

**THE EFFECT OF TRADE SPECIALIZATION
AND INSTITUTIONAL QUALITY ON INTRA-
ASEAN TRADE**

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**THE EFFECT OF TRADE SPECIALIZATION AND
INSTITUTIONAL QUALITY ON INTRA-ASEAN
TRADE**

by

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ABBREVIATION

AFTA	ASEAN Free Trade Agreement
GDP	Gross Domestic Product
RTA	Regional Trade Agreement
ASEAN	Association of Southeast Asian Nations
RER	Real Exchange Rate
CEPT	Common Effective Preferential Tariff
RCA	Revealed Comparative Advantage
UNCTAD	United Nations Conference on Trade and Development

KESAN PENGKHUSUSAN PERDAGANGAN DAN KUALITI INSTITUSI TERHADAP PERDAGANGAN SESAMA NEGARA ASEAN

ABSTRAK

Perdagangan antara ASEAN telah kekal pada tahap 20% ke 25% sejak beberapa abad yang lalu. Ini sebahagiannya kerana negara-negara ASEAN sangat bergantung kepada negara-negara bukan ASEAN untuk pasaran eksport mereka. Beberapa cadangan telah dikemukakan seperti kadar pertukaran matawang asing dan perjanjian perdagangan yang dilihat setakat ini sebagai kurang mampu meningkatkan tahap perdagangan antara ASEAN. Dalam kajian ini, kami mencadangkan dan mengkaji peranan pengkhususan perdagangan dan kualiti institusi di kalangan negara-negara ASEAN untuk tempoh dari 1996 sehingga 2015. ASEAN secara umumnya dianugerahkan sumber-sumber yang hampir sama yang mengakibatkan kecenderungan untuk bersaing bagi barangan yang sama. Pengkhususan dalam produk-produk tertentu dan membiarkan negara-negara ASEAN lain mengeluarkan yang baki secara teori mampu menggalakkan perdagangan antara ASEAN. Dalam perkembangan lain, negara-negara ASEAN juga secara umumnya menghadapi masalah kualiti institusi yang agak teruk seperti rasuah, ketidakstabilan politik dan lain-lain. Model 'fixed-effect' digunakan sebagai kaedah utama setelah mengambil kira saiz sample yang terhad. Kedua-dua model mencadangkan bahawa pengkhususan perdagangan dan kualiti institusi sangat memainkan peranan dalam mempromosi perdagangan dua hala antara negara ASEAN. Oleh itu, kemajuan dalam kedua-dua faktor mampu meningkatkan perdagangan antara ASEAN yang akhirnya mampu mengukuhkan integrasi serantau.

THE EFFECT OF TRADE SPECIALIZATION AND INSTITUTIONAL QUALITY ON INTRA-ASEAN TRADE

ABSTRACT

Intra-ASEAN trade is stagnant at 20% to 25% for the past few decades. This is partly because ASEAN members are over-reliant on non-ASEAN countries for their exports. Several suggestions have been put forward such as exchange rates and trade agreement which observed so far as having limited effect to increase intra-ASEAN trade. In this study, we propose and examine the role of trade specialization and the quality of institutions among ASEAN for a period between 1996 and 2015. ASEAN countries are generally endowed with similar resources have a tendency to compete with each other for similar products. Specialization in certain production, while leaving the other members to produce is theoretically helpful to promote trade among ASEAN. In other development, ASEAN countries are also in general suffer serious problem of poor institutional quality which involved among others corruption, political instability and so on. This situation is hypothesized in this study as having deterrent effect on intra-ASEAN. Therefore, this study focuses on and examines the role of both as potential solutions to low intra-ASEAN trade. Fixed-effect model is employed to examine the model considering the limited sample size of this study. The results suggest that trade specialization and quality of institution are significant and crucial to promote bilateral trade among ASEAN countries. Hence, continuous promotion of both factors may help to improve intra-trade and eventually capable in strengthening regional integration.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The Association of Southeast Asian Nations (ASEAN) consists of economically integrated countries that have different economic level and phases of economic evolution. This means that there are different levels of Gross Domestic Product per capita (GDP per capita). ASEAN was established on August 8, 1967 by pioneering members such as Malaysia, Singapore, Thailand, the Philippines and Indonesia. Its participation has since progressed and joined by Brunei in 1984, Vietnam in 1995, Laos and Myanmar in 1997 and Cambodia in 1999 (Chia, 2011).

Figure 1.1a and 1.1b show the Gross domestic product per capita (GDP per capita) for ten ASEAN members. GDP per capita amplifies the wealth of the residents of a state, especially in terms of ratio to other countries. It is often applied to appraise a country's standard of living (Balli, Louis & Osman, 2011). Figure 1.1a shows the GDP per capita growth for pioneering members of ASEAN, namely Malaysia, Singapore, Thailand, Indonesia and the Philippines. The GDP per capita for Brunei is compared with pioneering members because Brunei shows a rapid increment in its GDP per capita. In addition, Brunei and Singapore show a steep increase in their GDP per capita due to their activities in mining products and services, respectively (Anwar & Sam, 2010). Meanwhile, Figure 1.1b includes the GDP per capita of new comers of ASEAN namely Cambodia, Laos and Vietnam.

The data for Myanmar is not available in the World Bank Indicator. Vietnam shows the highest increase of GDP per capita among them, but its growth is still lower than the pioneering members. Both images show that ASEAN members have different stories in terms of their average incomes and economic growths; whereby both indicators indicate a country's economic development.

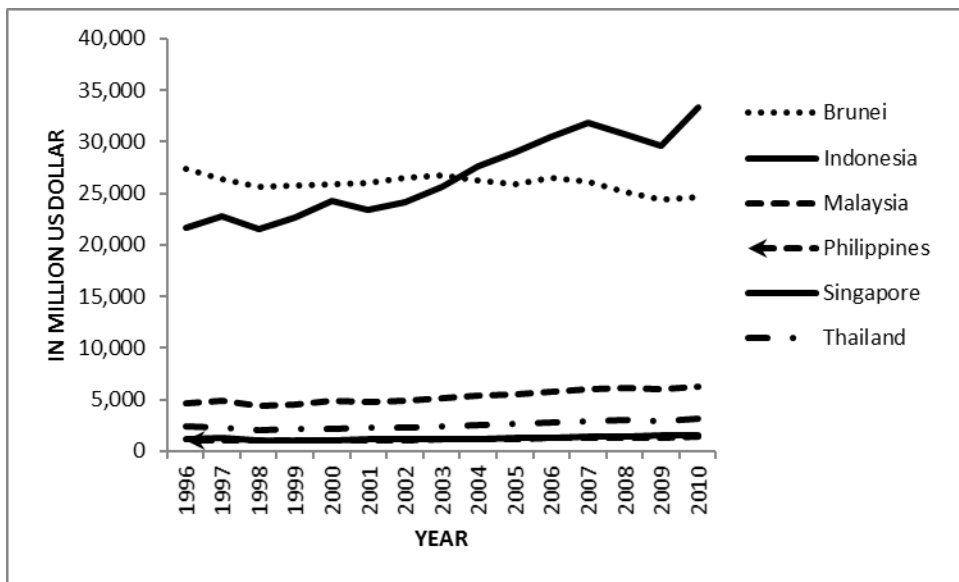


Figure 1.1a: GDP per capita for pioneering members

Source: World Bank (2015a).

States in a region can sustain their economic development via economic integration. Moreover, Sudsawad & Mongsawad (2007) found in their studies that ASEAN-5 would benefit from the free trade agreements (FTAs) if they fully liberalized trade among themselves. The results clearly show the advantages of a possible free trade within the region and pointed to the importance of regional cooperation for ASEAN.

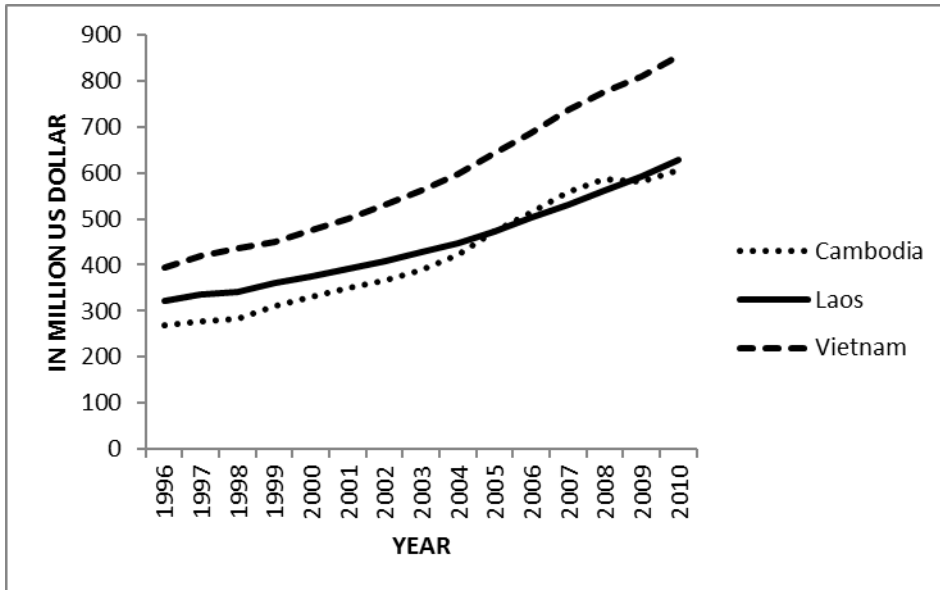


Figure 1.1b: GDP per capita for new members

Source: World Bank (2015a).

Via regional collaboration or integration, the merger of economic policies will happen. All parties in a region will gain tariff elimination for their tradings. This is supported by Funk (2010) whereby the merger of economic policies between different nations via the partial or total elimination of tariff and non-duty regulations on trade will take place among themselves preceding to their consolidation.

Peridy (2005) pointed out that some regions, including ASEAN, should present a great solemnity in economic integration with regional trade agreements demonstrating sound environment to face any critical economic situation. They could cope with an unpleasant situation such as inflation because with economic integration, the consumers pay at a lower price due to tariff elimination. With tariff elimination, countries will pay at a lower price and this situation will give advantage to the end users. Eichengreen & Tong (2007) explained in their study about the advantages of regional economic

integration whereby the countries in the region can see larger and pleasant market, the creation of businesses, economies of scale in production and distribution. The customers also enjoy the benefits of regional economic integration in which they will pay a low monetary value. This is because the group of countries in the region is linking their economies for the purpose of attaining a higher degree of economic performance that will benefit all the participating countries; whereby the member states will enjoy the abolition of trade barriers. The abolition of trade barriers will strengthen the regional cooperation.

De Rossa (1995) added that ASEAN regional cooperation should be involved in the efforts to overcome financial crisis. It is supported by Soesastro (1998) who argued that forces must be used at all levels, namely bilateral and international stages. Through bilateral level, ASEAN members have to support the most distressed rural areas, while the existing economic cooperation programs need to be increased in scope; such as aiding other countries by importing products from small rural areas in order to increase their GDP, and increase the commitment such as boost free trade among the ASEAN members by reducing or eliminating tariffs on international level. Dent (2003) indicated that the newest important development in the regional political economy is the materializing pattern of bilateral trade free agreement (FTA) projects. The said project included the one during 1997/1998 Asian financial crisis, the Asia-Pacific bilateral free trade agreement (APBFTA) project was where countries in the region evolved their income level via free trade arrangement.

A regional trading arrangement (RTA) is an agreement amongst governments to liberalize trade (Ghosh, 2007). This is done through the elimination or reduction of restriction or barriers on the freedom of exchange of goods between nations. Agreements between high income countries have the tendency to meet in terms of per capita income (Venables, 2003). Furthermore, Anwar & Sam (2010) stressed that becoming unified would provide ASEAN with a substantial opportunity of globalization, i.e. by acting cooperatively as a group; thus, enhancing the growth performance of the region through gains from trade. The various stages of economic development can be overcome since the level of incomes can be changed through regionalization. In addition, Beikzadeh, Rafat & Kharamkhani (2012) mentioned in their study that governments have resorted to regionalization in order to protect their economies from global problems as well as gaining competitive advantage in the global market. Comparative advantage is the ability of a party to produce a particular good or service at a lower marginal and opportunity cost, even if the country is more efficient in the production of all goods (Bhattacharya & Bhattacharyay, 2007). The authors continued to explain that if one country in a region has the efficiency of production of goods, it will gain the advantage of expanding its economic size.

In addition, Sharma & Chua (2000) revealed that intra-trade could broaden the country's economic dimension. This is because the larger countries could help the smaller countries by buying products produced by the smaller countries and at the same time will expand the country's gross domestic product (GDP).

1.2 The Issues

Table 1.1 shows intra-ASEAN exports for sectoral products of agriculture and manufacturing. For the purpose to show that ASEAN exports are highly overlapped and they need to have exports specialization, we took only a part of sub-sectors listed according to SITC Revision 3; namely tobacco, coffee, sugar and live animal. The same situation happened to the manufacturing sector and we took only electrical, vehicle, furniture and machinery. In addition, data were also summarized by geographical region and economic grouping for both host countries and their trading partners and by product grouping.

According to Table 1.1, generally, Indonesia, Laos and Malaysia are likely to have a comparative advantage in agriculture in relation to their gross domestic product (GDP). By looking at the percentages of agriculture and manufacturing, it can be confirmed that a country cannot offer everything. In fact, it will be more effective and productive to supply some of them only, leaving the rest to be produced by other ASEAN members.

That is why we segregate the sectors into several sub-sectors based on SITC Revision 3. Therefore, according to export percentages of agricultural product grouping, Laos shows the highest percentage in tobacco export in 1997, but the dominant production shifted to Indonesia in 2005 and was later dominated by Vietnam in 2010. Similarly, while Vietnam showed a high percentage in exporting coffee 1997, Indonesia took over from Vietnam in both years of 2005 and 2010. Thailand was a leader in sugar export in 1997. This was then taken over by Cambodia in 2005 and the Philippines in

2010. Furthermore, Laos was leading in exporting of live animal in 1997 but Malaysia took over in 2005 and 2010.

Table 1.1: Intra-Export of selected sectors and its sub-sectors by ASEAN members (in percentage)

	1997	2005	2010	1997	2005	2010	1997	2005	2010	1997	2005	2010	1997	2005	2010
	AGRI/GDP(%)			TOBACCO/AGRI(%)			COFFEE/AGRI(%)			SUGAR/AGRI(%)			LIVE ANIMAL/GDP(%)		
CAMBODIA	24.12	26.15	24.22	6.03	6.11	5.39	8.09	8.06	8.02	7.41	10.65	10.29	6.03	5.02	4.04
INDONESIA	26.00	27.15	24.05	5.92	6.38	6.07	13.71	14.12	14.56	9.03	8.61	6.16	9.12	9.07	9.03
LAOS	27.13	21.21	25.15	6.51	5.14	5.99	11.67	10.73	12.33	NA	1.58	1.63	14.22	12.61	10.66
MALAYSIA	26.13	26.11	27.21	5.09	6.05	4.59	9.32	8.56	7.68	5.02	6.05	6.72	10.93	14.39	13.37
MYANMAR	NA	NA	NA	4.29	3.65	2.85	5.76	4.12	4.17	7.18	6.27	6.55	7.53	5.55	6.06
PHILIPPINES	25.12	26.13	25.52	5.84	5.36	5.46	12.81	10.31	10.41	NA	5.28	10.66	6.15	10.11	8.04
THAILAND	25.23	26.21	25.19	5.49	5.59	5.57	10.26	10.78	11.94	11.85	8.63	7.32	10.23	10.11	11.17
VIETNAM	25.13	25.21	26.23	6.19	6.08	6.49	14.69	13.06	14.38	8.13	9.88	7.56	6.11	7.21	5.08
	MANU/GDP (%)			ELECTRICAL/MANU(%)			VEHICLE/MANU (%)			FURNITURE/MANU (%)			MACHINERY/MANU (%)		
CAMBODIA	20.23	21.25	11.21	9.92	8.54	9.15	2.64	3.83	1.64	0.11	0.11	0.18	1.19	1.79	1.37
INDONESIA	24.05	25.21	25.22	18.32	18.07	11.05	6.15	5.94	7.83	1.22	0.47	1.46	0.76	2.07	1.7
LAOS	21.13	25.12	20.16	0.03	5.35	4.41	2.93	3.46	1.61	0.11	0.29	0.06	0.9	0.38	1.81
MALAYSIA	25.21	27.13	26.06	23.69	22.73	37.78	10.58	10.98	11.68	1.07	0.48	0.84	1.56	1.82	2.86
MYANMAR	NA	NA	NA	4.47	3.71	NA	NA	NA	NA	2.83	1.3	0.63	2.18	0.74	0.01
PHILIPPINES	23.13	25.16	21.16	26.31	26.59	34.38	22.18	20.08	7.05	0.19	0.09	0.16	0.69	0.61	0.67
THAILAND	24.23	26.21	27.25	23.69	27.22	33.59	20.03	21.01	NA	0.28	0.40	0.44	1.18	2.42	2.77
VIETNAM	26.19	23.15	23.21	24.76	17.69	19.46	0.34	0.04	14.24	0.87	1.49	1.03	4.39	1.59	1.11

Sources: UNCTAD (2015) and World Bank (2015a).

Notes: AGRI-Agriculture; GDP-Gross Domestic Product; Manu-Manufacture; NA-Not Available

Furthermore, Vietnam, Malaysia and Thailand are likely to have a comparative advantage in manufacturing in relation to their gross domestic product (GDP). However, according to export percentages of manufacturing commodities, the Philippines showed a high percentage in exporting electrical products in 1997 but the leadership was taken over by Thailand in 2005 and Malaysia in 2010. Furthermore, the Philippines showed a high percentage in exporting vehicles in 1997 but Thailand took over in 2005 and Vietnam in 2010. In addition, Myanmar showed a high percentage in exporting furniture in 1997, but Vietnam took over in 2005 and Indonesia in 2010. Furthermore, Vietnam demonstrated its strength in exporting machinery in 1997 but Thailand took over in 2005 and Malaysia in 2010.

In addition, Singapore's export sector is reserved for service sector because structurally Singapore has to be more service-oriented (Anwar & Sam, 2010). Besides that, Singapore had an arable land amounting 1,000 hectares in 1996 to 2002 but zero arable land from 2003 until 2010 (<http://data.worldbank.org>). Meanwhile, Brunei is reserved for the mining sector because Brunei exports of mining products had increased from 30 percent to 50 percent from 2000 to 2011 (www.unctadstat.unctad.org).

From Table 1.2, it shows a signal that ASEAN members produce the same sub-sectors at the same time and this situation leads to less interdependent among ASEAN members. This could mean that the opportunity for each ASEAN member to specialize is there to be reaped. By classifying of the export sub-sectors by ASEAN members in Table 1.2, we can determine which sub-sectors should become one

country's export specialization. This situation may encourage interdependence between ASEAN members, hence boosting intra-ASEAN trade.

1.3 Problem Statements

Table 1.2 shows the percentages of intra- ASEAN export for the period from 1996 to 2010 is at the left side, while the percentages of exports of ASEAN members to non ASEAN countries from 1996 to 2010 is at the right side. The objective of this table is to identify the degree of interdependence, and hence the integration among members of ASEAN. ASEAN membership is comprised of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. The intra-ASEAN export occurs when every ASEAN member export to other ASEAN members.

Table 1.2: Intra- ASEAN Exports (% of Total Exports)

	1996-1998	1999-2001	2002- 2004	2005-2007	2008-2010
Brunei	24.25	18.40	19.30	26.50	21.50
Cambodia	23.60	10.20	19.70	24.70	25.80
Laos	26.10	26.10	27.60	25.70	27.50
Indonesia	22.52	18.20	19.30	23.50	21.50
Malaysia	23.36	25.00	25.20	25.90	21.60
Myanmar	24.50	25.00	27.20	28.50	25.70
Philippines	22.85	19.10	21.10	20.80	21.20
Singapore	24.15	27.70	20.40	20.30	23.90
Thailand	27.12	19.30	21.00	20.10	22.40
Vietnam	12.65	20.40	27.90	25.80	23.17

Source: UNCTAD (2015).

At the time being, the exertion to boost cooperation among ASEAN has intensified, but the outcome is still dissatisfactory because intra-ASEAN trade has been stagnant at about 25 percent for the past four decades. Although each ASEAN

member experienced improvement in the level of income as shown in Figure 1.1a & 1.1b and potentially explained by intra-ASEAN export in Table 1.1, no sign of improvement in regional trade can be observed even with the inclusion of few members such as Laos, Cambodia, Vietnam and Myanmar. Conversely, on the other side of the coin, ASEAN is over-reliant on non-ASEAN countries for their exports and imports. In short, exports to non-ASEAN countries accounted for more than 70 percent.

Table 1.2 shows that the percentage of Cambodia's export increased from 23.60 percent for the years 1996-1998 to 25.80 percent for the years 2008-2010. This also happened to Laos, whereby the percentage increased from 26.10 percent for the years 1996-1998 to 27.50 percent for the years 2008-2010. Myanmar and Vietnam were also experiencing the same; whereby their percentages increased from 24.50 percent and 12.65 percent for the years 1996-1998 to 25.70 percent, and 23.17 percent for the years 2008-2010, respectively.

Table 1.1 also shows the percentages of exports of ASEAN members to non-ASEAN countries from 1996 to 2010. This table shows the ten ASEAN members' commitment to exports to non-ASEAN countries. It also shows the high dependency of ASEAN economies on non-ASEAN countries. From Table 1.1, if intra-ASEAN exports drop, it shows that they export more to non-ASEAN countries. For example, intra-ASEAN exports from Brunei dropped from 24.25 percent to 21.50 percent and at the same time Brunei showed increment in the percentages of exports to non-ASEAN countries; whereby it increased from 75.75 percent to 78.50 percent. The same goes to Indonesia and Malaysia whereby their intra-ASEAN exports decreased

from 22.52 percent to 21.50 percent and from 23.36 percent to 21.60 percent; but they showed an increment in exports to non- ASEAN countries whereby the percentage increased from 77.48 percent to 78.50 percent and from 76.64 percent to 78.40 percent, respectively. The same happened in the Philippines, Singapore and Thailand, whereby their intra-ASEAN export decreased from 22.85, 24.15 and 27.12 percent to 21.20, 23.90 and 22.40 percent, respectively. At the same time, the Philippines, Singapore and Thailand showed an increment for exports to non-ASEAN countries whereby the percentages increased from 77.15, 75.85 and 72.88 percent to 78.80, 76.10 and 77.60 percent, respectively.

This is the signal of less intra-ASEAN trade whereby according to Table 1.1, ASEAN members export more than 70 percent to non – ASEAN countries. In addition, intra-ASEAN trade is fragile because they are over reliant on non-ASEAN economies of which their exports accounted more than 70 percent to outside ASEAN as explained in Table 1.3. On another note, Agrawal (2010) argued that ASEAN countries should recognize sector-specific opportunities to be specialized or particularly developed as development engine of each origin country. Via this approach, ASEAN members will take full advantage of their own comparative advantage; and to later increase interdependent to each other and at the same time increase intra-ASEAN trade.

For example, Malaysia and Thailand are simultanously producing rubber (Phoong & Mohd Tahir, 2013). To make them more interdependent of each other, Malaysia can produce tires and Thailand can produce rubber shoes. In order to cut costs such as transportation cost and information cost, Malaysia will import rubber

shoes from Thailand and Thailand will import tires from Malaysia. Intra-ASEAN trade will happen because Malaysia and Thailand conquer the market of tires and rubber shoes, respectively. In other words, the intra-ASEAN trade will occur between them. This is supported by both countries in which they already have their own export specialization. In addition, the ASIAN region has two countries which produce products made from rubber.

The product specialization can be realized because countries have different factor endowments from Heckscher-Ohlin (HO) models or because firms enjoy increasing returns to scale in productions (Filippini & Molini, 2003). Heckscher-Ohlin (HO) models were constructed based on David Ricardo's theory of comparative advantage by predicting patterns of commerce and production by taking the factor endowments of a trading region into consideration. The model basically says that countries will export products that use their abundant and cheap factor(s) of production and import products that use the countries' scarce factor(s). Meanwhile, return to scale explains the behavior of rate of increase in the output/production to the succeeding increase in the inputs namely the factors of production in the long run. In addition, ASEAN members have some distinct advantages among them such as more population than others, more arable lands as well as technological and expertise advantages.

At the time being, the exertion to boost cooperation among ASEAN has intensified, but the outcome is still dissatisfactory because intra-ASEAN trade has been stagnant at about 25 percent for the past four decades. Although each ASEAN member experienced improvement in the level of income as shown in Figure 1.1a &

1.1b and potentially explained by intra-ASEAN export in Table 1.1, no sign of improvement in regional trade can be observed even with the inclusion of few members such as Laos, Cambodia, Vietnam and Myanmar. Conversely, on the other side of the coin, ASEAN is over-reliant on non-ASEAN countries for their exports and imports, as shown in Table 1.3. In short, exports to non-ASEAN countries accounted for more than 70 percent.

On other development, trade among ASEAN might also be hampered by poor institutional quality (IQ) and most ASEAN countries are characterized by poor IQ with exception to Singapore. Unfortunately, almost no study has researched the role of IQ and become one of the agendas of research in this study.

1.4 Research Questions

Generally, what is the effect of economic specialization on intra-ASEAN trade. Specifically, this study has the following questions:

- i) What is the effect of economic specialization on intra-ASEAN trade?
- ii) What is the effect of institutional quality on intra-ASEAN trade?

1.5 Research Objectives

Generally, this study aims to analyze the implication of economic specialization on intra-ASEAN trade. Specifically, this study attempts to:

- i) Examine the effect of economic specialization on intra-ASEAN trade.
- ii) Examine the effect of institutional quality on intra-ASEAN trade.

1.6 Significance of Study

The specialization index in this study could provide a signal in terms of which sub-sector should one country specialized, by which it will be employed in the gravity model. This situation may boost economic integration between ASEAN members. In fact, it is possible to increase intra-ASEAN trade by focusing on the strengths of each country. For example, all ASEAN members may take Malaysia as their example. The intra-ASEAN export will happen if their countries' leaders sit together with their economists to determine their country's economic strength or advantage. Malaysia had taken an initiative to develop National Key Result Areas (NKRA) on 11th July 2009 (www.malaysia.gov.my). NKRA is the Malaysian government's plan to boost the nation's economic potential and reduce the development and income difference between the different regions in Malaysia. The plan covers the North of Peninsular Malaysia, namely Perlis, Kedah, Penang and North Perak via North Corridor Economic Region (NCER). In addition, there is also a development in South Malaysia, namely Johor via Iskandar Malaysia. Meanwhile, for East Coast, Malaysia has developed the East Coast Economic Region (ECER) which includes Kelantan, Terengganu and Pahang. Malaysia is also concentrating on East Malaysia states, namely Sabah and Sarawak by developing Sabah Development Corridor (SDC) and Sarawak Corridor of Renewal Energy (SCORE).

1.7 Scope of Study

This study will be examining the economic activities such as intra-trade of the five ASEAN members, namely Indonesia, Malaysia, the Philippines, Singapore and Thailand. The data were from the year 1996 to 2015 in view that AFTA was established in the year 1992, and year 1996 is the best time to employ AFTA as one of the independent variables. This is because we consider that this is an adequate time frame for AFTA to strengthen its implementation. The data covered the pioneering members only and dropped the new members because of the data limitations.

1.8 Operational Definition of Key Terms

In order to facilitate common understanding of the elements of this study, the following operational definitions will be used:

1.8.1 Intra-ASEAN trade

The trade, namely exports and imports done between any two ASEAN members within the region (Elliott & Ikemoto, 2004)

1.8.2 Specialization

A method of production whereby a particular country concentrates on producing the only product it has expertise in and by the limited scope of products or services in order to gain greater degrees of productive efficiency within the entire system of businesses or areas (Pettersson, 2002).

1.8.3 Regional trade agreement

Regional economic integration is an economic agreement among countries of the same region. The agreement is signed in order to gain free tariff and non-tariff barriers to allow free flow of goods or services and factors of production among themselves. It can also be referred to as any type of arrangement that countries agreed to; fiscal, and/or monetary policies are regarded to as economic integration (Antonucci & Manzocchi, 2006).

1.8.4 Bilateral trade

The trade agreement could benefit both countries in terms of free tariff in which it could promote long term bilateral trade between them (Mercan & Yargin, 2012).

1.8.5 Trade liberalization

Trade liberalization refers to zero tariff or free trade restrictions between countries. Trade liberalization could also develop trade relationship amongst countries (Groot, Linders, Rieveld & Subramaniam, 2004).

1.9 The Outline of Thesis

This research contains five chapters. All of the chapters are organized in accordance to the research stage so that the link between the chapters will clearly be recognized. In the first chapter, it discusses the intra-ASEAN trade and growth, including the GDP per capita growth, the importance of regional integration, summary of ASEAN members, as well as overview of problem statements, research

objectives and research questions. To add, this chapter also presents the significance of this research and a closing point will be discussed in the outline of the thesis.

Chapter two discusses the comprehensive literature (theoretical review) on the subject matter. In this chapter will elucidate past research in detail and the link between the previous research and current is resolute. The previous and current articles, journals, books and thesis are the sources of this study.

The third chapter reveals the research methodology used. The research methodology is the course of action or guidelines used by the researchers in order to consolidate the research and the process of collecting data. This chapter is divided into a few parts, with the first part is on the empirical model (gravity model) and the second part observes the estimation procedure used (panel data analysis). This chapter also presents on how the data were collected, including the focus as well as managing the inquiry and fieldwork framework. In short, the discussion is on how the data were analyzed.

The results and findings will be elucidated in the fourth chapter. It contains data analysis quantitatively. All of the data will be induced in order to address the research questions and problem statements. The conclusion and suggestion for future research will be presented on the closing chapter (chapter five). The researcher will discuss and come out with the implication for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Review

This segment presents traditional trade theory and new trade theory. Some of the traditional trade theories presented are David Ricardo and Heckscher -Ohlin. Meanwhile, the new trade theories are intra-industry trade theory, trade with economies scale, technology-based theories of trade and gravity model.

2.2 Traditional Trade Theory

Kang, Malki & Rassekh (2007) debated about technological differences and resource availability which will reflect the variations in prices caused by differences in supply and demand. Technological differences and resource availability will cause countries have differences in their victuals, while Trefler (1995) stressed that technological difference is enlightened by the Ricardo's theory of relative advantage. In Ricardo's theory, the principle of comparative advantage is developed. A comparative advantage results in a company to have the power to trade goods and services at lower prices than its contenders and better sales and net margins. Clearly, trade is based on certain advantages, comparative or differential advantage (Davis & Weinstein, 2001)

Ricardo opposed tariffs and other limitations on international business deal. Ricardo's idea is well known as the theory of comparative advantage where

comparative advantage is the ability to produce a good at a lower monetary value, compared to other goods, and other countries (Trefler, 1995). It is supported by Stern (1995) where In the Principles of Economics, Ricardo states that comparative advantage is a specialized technique used to create more effective production and describes the opportunity cost between producers.

In summation, the principle of comparative advantage states that nations should produce goods in rural area with a smaller opportunity cost. The rule of comparative advantage shows that craft can make everyone better off because it allows people to specialize in activities they are good at. Economists apply the principle advantages to provide their support to free trade between countries.

As an extension to David Ricardo 's theory, the Hecksher - Ohlin model has been developed (Johnson,1971). It builds on David Ricardo's theory of comparative advantage by anticipating patterns of commerce and production based on the factor endowments of a trading region. The Hecksher -Ohlin model (H-O Model) version of comparative advantage implies that a country specializes according to the factors of production, capital, labor and natural resources (KoekKoek & Mennes, 1984). In addition, the model essentially says that countries will export products that use their abundant and cheap factor(s) of production and import products that use the countries' scarce factor(s). Ricardo theory considers only a single factor of production, which is labor.

Nyahoho (2010) stated that the Ricardian model of comparative advantage is influenced by differences in labor productivity using different technologies whereas

Heckscher and Ohlin do not require production technology to vary between countries, so in the interests of simplicity the H-O model has identical production technology everywhere. The H-O model removes technological variations, but introduced varied capital endowments.

As a conclusion, as the concept of trade theory becomes tighter, certain assumptions derived from the traditional trade model, the new trade model has been eased such as constant returns to scale and product homogeneity. This led to the development of new models such as economies of scale, technology based theories, intra and industry trade developed into a more substantial theory in deciding the pattern of trade.

2.3 New Trade Theory

New trade theories are a compilation of economic models in international trade, which focus on the role of expanding returns to scale and network effects and advanced in the late 1970s and early 1980s (Bhatti et al, 2011).

2.3.1 Intra-Industry Trade

Intra-industry trade can be described as the trade within industry, and refers to the substitution of the same merchandise that is processed by the same manufacture while Buckley et al (2001) stressed that the term is usually applied to international trade, in which the same type of goods or services is imported and exported but unlike trade based on comparative advantage, intra-industry trade in finished products occurs in tremendous volume between developed industrial

economies with similar factor endowment, skill points and phases of growth. Cohen, Levin & Mowery (1987) supported that the industry, which revealed the highest intra-industry trade in finished products includes manufactures' advanced products and processes which demonstrate different characteristics of economies of scale.

In addition, intra-industry trades in finished products based on transportation costs, seasonal trade, or product differentiation often present fewer pressures for protection and less political controversy than inter-industry trade or intra-industry vertical specialization based on comparative advantage. Intra-industry trade in finished products, on the other hand, involved trade in goods of the same industry and produced using similar factor intensities (Bernatonytė & Normantienė, 2007)

2.3.2 Trade with Economies of Scale

For some items, the median cost of production is based on the scale of production, or the number of units made. If the average price decreases as the scale of production grows, production will show a decreasing cost; thus, expanding returns to scales, or economies of scale. Small firms find it quite hard to compete with larger ones in certain types of economies of scale. Whether it is more favorable to large firms will depend on whether economies of scale are internal or external to the firm.

Haouas & Heshmati (2013) debated that constitutional economies of scale occur when a firm slumps in the average cost as it increases the output where the essential foundation of constitutional savings of scale is fixed costs in relation to firm's output. (Clark, 2010) supported that in an industry characterized by constitutional scale economies, a firm with low production faces a similar high

average cost as a large firm of comparable industry; as such, in order to achieve lower per unit cost, more output can be produced as to spread the fixed costs over more units. Lower costs allow large firms to sell their products at lower prices (Bernatonytė & Normantienė, 2007).

Hanoch (1975) gave an example that the automobile industry is a classic case of the industry of internal economy of scale. The car industry is a special case of industry that is characterized by the internal economy of scale. If economies of scale is internal to firm, huge firms have a cost advantage over the minuscule ones, while Harris (1984) stressed that in a perfectly competitive market, many small firms enter a market with many sellers and buyers; whereby they have to sell at a price set by a market that operates based on economies of scale that has the power to control their products' prices. In addition, external economies of scale appear when the value of a firm increase when the industry's output decrease. For example, when the computer industry increases production, costs will decline as the industry computer firms have become big enough to support the number of skilled workers, together with input suppliers such as semiconductor manufacturers.

2.3.3 Technology-based Theories of Trade

The Heckscher-Ohlin model has insisted that all countries accept similar technology (Himmelberg & Petersen, 1994). The authors added that certain industries have different assumptions than the assumption of the real technology. Nonetheless, there are also industries which do not seem to be achieving the stipulated assumption (Kim, 2007). In addition, countries that are endowed with huge rivers have the advantage of hydroelectric technology which is not available in

desert countries. Thus, this advantaged the power producing country. Endowment factor such as natural resources, for example, river, can easily be utilized by various technologies and countries (Chen, 2004).

Ethier & Markusen (1996) presented the ideas in term of the new technology approaches where the economic experts have suggested to several technological approaches across countries. This allows undeveloped countries to learn new technologies in relation to the production of established goods. Thus, the undeveloped countries can specialize in the new technology while others can concentrate on producing more established goods. One crucial significance of the theory is that, as each product change over its life cycle, the geographic area of its production will change.

While Renko, Autio & Tontti (2002) debated about the modernization and technological advances contribute to big industrialized economies. This is because the countries are highly developed, have experienced workforce and huge funds for research and development (R&D). Only firms that are innovative and with the latest technology can produce as a rapid rate. These firms still dominate the innovation of new technologies (Lemoine & Kesenci, 2004).

In addition, Spulber (2008) explained that international trade of technology can increase the revenue if the research and development (R&D) activities are increased; which lead to best practices and further stimulates the level of technology. Additionally, technology and trade increase the bulk trade; and hence, disqualify