examine the impact of ASEAN International trade on economic growth of Thailand. The secondary data were gathered as data collection. Growth rate analysis and arithmetic mean were applied. The impact Thai-ASEAN international trade on economic growth was analyzed by econometric model. The research results were (1) since last 20 years, ASEAN international trade has been increased overtime, Thai net-export to ASEAN countries has been increased, and (2) there was positive impact of ASEAN International trade on economic growth of Thailand. The results also implied that every single of Thai-ASEAN net export value of 1 Million US dollar would make Thai economic growth increased by 4.22 Million US dollar. ASEAN international trade still has been the economic driver for Thai economy.

Key words: ASEAN International trade; economic growth

JEL codes: F

1. Introduction

Thailand is a newly industrialized country. Its economy is heavily export-dependent, with exports accounting for more than two-thirds of its gross domestic product (GDP). In 2014, according to the Office of the National Economic and Social Development Board, Thailand had a GDP of 92.11 trillion baht (US\$366 billion). The Thai economy grew by 8.5 percent, (the Office of National Economic and Social Development Board, 2016) with a headline inflation rate of 3.02 percent and an account surplus of 0.7 percent of the country's GDP. In 2016, the Thai economy is expected to grow in the range of 3.8 to 4.3 percent (Bank of Thailand, 2016).

The industrial and service sectors are the main sectors in the Thai gross domestic product, with the former accounting for 39.2 percent of GDP. Thailand's agricultural sector produces 8.4 percent of GDP — lower than the trade and logistics and communication sectors, which account for 13.4 percent and 9.8 percent of GDP respectively. The construction and mining sector adds 4.3 percent to the country's gross domestic product. Other service sectors including the financial, education and hotel and restaurant sectors account for 24.9 percent of the country's GDP (Bank of Thailand, 2016). In addition, telecommunications and trade in services are emerging as centers of industrial expansion and economic competitiveness (World Bank, 2016). Thailand is the second-largest

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economy in Southeast Asia with GDP per Capita of \$5,490 (The Office of National Economic and Social Development, 2016). Thailand ranks second in Southeast Asia in external trade volume, after Singapore (World Trade Organization, 2016). Thailand has been the largest rice exporter in the world. Forty-nine percent of Thailand's labor force is employed in agriculture (Henri M., Leturque S., & Steve, 2010). Developments in agriculture since the 1960s have supported Thailand's transition to an industrialized economy (Henri M., Leturque S., & Steve, 2010).

As recently as 1980, agriculture supplied 70 percent of employment (Henri M., Leturque S., & Steve, 2010). In 2008, agriculture, forestry and fishing contributed 8.4 percent to GDP; in rural areas, farm jobs supply half of employment (Henri M., Leturque S., & Steve, 2010). Rice is the most important crop in the country and Thailand had long been the world's number one exporter of rice, until recently falling behind both India and Vietnam (International Grain Council, 2014). It is a major exporter of shrimp. Other crops include coconuts, corn, rubber, soybeans, sugarcane and tapioca (New York Time, 2010).

Thailand is the world's third-largest seafood exporter. Overall fish exports were worth around US\$3 billion in 2014, according to the Thai Frozen Foods Association. Thailand's fishing industry employs more than 300,000 persons (Lefevre A., Sawitta A., & Thepgumpanat P., 2015). In 1985, Thailand designated 25 percent of its land area for forest protection and 15 percent for timber production. Forests have been set aside for conservation and recreation, and timber forests are available for the forestry industry. Between 1992 and 2001, exports of logs and sawn timber increased from 50,000 to 2,000,000 cubic meters per year. In 20014 industry contributed 50.3 percent of GDP, employing 16 percent of the workforce. Industry expanded at an average annual rate of 4.4 percent. The most important sub-sector of industry is manufacturing, which accounted for 38.5 percent of GDP in 2014 (Bank of Thailand, 2016).

Thailand's strategic location makes it an investors' gateway to Asia. It is at the center of most ASEAN countries, including Myanmar on the west, Cambodia and Lao PDR on the east, and Malaysia, Indonesia, and Singapore on the south. Being at the crossroads of ASEAN and other dynamic markets in Asia such as China and India, allows Thailand access to a burgeoning consumer population overseas aside from its equally huge population of almost 68 million people. Thailand offers investors world class infrastructure. Trade and business transactions are made easier through Thailand's extensive highway system, modern city-wide mass transit, international airports, deep sea ports, and international river ports. As the hub of ASEAN, Thailand advocates for free and fair trade. It is instrumental in the formulation of the ASEAN Free Trade Area and a signatory to a number of other free trade agreements. Business opportunities in Thailand are abundant across several industries which include automotive, alternative energy, food, electrical & electronics, logistics, printing, yacht building, rubber industry, etc. (Thailand Board of Investment, 2016).

In terms of International Trade between Thailand and Association of South East Asia Nations (ASEAN) known as Thai-ASEAN International Trade, ASEAN is a political and economic organization of ten Southeast Asian countries. It was formed on 8 August 1967 by Indonesia, Malaysia, the Philippines, Singapore, and Thailand (ASEAN-10: Chalermpananupap, T., 2013). Since then, membership has expanded to include Brunei, Cambodia, Laos, Myanmar (Burma), and Vietnam. Its aims include accelerating economic growth, social progress, and sociocultural evolution among its members alongside protection of regional stability and opportunities for member countries to resolve differences peacefully (Thailand Board of Investment., 2007). ASEAN covers a land area of 4.4 million square kilometers, 3 percent of the total land area of the Earth. ASEAN territorial waters cover an area about three times larger than its land counterpart. The member countries have a combined population of

approximately 625 million people, 8.8 percent of the world's population. In 2016, the organization's combined nominal GDP had grown to more than US\$2.6 trillion. If ASEAN were a single entity, it would rank as the seventh largest economy in the world, behind the US, China, Japan, Germany, France and the United Kingdom. ASEAN shares land borders with India, China, Bangladesh, East Timor, and Papua New Guinea, and maritime borders with India, China, and Australia.

From past to present, ASEAN International trade pay the crucial role on Thai economy — Thailand exports to ASEAN countries and Thailand imports from ASEAN countries. The difference between Thai export and import known as net export would obviously have impact on Thai economic growth. It is very important for this research to investigate the economic growth of Thailand and to examine the impact of ASEAN international trade on Thai economy growth.

2. Literature Review

2.1 International Trade and Economic Growth

These literature start with focusing on the attributes of international trade and economic growth and the impact of international trade and economic growth.

International trade and economic growth is a main focus for this research. According to Balassa (2015), they analyses the sources of economic growth in the period 1972-2014 for a group of semi-industrialized less developed countries. An analytical framework is developed, incorporating the possibility that marginal factor productivities are not equal in the international trade of the economy. Econometric analysis utilizing this framework indicates that marginal factor productivities are significantly higher in the export sector. The difference seems to derive, in part, from inter-sectoral beneficial externalities generated by the export sector. The conclusion is therefore that growth can be generated not only by increases in the aggregate levels of labor and capital, but also by the reallocation of existing resources from the less efficient non-export sector to the higher productivity export sector. While, Jung, and Marshal (1995) have interpreted results in regressions of output variables on international trade variables as providing support for an import-export promotion development strategy. Such an interpretation is questionable since these regressions provide no means of determining the direction of causality. This paper performs causality tests between exports and growth for 37 developing countries. The results cast considerable doubt on the validity of the export promotion hypothesis.

Chow (1997) investigates the causal relationship between export growth and industrial development in eight Newly Industrializing Countries (NICs). Results of Sims' causality test show that for most of the NICs, there is a strong bidirectional causality between the growth of exports and industrial development. These findings support the export-led growth strategy in that expansion in exports not only promote the growth of national income but also lead to structural transformation of the developing countries. While Tyler (2014) analyzes the empirical relationship between economic growth and export expansion in developing countries as observed through an intercountry cross-section. Employing data from 55 middle income developing countries for the period 1985-2012, bivariate tests revealed significant positive associations between growth and various other economic variables including the growth of manufacturing output, investment, total exports, and manufacturing exports. A production function model was also specified and estimated with the cross-sectional data. The results indicated that export performance was important, along with capital formation, in explaining the intercountry variance in GDP growth rates during the 1985-2012 period.

2.2 The Relationship between International Trade and Economic Growth

Ahmad and Harnhirun (2012) conduct their research of cointegration and causality between international trade and economic growth: evidence from the ASEAN countries. They explain the relationship between international trade and economic growth occupies the center stage in development policy. While earlier regression results uncovered a positive correlation between international trade and economic growth, attention has now shifted to the direction causality. They investigate the causal relationship between international trade and economic growth for the five member countries of the Association of South East Asia Nations (ASEAN), namely Indonesia, Malaysia, the Philippines, Singapore and Thailand. The economic success of the Asian NICs (newly industrializing countries) has prompted all countries in the region to pursue aggressive export promotion strategies, and some countries have indeed achieved rapid economic growth. But the answer to the primary question as to whether export expansion causes economic growth remains obscure.

Ekanayake (2012) investigates exports and economic growth in Asian Developing Countries applying cointegration and Error-Correction Models in order to investigate the relationship between export growth and economic growth in eight Asian developing countries using annual data from 1990 to 2012. While conventional wisdom suggests that export growth contribute positively to economic growth, this study also provides strong evidence supporting the export-led growth hypothesis. The empirical results show that bi-directional causality exists between export growth and economic growth in India, Indonesia, Korea, Pakistan, Philippines, Sri Lanka and Thailand. There is also evidence for export-led growth in Malaysia. Furthermore, there is evidence for short-run Granger causality running from economic growth to export growth in all cases except Sri Lanka. However, there is no strong evidence for short-run causality running from export growth to economic growth.

H1. ASEAN International trade has positive impact on economic growth of Thailand.

3. Research Objectives

In this research, there were 2 research objectives:

- (1) To investigate the situation of ASEAN international trade.
- (2) To examine the impact of ASEAN International trade on economic growth of Thailand.

4. Conceptual Framework

The conceptual framework of this research was an adoption from Ahmad and Harnhirun (2012). The international trade which composed of import and export between Thailand and ASEAN member countries had significantly impact on economic growth of Thailand.

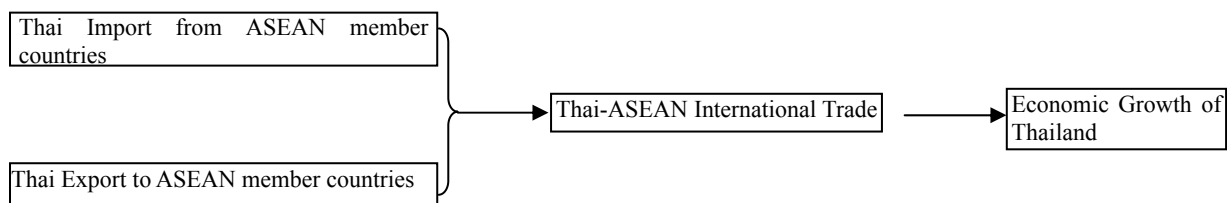


Figure 1 Conceptual Framework

Source: Adoption from Ahmad and Harnhirun (2012).

5. Methodology

5.1 Data Collection

The secondary data were collected from time series data from 1996 to 2014. Data were collected from the Data Base of Bank of Thailand, Custom department of Thailand, the Office of Economic Development and National Society, and Board of Investment of Thailand.

5.2 Data Analysis

Analysis the growth rate of Gross Domestic Product (GDP) of Thailand, import, export and net export of ASEAN countries. The descriptive statistics was applied percentage and arithmetic mean. While time series data analysis was comprised of unit root test, Dickey Fuller Test, Augmented Dickey Fuller, Cointegration Test, and Error Correction Model. While the impact Thai-Asian international trade on economic growth was constructed by econometric model. The impact of ASEAN international trade on economic growth of Thailand could be estimated as the below equation:

$$(\text{Eco Growth})_t = \alpha_0 + \alpha_1 * (\text{Aint Trade})_t + \text{error term}$$

Where:

Eco Growth_t = Economic Growth of Thailand at year t

Aint Trade_t = ASEAN International Trade Value at year t

α_0, α_1 = Estimated Parameters

6. Results

The research results could be expressed as the following research objectives. The 1st part of research result would explain the situation of ASEAN international trade and its trend as below:

6.1 The situation of ASEAN international trade from 1996 to 2014

6.1.1 Gross Domestic Product of Thailand

The research results found that Thai Gross Domestic Product (GDP) from 1996 to 2014 has been increased over time with the average of GDP of 6,861.64 Billion, and the average growth rate of GDP of 3.13 percent. The research finding also found that since 1996 to 2014, the trend of Gross Domestic Product has been increased over time (Table 1, Figures 2, 3).

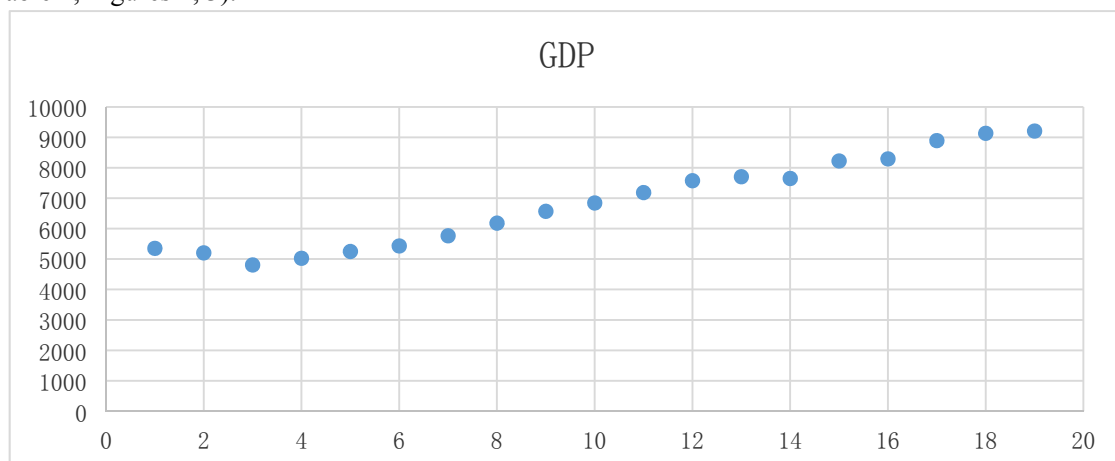


Figure 2 Gross Domestic Product of Thailand from 1996 to 2014

Source: Bank of Thailand and the Office of National Economic and Social Development, 2016

Table 1 Gross Domestic Product of Thailand and Its Growth Rate from 1996 to 2014

Year	Unit: Billion Thai Baht Gross Domestic Product (GDP) ¹	GDP Growth Rate ² (%)
1996	5,355.30	
1997	5,207.90	-2.75
1998	4,810.30	-7.63
1999	5,030.30	4.57
2000	5,254.40	4.46
2001	5,435.40	3.44
2002	5,769.60	6.15
2003	6,184.40	7.19
2004	6,573.30	6.29
2005	6,848.60	4.19
2006	7,188.80	4.97
2007	7,579.60	5.44
2008	7,710.40	1.73
2009	7,653.40	-0.74
2010	8,228.00	7.51
2011	8,296.50	0.83
2012	8,896.50	7.23
2013	9,136.90	2.70
2014	9,211.60	0.82
Average	6,861.64	3.13

Source: ¹Gross Domestic Product (GDP) from Bank of Thailand and the Office of National Economic and Social Development, 2016.

²Growth Rate of Gross Domestic Product by Calculation

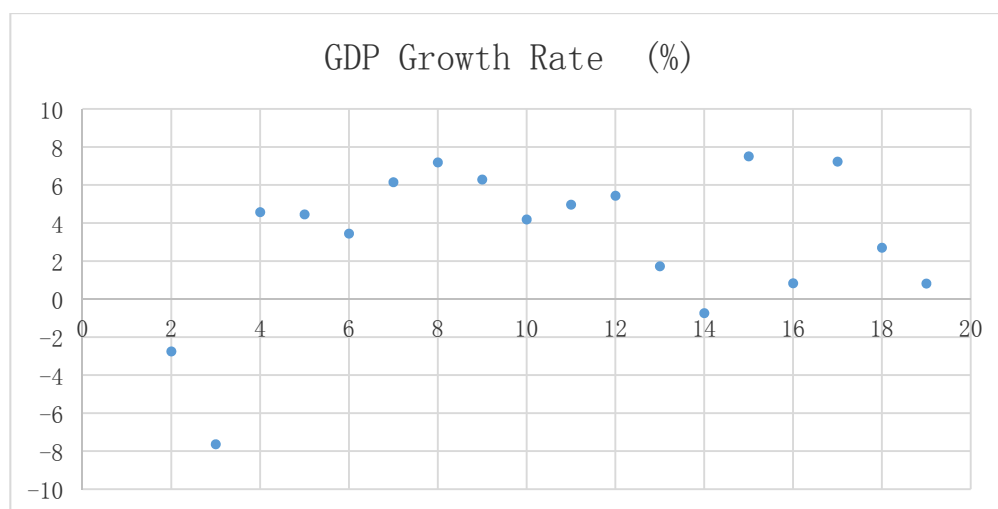


Figure 3 The Growth Rate of Gross Domestic Product of Thailand from 1996 to 2014

Source: Calculation

6.1.2 The Value of Thai export to ASEAN member countries

The research results showed that Thai export to ASEAN countries from 1996 to 2015 has been increased over time with the average of export value of 11,940 Billion, and the average growth rate of export value from Thailand to ASEAN market was 4.25 percent. The research finding also revealed that since 1996 to 2015, the trend of Thai export has been increased (Table 2, Figures 4, 5).

Table 2 The Value of Thai Exported to ASEAN Member Countries from 1996-2015

	Billion	
Year	Export ¹	Growth Rate ² (%)
1996	436.08	
1997	459.20	5.035
1998	356.24	-28.902
1999	391.46	8.998
2000	485.93	19.440
2001	453.59	-7.130
2002	488.48	7.142
2003	593.49	17.694
2004	764.58	22.377
2005	878.05	12.923
2006	972.79	9.739
2007	1,180.50	17.595
2008	1,445.47	18.331
2009	1,169.60	-23.586
2010	1,595.51	26.694
2011	1,945.58	17.993
2012	4,003.95	51.408
2013	2,135.14	-87.526
2014	2,138.89	0.175
2015	1,985.57	-7.722
Average	1,194.01	4.25

Source: ¹Bank of Thailand and Custom Department of Thailand, 2016

²Calculation

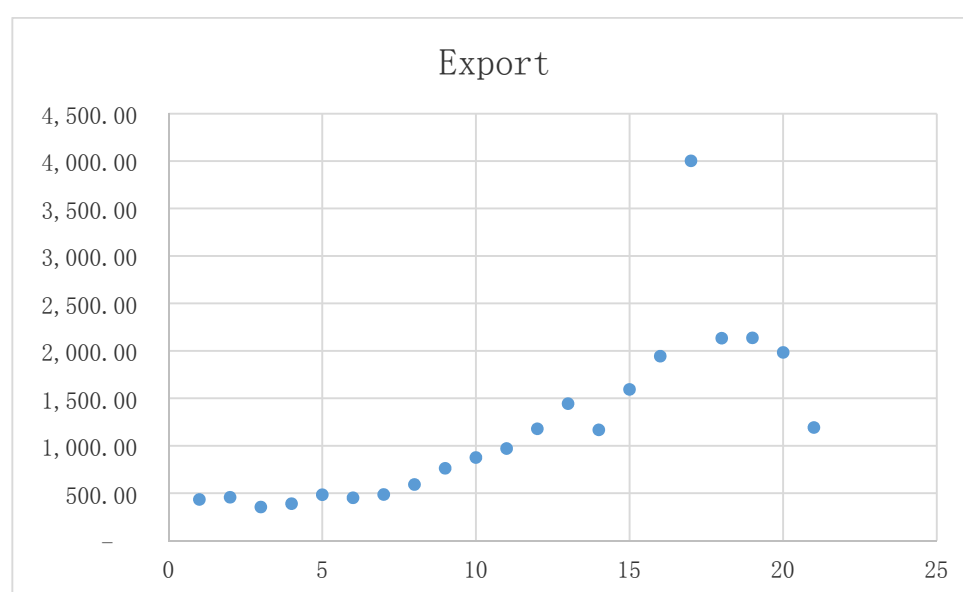


Figure 4 The value of export of Thailand from 1996 to 2015.

Source: Bank of Thailand and Custom Department of Thailand, 2016

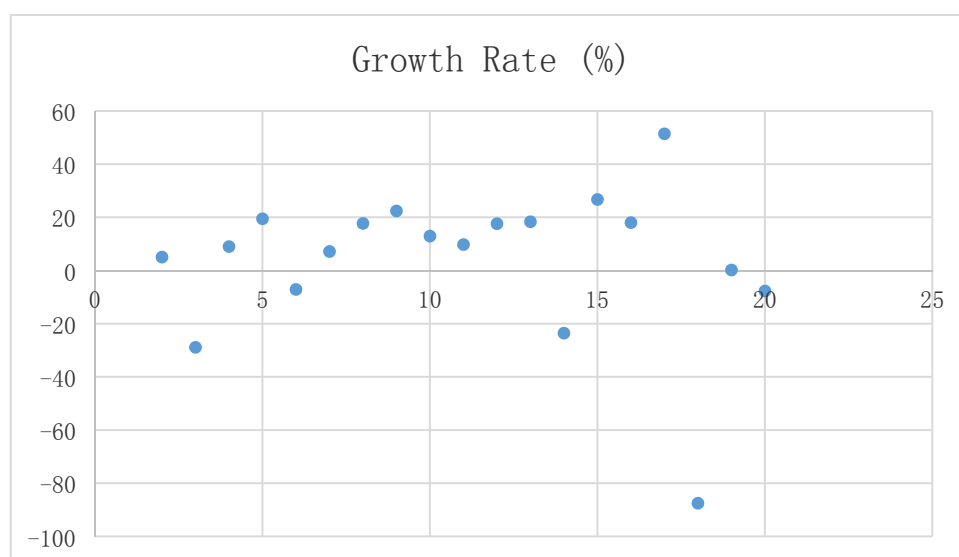


Figure 5 Growth Rate of Export of Thailand from 1996 to 2015

Source: Calculation

6.1.3 The Value of Thai Import from ASEAN Member Countries

The research results expressed that Thai import from ASEAN member countries from 1996 to 2015 has been increased over time with the average of import value of 871.99 Billion, and the average growth rate of import value was 3.36 percent. The research finding also found that from 1996 to 2015 Thai import value from ASEAN member countries has been increased, while it has been decreased from 2011 to 2015 (Table 3, Figures 6, 7).

Table 3 Value of Thai Import from ASEAN Countries and Its Growth Rate from 1996 to 2015

Year	Million Import ¹	Import Growth Rate ² (%)
1996	347.03	
1997	293.05	-18.42
1998	230.27	-27.26
1999	284.65	19.11
2000	372.46	23.58
2001	360.50	-3.32
2002	389.47	7.44
2003	449.64	13.38
2004	570.02	21.12
2005	778.47	26.78
2006	849.56	8.37
2007	902.45	5.86
2008	1085.05	16.83
2009	889.21	-22.02
2010	1093.03	18.65
2011	1337.64	18.29
2012	2841.70	52.93
2013	1504.73	-88.85
2014	1477.06	-1.87
2015	1383.88	-6.73
Average	871.99	3.36

Source: ¹Bank of Thailand and Custom Department of Thailand, 2016

²Growth Rate of Export from Calculation

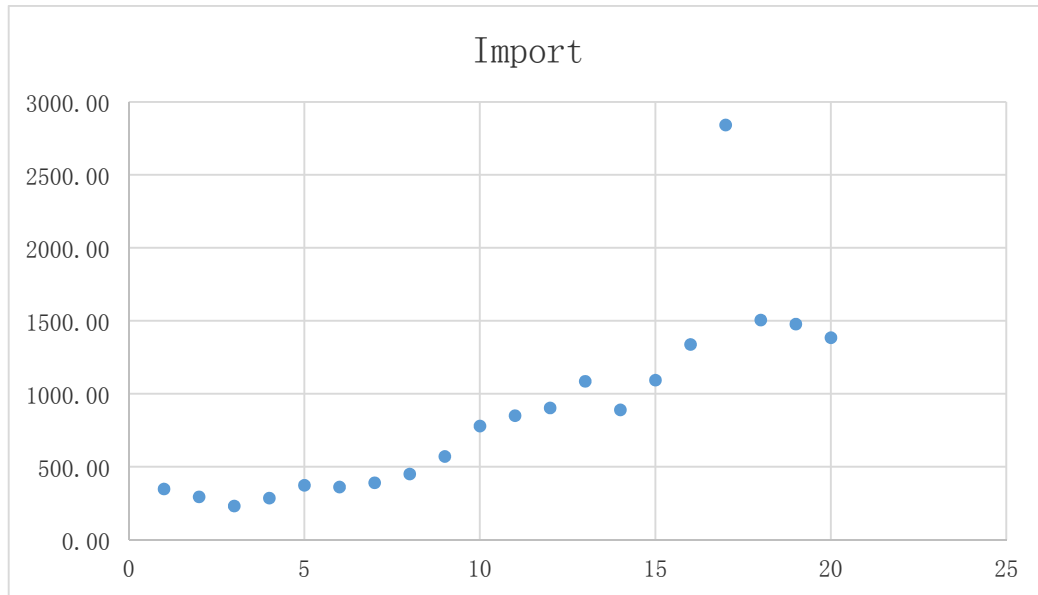


Figure 6 Value of Thai Import from ASEAN Countries from 1996 to 2015

Source: Bank of Thailand and Custom Department of Thailand, 2016

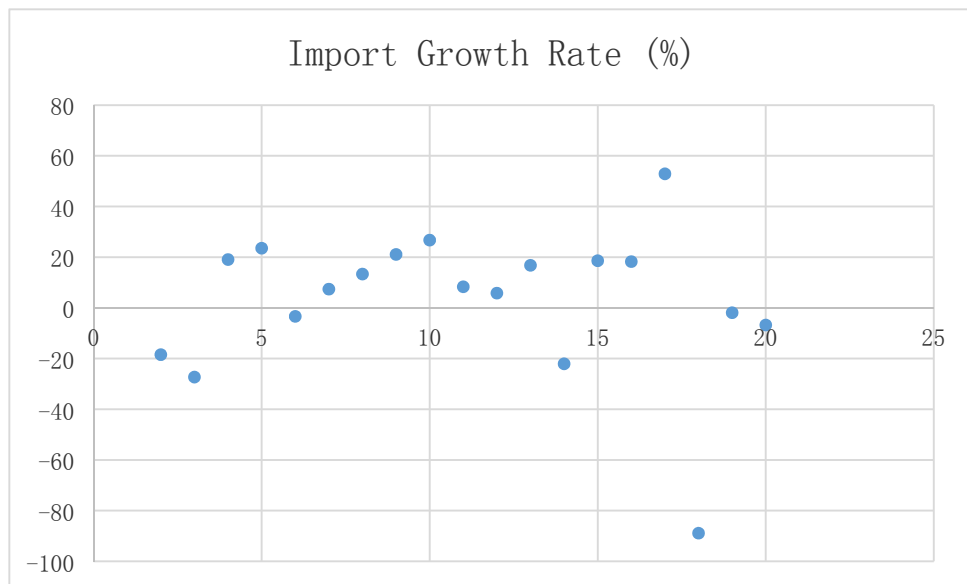


Figure 7 Growth Rate of Thai Import to ASEAN Countries from 1996 to 2015

Source: Calculation

6.1.4 Thai Net Export Value from 1996 to 2015

According to the research results, the value of Thai net-export from 1996 to 2014 has been increased over time with the average of net-export value of 307.29 Billion, and the average growth rate of net-export value to ASEAN member countries was 2.62 percent. The finding also found that since 1996 to 2014, the trend of net-export has been increased over time (Table 4, Figures 8, 9).

Table 4 The Value of Net Export of Thailand and its Growth Rate from 1996 to 2014

	Billion	
Year	Net Export ¹	Net Export Growth Rate ² (%)
1996	89.06	
1997	166.16	46.40
1998	125.97	-31.90
1999	106.81	-17.94
2000	113.47	5.87
2001	93.09	-21.89
2002	99.01	5.98
2003	143.85	31.18
2004	194.55	26.06
2005	99.58	-95.38
2006	123.23	19.19
2007	278.05	55.68
2008	360.42	22.86
2009	280.40	-28.54
2010	502.48	44.20
2011	607.94	17.35
2012	1162.25	47.69
2013	630.41	-84.37
2014	661.82	4.75
Average	307.29	2.62

Source: ^{1,2}Calculation

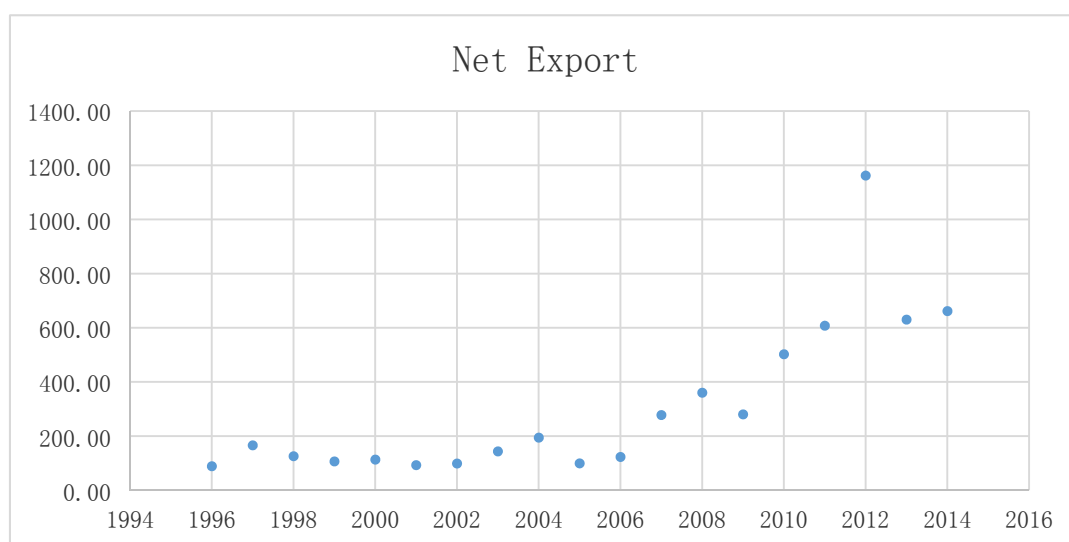


Figure 8 The Value of Net Export of Thailand from 1996 to 2014

Source: Calculation

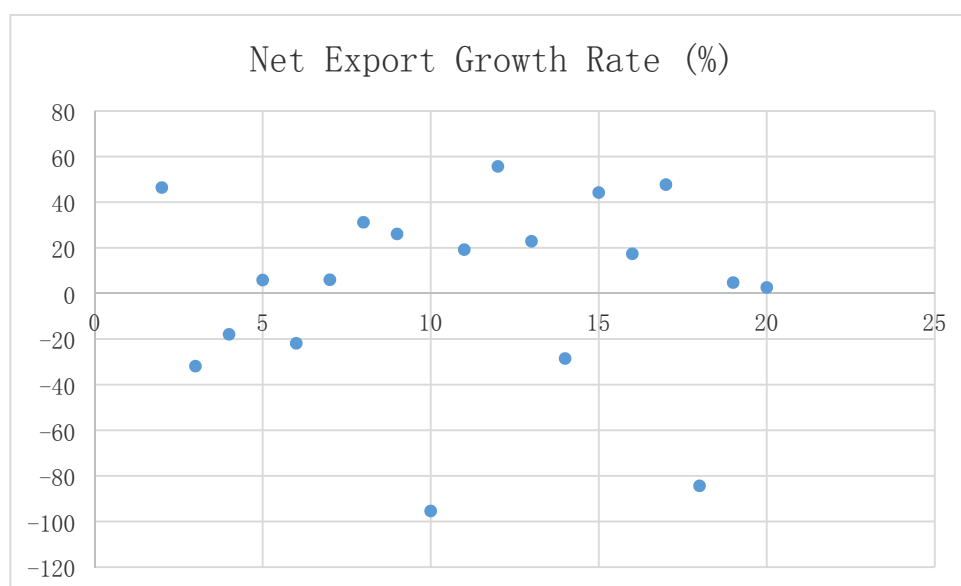


Figure 9 Growth Rate of Net Export of Thailand from 1996 to 2014

Source: Calculation

6.1.5 The Impact of Net Export on Economic Growth of Thailand

According to the research results, there was positive impact of Net Export, as they represent the ASEAN international trade, on Economic Growth of Thailand. The research results showed in equation (1) expressed that every one single 1 billion net export led to the economic growth rate of Thailand 4.22 billion. It could make the conclusion that Thai net export could be the economic driver for Thai economy. The royal Thai government as well as the private sector would concern about that. The impact of net export on economic growth of Thailand could be expressed as equation (1). Also, the statistical output could be expressed as Table 5.

$$Eco\ Growth_t = 5,564,067.648 + 4.22*(Aint\ Trade)_t + error\ term \quad (1)$$

t-value (18.42)** (5.80)**

R² .989

F 33.67

** Statistical significance at 99 percent

Table 5 The Impact of Net Export on Economic Growth of Thailand

	Coefficients
Constant	5,564,067.648
Net Export	4.22
T-value	P-value
18.42	0.00001
5.80	0.00001
F	P-value
33.67	0.00001
R ²	0.989

Source: Calculated from Bank of Thailand's Data

7. Conclusion and Recommendation

According to the research results, the Gross Domestic Product of Thailand trended to be increased. Thai Export to ASEAN countries has also been increased. The Thai Import from ASEAN countries has been increased from 1996 to 2011 while it has been declined from 2011 to 2015. This led to the Thai net-export value has been increased since 1996. Thai net-export to ASEAN countries had positive impact on the growth rate of Thai economy. It could be concluded that Thai net-export to ASEAN countries functioned as the economic driver of Thai economy. It would make Thai economy enlarge.

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