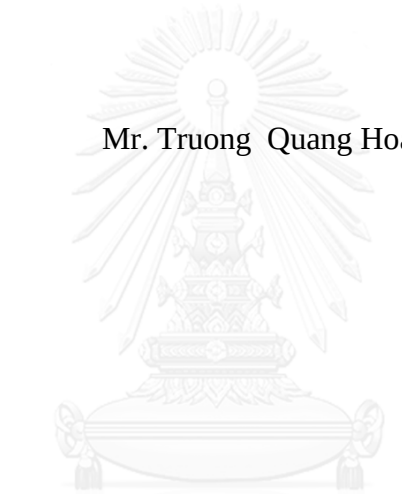
THE STRUCTURE OF COMMODITY TRADE BETWEEN THAILAND AND VIETNAM (2004-2013)

Mr. Truong Quang Hoan



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โครงสร้างทางการค้าสินค้าโภคภัณฑ์ระหว่างไทยกับเวียดนาม (ค.ศ.2004-2013)

นายเตรือง กวาง ฮวาน

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาอักษรศาสตรมหาบัณฑิต
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Thesis Advisor	Assistant Professor June Charoenseang, Ph.D.

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เตรือง กวาง ฮวาน : โครงสร้างทางการค้าสินค้าโภคภัณฑ์ระหว่างไทยกับเวียดนาม (ค.ศ.2004-2013) (THE STRUCTURE OF COMMODITY TRADE BETWEEN THAILAND AND VIETNAM (2004-2013)) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ผศ. ดร. จูน เจริญเสียง, หน้า.

วิทยานิพนธ์ฉบับนี้ได้ใช้การวิเคราะห์เชิงพรรณนาวิเคราะห์สถานการณ์การค้าระหว่างไทยกับเวียดนามในช่วงปี 2547-2556 เพื่อศึกษาการเปลี่ยนแปลงในโครงสร้างทางการค้า พร้อมทั้งศึกษาปัจจัยที่เป็นตัวกระตุ้นในเกิดการเปลี่ยนแปลงในโครงสร้างทางการค้า นอกจากนี้ยังได้ศึกษาถึงความได้เปรียบโดยเปรียบเทียบของแต่ละประเทศ และศักยภาพในการขยายการค้าในกลุ่มสินค้าที่มีการค้าระหว่างไทยและเวียดนาม

การศึกษาแสดงให้เห็นว่านอกจากจะมีการขยายตัวทางการค้าระหว่างประเทศทั้งสองแล้ว ยังมีการเปลี่ยนแปลงในองค์ประกอบของการค้าสินค้าระหว่างสองประเทศ โดยมีสัดส่วนการค้าในสินค้าอุตสาหกรรมเพิ่มขึ้นในช่วงสิบปีที่ผ่านมา การศึกษายังพบว่ามีการเพิ่มขึ้นของการส่งออกในสินค้าขั้นกลางและขั้นสุดท้ายของเวียดนามอีกด้วย อย่างไรก็ตามเวียดนามมีบทบาทแค่ในส่วนของการผลิตและการประกอบชิ้นส่วนในการสินค้ากลุ่มนี้เท่านั้น การที่เวียดนามมีส่วนในการเพิ่มมูลค่าน้อยทำให้ความได้เปรียบโดยเปรียบเทียบทางการค้ากับไทยจึงเป็นสินค้าในกลุ่มที่ใช้แรงงานราคาถูกและทรัพยากรธรรมชาติเป็นส่วนมาก รวมทั้งการศึกษายังแสดงให้เห็นว่าการส่งออกของเวียดนามไปยังไทยมีความหลากหลายน้อยกว่าการส่งออกจากไทยมายังเวียดนาม และไทยยังมีความได้เปรียบโดยเปรียบเทียบในสินค้าที่ใช้เทคโนโลยีขั้นกลางและขั้นสูงมากกว่าเวียดนาม การศึกษาจึงสรุปว่ารูปแบบการค้าระหว่างทั้งสองประเทศจึงเป็นความสัมพันธ์ในลักษณะการพึ่งพากัน

การศึกษาเห็นว่าทางเวียดนามควรมีนโยบายในการส่งเสริมการค้าระหว่างไทยกับเวียดนาม โดยการให้ความสำคัญกับการทำการค้าร่วมกันและส่งเสริมให้มีความหลากหลายในการส่งออกสินค้าระหว่างทั้งสองประเทศ รวมทั้งเวียดนามควรเพิ่มศักยภาพในการแข่งขันทางธุรกิจ เพิ่มความเข้มแข็งของความร่วมมือด้านเศรษฐกิจ การค้า และการลงทุนกับไทยให้มากขึ้น

สาขาวิชา ไทยศึกษา ลายมือชื่อนิสิต .....

ปีการศึกษา 2557 ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

5680353622 : MAJOR THAI STUDIES
KEYWORDS: TRADE STRUCTURE / INTRA-INDUSTRY TRADE / COMPARATIVE ADVANTAGE / PRIMARY GOODS / INTERMEDIATE GOODS / FINAL GOODS

TRUONG QUANG HOAN: THE STRUCTURE OF COMMODITY TRADE BETWEEN THAILAND AND VIETNAM (2004-2013). ADVISOR: ASST. PROF. JUNE CHAROENSEANG, Ph.D., pp.

Using the quantitative approach as the main research methodology, this thesis analyzes trends and changes that have taken place in the structure of commodity trade between Thailand and Vietnam over the past decade (2004-2013). It will also provide several suggestions to promote Thailand-Vietnam commodity trade in the coming years.

Findings show that along with the rapid growth in bilateral trade, trade composition between Thailand and Vietnam has changed positively towards increasing share of traded manufactures over the past decade. The thesis finds out that there has been a high share of trade in intermediate goods between the two countries, especially in Thailand's exports while there has been a considerable growth in the share of final goods, especially capital goods in Vietnam's exports. However, Vietnam has taken part only in assembling and processing stages with low value added and its exports to Thailand still depend heavily on comparative advantages over cheap labor and natural resources. Also, the thesis demonstrates that Vietnam's exports have been less diversified as compared with Thailand. Although both countries enjoy a comparative advantage in primary products, there has been more medium and high technology products with high RCA index in Thailand's exports as compared with Vietnam. This thesis therefore concludes that trade pattern between the two countries is a complementary trade relation.

This thesis also argues that in order to promote Thailand-Vietnam commodity trade in the coming years, on Vietnam's side, it should build appropriate policies on export-import orientation and export diversification. Vietnam should also enhance the competitiveness of domestic businesses as well as strengthen economic, trade and investment cooperation relations with Thailand.

Field of Study: Thai Studies Student's Signature .....

Academic Year: 2014 Advisor's Signature .....

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LIST OF ABBREVIATIONS

ACMECS	Ayeyawady - Chao Phraya - Mekong Economic Cooperation Strategy
AEC	ASEAN Economic Community
AFTA	ASEAN Free Trade Area
ASEAN	Association of Southeast Asian Nations
ASEAN-6	Brunei, Indonesia, Malaysia, Philippines, and Singapore
BEC	Broad Economic Categories
CEPT	Common Effective Preferential Tariff
CLMV	Cambodia, Laos, Myanmar, and Vietnam
CPV	Communist Party of Vietnam
ECS	Economic Cooperation Strategy
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Production
GMS	Greater Mekong Sub-region
HI	Herfindahl Index
HS	Harmonized System
IIT	Intra-industry Trade
NTBs	Non-Tariff Barriers
N.E.S	Not Elsewhere Specified
R&D	Research and Development
RCA	Revealed Comparative Advantage
SITC	Standard International Trade Classification

SMEs	Small and Medium Enterprises
UN	United Nations
US$	United States Dollar

Chapter 1 : INTRODUCTION

Background, rationale and research questions

After the unification of the country in 1975, Vietnam continued to remain its centrally planned economy in the subsequent decade. This model however revealed numerous disadvantages as it did not encourage investment and renovation of business sector (both state sector and private sector). Consequently, Vietnamese economy faced huge difficulties especially the sharp decline in Gross Domestic Production (GDP) and the income per capita. These challenges forced the Vietnamese government to perform the changes in economic development strategy, converting from a command economy into a market economy which has been known as "Doi Moi" (renovation) period since 1986. Along with the internal economic reforms, the Vietnamese government has tried to promote trade and investment activities with other countries, firstly with neighbouring nations through its participation in Association of Southeast Asian Nations (ASEAN) since 1995.

On the other hand, thanks to the end of Indochina war, Thailand reckons that instead of restricting trade exchange with CLMV countries (Cambodia, Laos, Myanmar, and Vietnam), it would be wiser if the country can exploit these markets for economic gains. This strategy was expressed with the impressive slogan "converting Indochina from the battlefield to the market" in 1988 under the administration of Prime Minister Chatchai Choonhavan.

Also thanks to the introduction of ASEAN Free Trade Area (AFTA) in 1992 and later on ASEAN Economic Community (AEC) in 2003 as well as other economic cooperation initiatives, the economic association level between Vietnam with other ASEAN members has deepened.

Thailand and Vietnam established an official foreign relation in 1976, one year after the unification of Vietnam. From that, several economic cooperation agreements have been signed between the two countries such as Economic, Trade and Technical Agreement (1978); Agreement on Aviation Transportation (1978); Agreement of Investment Promotion and Protection (1991); Agreement of Tourism Cooperation

(1994) and so on. In 2003, the former Prime Minister Thaksin Shinawatra initiated the Economic Cooperation Strategy (ECS) comprising 4 countries, namely Cambodia, Laos, Myanmar and Thailand. Vietnam joined the ECS in 2004 and one year later, the name of the ECS was changed into Ayeyawady - Chao Phraya - Mekong Economic Cooperation Strategy (ACMECS). The creation of the ACMECS was to create regional prosperity with increasing solidarity, mutual respect, close friendship, good neighborliness and active cooperation among members.

A strong and effective economic relation between Thailand and Vietnam was expected to bring benefits not only to the two countries in particular but also to ASEAN as a whole. In ASEAN, Thailand has become one of major trading partners of Vietnam (the second largest partner) as total value of trade exchange between the two sides has significantly increased from nearly US$ 1.2 billion in 2000 to about US$ 10 billion in 2013. In terms of Foreign Direct Investment (FDI), Thailand is also among the top ten biggest investors in Vietnam. In ASEAN, Thailand is one of three biggest investors (along with Singapore and Malaysia) in Vietnam with over 330 projects, accounting for US$ 6.5 billion in total accumulated FDI in 2013 (VCCI 2014).

With respect to trade exchange, albeit the growth in trade volume between the two sides, Vietnam still remains a significant amount of trade deficit with Thailand, at over US$ 3 billion in 2013. In regard to bilateral trade structure, Vietnam still exports a large part of commodities with low value added to Thailand while it imports from Thailand a huge volume of medium and high technology products. This trade pattern has changed positively in recent years, principally due to the contribution of FDI sector in total export.

However, a number of questions emerge here. First, how Vietnam can reduce quickly the large trade deficit with Thailand, as well as promote export activity of domestic business sector?. Second (also most importantly), what approaches and methods should be implemented to promote Vietnam's export of medium and high technology products which create higher value added to Thailand's market?. Third, how to identify and enhance export of the commodities that Vietnam has a comparative advantage over Thailand market?. These issues have become

increasingly serious in the circumstance that the AEC with removal of taxes and other trade barriers will come into effect by the end of 2015.

Objectives of study

This study aims:

- To analyse the situation of Thailand-Vietnam commodity trade structure between 2004 and 2013 through quantitative methods in order to determine the changes that have taken place as well as to investigate the factors influencing such changes in trade patterns.

- To identify comparative advantages for each country as well as expansion potential in specific goods or commodity groups that the export sector of Thailand and Vietnam should focus on.

Hypothesis or major arguments of research

This thesis includes some major arguments as follows:

- In 2004 Vietnam joined the ACMECS. The volume of trade exchange between Thailand and Vietnam has increased remarkably in the last decade. Along with the rapid growth in bilateral trade volume, trade composition between the two countries has changed positively towards increasing share of traded manufactures. Nevertheless, Vietnam has taken part only in assembling and processing stages with low value added as well as its export to Thailand still depends heavily on comparative advantages over cheap labour and natural resources.

- Intermediate goods and final goods make up a large proportion of total commodity exchange value between the two countries over the past decade.

- The growth in Vietnam's exports, especially high technology manufactures to Thailand is contributed greatly by the FDI sector, while the contribution of domestic businesses remains limited.

- A deeper regional integration such as the AEC with the removal of taxes and trade barriers is considered to have remarkable impacts on commodity trade structure between Thailand and Vietnam in the future.

Boundary of study

- This study only considers bilateral trade exchange between Thailand and Vietnam without deeply analysing economic cooperation between the two sides in multilateral cooperation frameworks such Greater Mekong Sub-region (GMS) or the ACMECS.

- The thesis only considers the flow of direct trade between Thailand and Vietnam. It does not look at indirect trade exchange between the two sides through the third country.

- The thesis focuses mainly on trade exchange between Thailand and Vietnam from 2004 to 2013 (a ten year period). The year 2004 is chosen because this was the year that Vietnam joined the ACMECS which marked the relatively comprehensive integration between the two countries. Furthermore, in 2004 the Thai economy recovered almost entirely from the damage of the Asian Financial crisis 1997-1998. On the other hand, over the past decade, Thailand's economy has witnessed many ups and downs stage due to negative impacts of the global financial crisis 2008-2009 or the severe flood in 2011. In terms of political field, there have been numerous fluctuations in Thai politics, especially the dismissal of the Thaksin Shinawatra government after the coup in 2006. With regards to Vietnam, from 2004 to 2013, Vietnam's economy continued to grow strongly though its growth rate was not as high as the period 1995-2003. This period also witnessed the deeper economic integration of Vietnam into the global economy revealed through Vietnam's participation in the World Trade Organization (WTO) in 2007 as well as the considerable growth of FDI flows into its manufacturing and processing sector. It therefore is of interest to explore in depth the situation of Thailand-Vietnam commodity trade structure during this important period.

- This thesis only mentions trade in commodity. It does not mention trade in service since data on service trade between Thailand and Vietnam are hard to be collected sufficiently as well as the classification of service into specific sectors is very complicated and inconsistent.

Limitation of study

Most reference documents used in this study are English and Vietnamese documents. It is a deficiency as the researcher could not explore documents written in Thai.

Another limitation is that this research only investigates trade in goods while it does not explore trade in services as stated, so the picture of Thailand-Vietnam trade relation would not be examined comprehensively.

In addition, it would be ideal if the researcher can make interviews with Thai exporters and Vietnamese exporters related to their thoughts and assessments on Thailand-Vietnam trade relations. However, the thesis has not carried out this work yet not only because it is time-consuming to make interviews but also because the exporters seem to be not willing to share their views on this topic.

Similarly, the researcher does not have conditions to do an in-depth study of the role of Thai investors in the Vietnamese market in trade relations between the two countries. This topic can be developed as another independent MA thesis.

Finally, this study would be more complete if it could make comparisons of Thailand-Vietnam trade structure in depth with trade composition of the two countries with other ASEAN countries.

Significance and usefulness of study

With the quantitative approach, firstly this study expects to provide a more detailed picture of commodity trade structure between Thailand and Vietnam over the past decade which is mostly investigated under the norm of traditional statistics or descriptive analyses in previous studies.

Secondly, this research expects to fill the gap in the study of trade structure between Vietnam with a more advanced country in ASEAN.

Next, findings and suggestions drawn from this research can be a good reference material for policy makers in promoting Thailand-Vietnam commodity trade in the future.

Lastly, this research will be a first step for further studies on economic, trade and investment cooperation relations between Thailand and Vietnam in the coming years.

Ethical considerations

The whole procedure of study conducted in this thesis is performed by the researcher himself with the support from technical tools and programs. All data collected and assessments are cited clearly and all charts and tables are made by the researcher himself. Finally, no copy or plagiarism is accepted in this study.

Structure of the research

This study includes 5 chapters as follows:

Chapter 1: Introduction

Chapter 2: Theoretical background on bilateral commodity trade structure

Chapter 3: Methodology

Chapter 4: The situation of commodity trade structure between Thailand and Vietnam (2004-2013)

Chapter 5: Conclusions and recommendations

Chapter 2 : THEORETICAL BACKGROUND ON BILATERAL COMMODITY TRADE STRUCTURE

This chapter provides a conceptual framework which is vital to understand structure of trade in goods. It also generalizes theories of international trade which are foundation for the understanding of international trade relations and trade policy. Chapter 2 also provides literature review related to bilateral structure of commodity trade.

2.1. Conceptual framework

2.1.1. Commodity trade and structure of commodity trade

Commodity trade

Economic commodities consist of goods and services. Goods are tangible items by contrast services are intangible commodities, or non-physical since we cannot touch, grip, handle, look, smell or taste them. The classification between goods and services in many cases only has a relative meaning. For instance, information is classified as a good but only takes an intangible form.

As for definition of trade (or commerce), in a broad sense, it refers to business activities by individuals in the market for seeking profit. In a narrow meaning, trade is the process of selling or buying goods or services in the market, is the distribution of goods and services. Trade, as defined by Free Encyclopedia "involves the transfer of the ownership of goods or services from one person or entity to another in exchange for other goods or services or for money".[1] The exchange activities of goods and services across national borders are called international trade.

Trade has developed from the form of barter or direct exchange of goods to metals and later money and cheque as mediate means of payment which can separate between buying and selling. At present, e-commerce (a type of trade) has increasingly used as a crucial means of buying, selling, and payment in developed countries like

[1] http://en.wikipedia.org/wiki/Trade, accessed online on 12 January 2015.

the US, Germany and Japan. Trade occurring between two individuals is considered as bilateral trade; between more than two traders is multilateral trade. The rise in specialization and division of labour are direct causalities for the development of trade. Another reason is the existence of absolute advantage or comparative advantage in different regions in producing commodities or the advantage that some regions can have with mass production.

Commodity trade, in this study, is understood as trade in goods and is a part of trade in general. It includes all activities related to buying, selling or distributing goods which can satisfy wants or need of human and exist in tangible norms.

Commodity trade structure

By definition, structure of commodity trade refers to the proportion or status of all categories of goods or a specific type of goods which constitute a total country's export and import value as well as constitute stable relations between these components during a specific period (Huong, N. T. M. 2012). In other words, commodity trade structure is the ration of import and export value in each category of goods to total volume of import and export.

Structure of commodity trade is revealed through quantity and quality. In terms of quantity, commodity trade structure is represented through the ratio of each category to total trading value and is outside form of it. As for quality, structure of commodity trade demonstrates the inside content, such as technology level embodied in export goods or composition of import and export products (for example, the share of primary products and manufactured products in total trade exchange value).

Normally, structure of commodity trade is divided into structure of import and export markets and structure of import and export products. In relation to structure of export-import markets, it refers to distribution of export and import value by a country or a region in the world through measuring the share of export (import) value between that country or that region and its trading partner(s) in its total export (import) value to other countries. This structure also reflects the trade openness level and the extent to that a country takes part in international division of labour. By structure of import-

export products, it refers to the correlation proportion between products or industries in total amount of import and export.

Currently, HS, SITC and BEC classification systems have been widely used in studies owing to its detailed level. This study also employs the data from these classification systems to analyse the trade structure of commodity between Thailand and Vietnam in the last decade.

2.1.2. Inter-trade industry and intra-trade industry

Commodity trade can be decomposed into two types, namely inter-industry trade and intra-industry trade.

By definition, *inter-industry trade* refers to trading activities which occurs between different industries. For example, Vietnam exports agricultural products to Japan while imports cars and technological equipment produced in Japan. Another example is Vietnam exports clothes to the US and imports chemical products from the US.

Inter-industry trade was supported traditionally by classical economists such as Adam Smith, Ricardo or Heckscher and Ohlin. In other words, trade occurs due to differences between countries in absolute advantage and comparative advantage which allow countries to gain benefit if they perform specialization in different sectors and then trading together.

In contrary to inter-industry trade, *intra-industry trade* is a type of trade that a country imports and exports in the same industries (Deardorff, A. V. 2006). This term is used widely in international trade at present because high volume of the similar types of goods and services, especially automobiles, computers, electronic products are both exported and imported by countries. For instance, Vietnam exports rice to Thailand but it also imports this commodity from Thailand, or Japan exports family cars to Germany market while Germany exports sport cars to Japan market.

There are two different types of intra-industry trade, namely horizontal intra-industry trade and vertical intra-industry trade. The former refers to exports and imports of goods in the same industry (or sector) and at the same stage of processing

(Marrewijk, C. v. 2008). These products are produced by similar technology and also provide similar functions. For example, mobile phones are made by Korean firms and Japanese firms, but they differ in appearance, shape, colour, or design to satisfy different types of customer. On the other hand, the latter also refers to trade of goods in the same sector but at different stages of processing. This type of trade is often associated with related international fragmentation of production into different stages of processing at different locations, based on advantage of local conditions such as natural resources, cost of labour, scale of domestic sector and so on (Marrewijk, C. v. 2008). Taking computers for example, Vietnam purchases parts and components (intermediate inputs) of computers from Thailand to produce final computers and then exports them back to Thailand and other countries. Similarly, Thailand imports electronic chips from Vietnam to assemble cameras and then exports them back to Vietnam market.

Currently, East Asia is the region that its trade in parts and components heavily concentrates on electrical machinery, especially semiconductor devices as well as transport equipment (SITC 7) as it makes up more than 90 per cent of combined parts and components trade in the region (Athukorala, P.-c. 2011).

Intra-industry trade exists because of several reasons in which increasing returns to scale (or economies of scale) and consumers love for variety (product differentiation) as argued by new trade theory are the most widely accepted causalities (Krugman, P. R. 1979, 1981, Lancaster, K. 1980). Increasing returns to scale allows firms to obtain more benefits as they focus on manufacturing specific types or products within specific range due to first mover advantages. On the other hand, new firms (both domestic firms and foreign firms) will also enter the market. However, in order to compete with old firms they need to produce different types of products (that they have an advantage) that are close but not perfect substitutes to satisfy differences in consumer's hobbies. This therefore increases the variety of products in the same industry.

The share of intra-industry trade is often high if trading partners are developed countries and are a similar status of development; or economic scale of trading partners is large and they are not too different in size (Helpman, E. 1998).

In summary, inter-industry trade reflects gains obtained through comparative advantage while intra-industry trade refers gains achieved through increasing returns to scale (cost advantage) and wider customer choices.

2.1.3. Primary goods, intermediate goods, and final goods

Primary good

By definition, a primary good is a good that has not been processed and is therefore in its natural state, specifically products of agriculture, forestry, fishing, and mining (Deardorff, A. V. 2006). Examples of primary products are oil, water, fish, fruit, or wood.

According to the BEC classification, primary products include food and beverages, industrial supplies not elsewhere specified as well as fuels and lubricants in which they are entirely processed. Often developing countries have comparative advantage in producing primary products because many of them are rich in natural resources but poor in capital, education and technology.

Intermediate good

An intermediate good can be defined as an input to production that has itself been produced and that, unlike capital, is used up in production (Deardorff, A. V. 2006). As an input, it is in contrast to a primary input because intermediate good has itself been produced and as an output, intermediate good is used to produce other goods (or services) so it is contrast to a final good which is consumed and can be referred to as a consumption good (Miroudot, S., R. Lanz and A. Ragoussis 2009).

Intermediate goods are not counted in a nation's GDP since it would mean we count two times. The value of intermediate good is included in the value of the final good. In the BEC classification, intermediate goods consist of semi-finished goods (such as processed food and beverages or processed fuels and lubricants) and parts and components (like parts and components of capital goods).

Final good

Final good is a good that requires no further processing or transformation to be ready for use by consumers, investors, or government (Deardorff, A. V. 2006). Final

goods include capital goods and consumption goods according to the BEC classification. For example, a television or an apple which is sold to a consumer is a consumption good while a machine or a car is sold to consumer is classified as a capital good. In many cases, a good can be a final good as well as can be an intermediate good according to main use. For instance, apples can be sold to households as final goods as well as can be sold to a factory as inputs for food preparation.

When measure the income and output of a nation, the term "final goods" only counts for new goods in a year to avoid double counting of production which is based on re-sales of the same item made in previous year.

2.2. International trade theories

The arguments over issues of international trade appeared for long time in the past. Staring from Mercantilism's claims on encouraging export and restricting import, theory of international trade was then developed by economists Adam Smith and David Ricardo who insist that economic advantage can be achieved if countries specialise in producing goods that they have advantages. The theory on comparative advantage then was developed by Heckscher and Ohlin who explain the roof of international trade through theory on factor-proportions. Nevertheless, there are many cases in reality that Heckscher-Ohlin model does not resolve. Thus new theory on international trade has been introduced to address these challenges. This theory emphasises on the role of economies of scale and technology, product differentiation, government, and supporting industries in determining the countries' position in the global value chain.

This section generalizes the main ideas, meaning and deficiencies of international trade theories, namely classical trade theory and new trade theory. It starts with the classical international trade theory.

2.2.1. Classical international trade theory

The early arguments related to international trade were brought out during the 16th-17th century by Mercantilism in transition period of Europe. According to

Mercantilism, the wealth of one country depends on how the state promotes export goods and restricts import goods. They suppose that export is good as we export we receive payment-currency based on gold standard, thus one country should export as much as possible to gain as much benefit as possible. The wealth of a country will increase if its export volume is larger than its import volume so Mercantilism suggests the state should perform trade protection policy through imposing high tariffs on imported goods. Simultaneously, it should perform subsidies for export goods.

The biggest shortcoming of Mercantilism is that in some cases it is good to import goods from foreign countries since the population can consume the products that are not produced by domestic sector as well as countries can gain benefit in trading together based on advantage of each country. These deficiencies were resolved under theories on absolute advantage of Adam Smith and comparative advantage of David Ricardo.

Unlike Mercantilism's ideas, in his publication "An Inquiry into the Nature and Causes of the Wealth of Nation", Adam Smith argued that all nations would gain benefit if they perform free trade and specialize in production of and export goods that they have an absolute advantage (Smith, A. 1776). Tariffs and quotas should not restrict international trade since international trade is a positive sum game where there are gains for both countries to exchange goods together. The wealth of a nation is measured by the living standards of its people and not by gold and silver as Mercantilism emphasized on.

The absolute advantage theory is based on a number of assumptions, namely trade is between two countries; only two commodities are traded; labour is only cost of production. Although Smith successfully proved the role of free trade in creating benefit for each country, his theory did not resolve the case that whether or not one country without having an absolute advantage in the production of any product can take part and get sake in international trade. This concern was addressed by Ricardo's comparative advantage theory which is perhaps the most important concept in international trade theory.

Like Smith's absolute advantage theory, Ricardo's comparative advantage model assumes that there are two countries producing two goods in free trade. Only labour is

utilized to produce goods, with a given fixed coefficient between labour and output of a good in each country (Helpman, E. 1998). Other assumptions are as follows: labour is homogeneous (identical) within a country but heterogeneous (non-identical) across countries; goods are homogeneous across firms and countries; there is no cost in transporting goods between countries; factor of production (labour) and goods market are perfectly competitive in both countries (Suranovic, S. M. 2010). The comparative advantage theory predicts that a country should specialize in the production of goods which it has a comparative advantage, that is, it produces and exports most efficiently and imports the goods that it produces less efficiently from other countries (Ricardo, D. 1817).

Economists often use the term "opportunity cost" to illustrate Ricardo's comparative theory. The opportunity cost of cars in term of computers, for example, is the number of computers that can be manufactured with the resources used to produce a given number of cars. Thus, a country has a comparative advantage in producing a good as the cost of opportunity to produce that good in terms of other goods is lower in that country, comparing with this cost in other countries (Paul R. Krugman, M. O., Marc J. Melitz. 2012).

Ricardo (1817) also used the term "relative price" between two goods for explaining the cause of international trade. For instance, if the relative price of cloth in terms of car in Vietnam is lower than the relative price of cloth in terms of car in Thailand, then Vietnam enjoys a comparative advantage in producing cloth; Thailand enjoys a comparative advantage in producing car. If there is an international exchange rate between cloth and car lying in the relative price of the two countries, the model predicts that Vietnam specializes in producing cloth while Thailand specializes in the production of car.

The main deficiency in Ricardian comparative advantage theory is that if only labour is used as a factor of production, comparative advantage arises only due to international differences in labour productivity but in reality, other differences in countries' resources like capital and technology also significantly impact the pattern of trade in these countries.

Expanding Ricardo's comparative advantage theory, Heckscher (1919) and Ohlin (1933) provided a framework which is widely known as Heckscher-Ohlin's factor-proportions theory to analyse international trade relations (Heckscher, E. F. 1919, Ohlin, B. 1933). According to Heckscher-Ohlin's theory, capital and workers are necessary resources required to produce goods and services. In the production process, some goods may employ more capital such as technical equipment and machinery which are called capital-intensive goods. But other goods use more efforts of the workers in the production, or called labour-intensive goods. The countries differ in the availability of the factors of production, in other words, some have many machines (capital) but few workers while others have few machines but numerous workers. Heckscher-Ohlin theory predicts that countries will export goods that it is relatively intensive in using factors that are locally abundant; and import good that make intensive use of factors that are locally scarce (Baldwin, R. E. 2008).

Nevertheless, Heckscher-Ohlin model is not absolutely correct with every case in reality. Leontief (1951), through testing labour-output and capital-output ratios for different sectors in the US found that the US (among the most capital abundant countries in the world) exported labour-intensive goods while imported capital-intensive goods which was contradict with Heckscher-Ohlin theorem (Leontief, W. W. 1951). In addition, this theory cannot explain the rising tendency in intra-industry trade among countries in the world.

In summary, classical theory on international trade emphasizes on free trade, absolute advantage and comparative advantage as the ways for countries to seek benefit in international trade. The limitations can be found in its assumptions, namely simple world (two countries); no transportation costs; no price differences in resources; resources immobile across countries; or constant returns to scale. In practice, international trade occurs much more complicatedly than these assumptions. Thus, the new international trade theory is formed in order to fill up these shortcomings.

2.2.2. New International Trade Theory

New trade theory suggests that trade can increase the variety of goods available and reduce the average cost of those goods due to economies of scale (unit cost of production decreases with a large scale of output) (Krugman, P. R. 1979, 1981). Firms with first mover advantage will develop economies of scale and create barriers to entry for other firms. However, other firms try to enter the market by producing different types of goods within the range of goods. In other words, with trade, a country can specialize in producing a narrower range of products and then purchase the goods that it does not produce from other countries.

According to new trade theory, countries may gain benefit from trade even when they do not differ in resource endowments or technology. In addition, a country may predominate in export of a specific good simply because it has one or a number of firms which are among the first to produce and distribute that good. For example, the US exports a lot of airplanes and dominates aviation market since it possesses the Boeing firm which its airplanes are used broadly in the world.

Another trend in new trade theory is theory on global production network which puts emphasis on the role of global value chain and the ways that countries participate in this chain. Also, many recent studies have explored the growing trend of intermediate goods in trading relations among countries (Ando, M. 2006, Athukorala, P. C. and J. Menon 2010, Sitchinava, N. 2008).

New trade theory based on a very strict assumption, that is, all firms are symmetrical. This assumption is criticized because it does not help a country to allocate its resources efficiently. In the case that one country has to protect the infant industries (which are now applied widely in the world), that country can be shifting the resources from an industry that it enjoys a comparative advantage into another industry that it has a comparative disadvantage. The arguments of new trade theory can be only effective as there are many firms with different stages of production. In fact, this condition does not always exist. In addition, the assumption that all firms are symmetrical may be not true in every case due to the shortage of information or dissymmetrical information in the market.

In summary, international trade theories have attempted to explain the roof of international trade. All countries could gain benefit from trade if they specialize in producing goods in accordance with their absolute advantage (as Smith stated), comparative advantage (as Ricardo argued), factor endowments (as Heckscher-Ohlin's theory affirmed), or economies of scale and the product differentiation (as new trade theory expressed). While classical trade theory emphasises on free trade, new trade theory advocates limited and selective government interventions to support the certain export industries. As discussed above, each model has its own shortcomings, thus international trade theory requires new studies to resolve drawbacks of current trade theories.

2.3. Literature review

In this part, the thesis reviews briefly previous studies related to trade structure in various aspects such as comparative advantage; intra-industry trade; export diversification; stages of products; and technological content.

Many studies have investigated bilateral trade relations based on Ricardor's comparative advantage theory by calculating the revealed comparative advantage (RCA) index. The first RCA index was used by Liesner (1958) but Balassa's index (1965) was widely used to estimate the RCA index for one country. Various studies use this indicator to examine the structure of commodity trade between two countries or between one country with a region such as the study of the comparative advantage of mainland China with Hongkong and Taiwan (Hinloopen, J. and J. van Marrewijk 2004); comparative advantage between Australia and China (Sheng, Y. a. and L. Song 2008); or revealed comparative advantage and competitiveness between Turkey with European countries (Utkulu, U. and D. Seymen 2004). These studies in general agrue that developing countries like China or Turkey have a comparative advantage over labour-intensive products, on the contrary developed countries like Australia and the European nations often enjoy a comparative advantage in capital-intensive products. Similarly, in the study of Thailand's trade relations with CLMV, Sompop, M. (2010) and Chaisrisawatsuk, S. (2008) have figured out main characteristics in trade exchange between Thailand and CLMV through computing the RCA index of

Thailand and these countries. They both emphasize on the improvements of infrastructure system and custom procedure as the key tasks to boost trade exchange in mainland Southeast Asian region in the future (Chaisrisawatsuk, S. 2008, Sompop, M. 2010). The drawback of these studies is that it calculates the RCA index at 1-digit and 2-digit which may not help to assess deeply the comparative advantage between Thailand and CLMV.

On the other hand, there are also critisms that the RCA index should be used to assess the competitive advantage between countries instead of being used as a measurement of comparative advantage. However, to some extent this index is still one of the best measurements that we have in examining bilateral trade relations. Therefore, the thesis still uses the RCA index at 3-digit to analyse trade structure between Thailand and Vietnam.

New international trade theory expanded the theories of Ricardo and Hecksher-Ohlin by investigating trade tendency of similar but differentiated products, in other words, intra-industry trade rather than specialization (Balassa, B. 1966, Grubel, H. G. 1967, Grubel, H. G. and P. J. Lloyd 1975). This phenomenon is explained comprehensively in the studies of Krugman (1979, 1981) and Lancaster (1980) with two key assumptions: increasing returns to scale and consumers love for variety (product differentiation). In the study of intra-industry trade, many studies reckon that the high level of intra-industry trade occurs mainly between developed countries as well as in medium and high technology manufactures. Meanwhile, trade between a developed country and a developing country occurs mainly in different industries or inter-industry trade where traditional principles still dominate trade relations.

The study of intra-industry trade between Thailand and Vietnam is worth since it helps to examine the extent to which the two countries utilize the economies of scale and product differentiation. However, Krugman (1980) also noted that the degree of intra-industry trade may be lower according to the detailed level of classification. Thus, the classification used in this study should not be over detailed but it also should not be too board.

Countries not only try to promote the export of comparative advantage products but also try to diversify its export sector. This is because export diversification helps

developing countries to stabilize export earnings as well as sustain economic growth in long term period (Brenton, P., R. Newfarmer and P. Walkenhorst 2007). Imbs and Wacziarg (2003) are among the first scholars exploring the pattern of export diversification in depth in accordance with different development levels between countries. According to them, poor countries have a bias in diversifying their export sector until they achieve a relatively high level of income per capita to specialize (Imbs, J. and R. Wacziarg 2003). Using empirical evidence, some studies found that there exists an U-shaped curve of diversification with development status (Cadot, O., C. Carrère and V. Strauss-Kahn 2011, Imbs, J. and R. Wacziarg 2003, Parteka, A. and M. Tamberi 2011). In trade relations, export expansion can be either through extensive margin or intensive margin. Amurgo-Pacheco and Pierola (2008) define the intensive margin of trade referring to the growth of exports in goods that are already being exported (more of current export products), while the extensive margin refers to export of new products to existing markets, old products to new markets, and new products to new markets. In regards to the determinants of export diversification, exporters of primary goods tend to have more focused export patterns than exporters of manufactured goods (Bebczuk, R. N. and N. D. Berrettoni 2006). Meanwhile, Parteka A. and Tamberi M (2011) argue that there has been a link between the geographical, institutional or economic conditions of a country with its degree of export diversification.

In the study of Thailand's export diversification, an early academic work related to export instability and export diversification of Thailand was made by Koomsup, P. (1978). His dissertation empirically examines the actual diversification level of annual export crops in Thailand. According to him, export diversification with respect to commodity and market tends to reduce fluctuations in export earnings. He also notes that the main challenge in agricultural export diversification in Thailand is the restricted nature of land substitutability between rice and upland cash crop, thus there should be the improvements in water management and seed selection (Koomsup, P. 1978). Likewise, Jomo K.S and M. Rock (1998) conclude that Thailand, along with Malaysia and Indonesia, successfully diversified their export sector with various primary commodities produced including the processing of raw materials. Moreover, Thailand has also diversified its agro-industry, especially agro-processing industries

as well as the manufacturing sector (including labour-intensive manufactures such as textiles and garments; and medium high technology manufactures such as machinery and appliances). The proportion of manufactures in total export of Thailand jumped significantly from around 35 per cent in 1981 to about 80 per cent in 1993 (Jomo, K. S. and M. Rock 1998).

Similarly, a recent study carried out by Bank of Thailand shows that Thailand's exports are relatively well-diversified even during the period of global financial crisis. Export products to foreign countries are various, spanning across agriculture and fishery to manufactures (especially computer and electrical circuit). Regarding market diversification, Thai exporters have expanded its export activity to new markets in Middle East, India, and new EU member countries. In addition, Thailand has diversified its foreign currencies as the percentage of the US dollar in total export receipts has reduced to around 80 per cent in 2007, comparing with more than 90 per cent in 1996 (BOT 2008).

With regards to Vietnam's export diversification, Huong (2012) computes the HI (Herfindahl Index) to explore the level of export concentration in Vietnam and Japan. Huong (2012) asserts that Japan has been much lower HI (more diversified export) in comparing with Vietnam. This shows that Vietnam could be more vulnerable than Japan if there are big changes in international commodity market. The same conclusion could be also found in studies of trade pattern between Vietnam and Korea carried out by Kien and Lee (2010) and Hoan and Jeong (2012). To put it differently, in trading with more advanced countries such Japan and Korea, Vietnam's export diversification level is much lower than that of these economies.

It is expected that Thailand as a more advanced country would have a more diversified export sector in comparing with Vietnam. However, there is not a deep work on export diversification between the two countries. It is therefore meaningful to explore this dimension in trade relations between Thailand and Vietnam.

With respect to the studies of stages of production, based on the BEC classification, Gaulier, Lemoine, and Kesenci (2005) explore commodity trade structure between two countries according to the stages of production. They group BEC items into stages of production as follows: primary goods; intermediate goods

(including semi-finished goods and parts and components); and final goods (including capital goods and consumption goods). In which, intermediate goods have been increasingly traded among countries in the world, especially East Asian economies like China, Japan, Korea, and ASEAN countries (Makishima, M. 2011, Van, H. T. H. 2011). The rising tendency of intermediate goods in this region is highly linked with the rising FDI flows. This has led to the growth in intra-industry trade in parts, components, semi-finished and finished products (Xingmin, Y. 2011). In fact, East Asian region has the high rate of intra-industry trade as comparing with other regions in the world. For instance, intra-industry trade in East Asia with respect to exports between 1981 and 2001 expanded by 6.7 times, accounting for around 46.9 per cent of total East Asian region trade in 2001 (Ando, M. 2006). Thailand-Vietnam trade relation therefore would be expected to share a large proportion of intermediate goods with the significant contribution from the FDI sector.

Many studies have focused on examining technology level embodied in export goods and import goods. For example, in relation with Korea, Kien and Lee (2010) note that the technological level embodied in Korea's export to Vietnam is much higher than Vietnam's export to Korea. The similar assessment is also drawn from the study of Hoan and Jeong (2012).

It should be noted that all above studies concentrate on trade relations between Vietnam with developed countries (for example Japan and Korea) where the differences in trade structure of Vietnam with these countries are very clear. However, the studies on Vietnam's trade pattern with an upper-medium income country like Thailand seem to be very scanty. If have, they are only descriptive statistics and analyses such as the studies of Huyen, H.L (2010), My, T. (1992), and Thang, N.X. (2001) which do not really help us to assess trade compostion between Thailand and Vietnam.

In conclusion, a number of studies have tried to explore whether or not classical international trade principles impact trade patterns between countries. By constrast, a huge volume of studies have attempted to use new trade theory, especially intra-industry trade, technology content, and production network in order to analyze bilateral trade relations. This thesis utilizes the approaches of both traditional trade

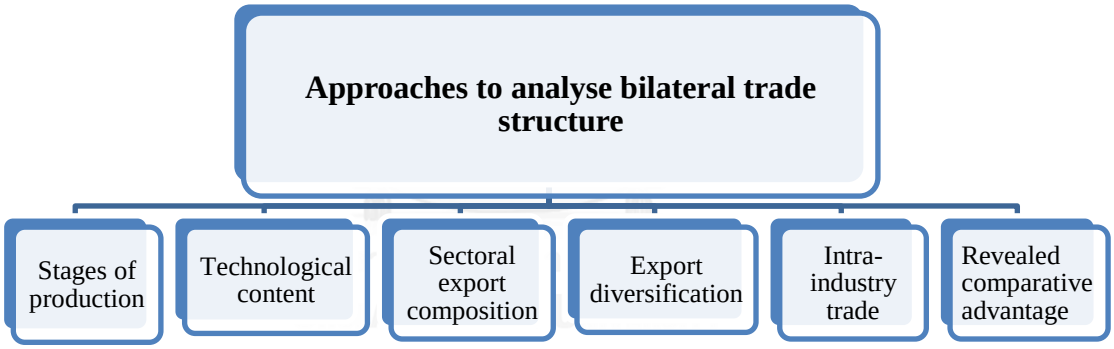
theories and new trade theories which allow us to examine comprehensively trade structure in commodity between Thailand and Vietnam over the past decade. These approaches are discussed in detail in chapter 3.

Chapter 3 : METHODOLOGY

Chapter 3 investigates approaches to analyse the structure of Thailand-Vietnam commodity trade. The contents, meanings and causes for choosing these approaches are also mentioned in this chapter. In addition, this chapter discusses the criteria for the assessments of Thailand-Vietnam commodity trade structure.

3.1. Approaches to analyse structure of bilateral commodity trade

As stated in the previous chapter, the thesis explores Thailand-Vietnam trade relations according to various dimensions of trade structure which can allow us to gain insight into trade pattern between the two countries over the past ten years. These approaches are illustrated in the flowchart below.



The first three approaches can be measured by using classifications of Gaulier, Lemoine, and Kesenci (2007), Lall (2000), and Hanson (2010) according to specific purposes, namely stages of production; technological content, and sectoral composition of export respectively. Meanwhile, the last three methods are indices and can be calculated by using specialized formulas which help to explore the degree of export diversification (HI index), intra-industry trade (IIT index) and revealed comparative advantage (RCA index) between Thailand and Vietnam.

The data used in this thesis mainly come from UN Comtrade database (BEC, SITC, and HS classification systems at 2-digit and 3-digit). The detailed explanations related to these methods are discussed below.

3.1.1. Commodity trade structure as the stages of production

Through observing the changes in composition of primary goods, intermediate goods and final goods, we can assess whether or not a country has moved to higher stages of production with large shares of intermediate goods and final goods (especially capital goods like transport, machines, and electronic products). This is because trade in intermediate goods, especially parts and components is an important factor that determines the level of sophistication of a country's basket, rather than only looks at final goods (Reis, J. G. and T. Farole 2012). In addition, this also allows us to examine whether a country has been a charge of final stage in the value chain of production.

Currently, the most widely accepted and used method to analyse stages of production in international trading relations is based on the BEC classification (Broad Economic Categories) of the UN. This classification bases on the principal use of goods which is comparable with the three basic classes of goods in the System of National Accounts (SNA), including: capital goods, intermediate goods and consumption goods (UN 2002). The first BEC was published in 1971 and then it was revised in 1976, 1986, 1998 and 2002.

The top level categories of the BEC comprise as follows: 1. Food and beverages; 2. Industrial supplies n.e.s; 3. Fuels and lubricants; 4. Capital goods (except transport equipment), and parts and accessories thereof; 5. Transport equipment, parts and accessories thereof; 6. Consumer goods n.e.s; 7. Goods n.e.s (UN 2002).

This thesis employs the classification of Gaulier, Lemoine, and Kesenci (2007) in order to consider the changes to stages of production in bilateral trade structure between Thailand and Vietnam over the past decade (Gaulier, G., F. Lemoine and D. Ünal-Kesenci 2007). They grouped BEC items into five stages of production as illustrated in table 3.1.

Table 3.1: ***Production stages according to the BEC classification***

3 stages	5 stages	Code BEC	Title BEC
Primary goods		111	Food and beverages mainly for industry
		21	Industrial supplies, n.e.s., primary
		31	Fuels and lubricants, primary
Intermediate goods	Semi-finished goods	121	Food and beverages, processed, mainly for industry
		22	Industrial supplies, n.e.s., processed
		322	Fuels and lubricants, processed
	Parts & components	42	Of capital goods, except transport equipment
		53	Parts and accessories of transport equipment
Final goods	Capital goods	41	Capital goods except transport equipment
		521	Other industrial transport equipment
	Consumption goods	112	Food & bev., primary, mainly for household consumption
		122	Food & bev., primary, processed, for house. consumption
		51	Passenger motor cars
		522	Other non-industrial transport equipment
		61	Durable consumer goods n.e.s.
		62	Semi-durable consumer goods n.e.s.
		63	Non-durable consumer goods n.e.s.

Source: ***Adapted from Gaulier, Lemoine, and Kesenci (2007).***

3.1.2. Commodity trade structure as the technological content

Developed countries' exports include a large volume of medium and high technological goods which have been proved to create higher value added for these countries. On the contrary, a major part of goods exported from developing countries is primary goods and low technological goods. As discussed, most classical trade theories assume that technological element does not affect a country's comparative advantage. The significance of technology to the development of a country is only considered in new trade theory such as economies of scale (Krugman, P. R. 1979), national advantage (Porter, M. E. 1990), or regional production network (Athukorala, P.-c. 2011).

There are several approaches to explore the technological level embodied in a bilateral commodity trade relation. For example, Pavitt (1984) distinguished export goods into resource-based, labour-intensive, scale-intensive, and science-based manufactures (Pavitt, K. 1984). The drawback of this method is that the analytical

distinctions are unclear and there are large overlaps between categories (Lall, S. 2000).

Meanwhile, based on SITC classification at 3-digit, Hinloopen and van Marrewijk (2008) classify commodities into 5 groups according to factor intensity, namely: A. Primary (83 industries); B. Natural-resource intensive (21 industries); C. Unskilled-labour-intensive (26 industries); D. Technology intensive (62 industries); and E. Human-capital intensive (43 industries) (Hinloopen, J. and C. van Marrewijk 2008).[2]

Table 3.2: ***Technological classification of exports (SITC 3-digit, revision 2)***[3]

Classification	Number of items	Example
Primary products	48	Fresh fruit, meat, rice, tea, coffee
Manufactured products		
Resource-based manufactures		
Agro/forest based products	35	Prepared meats, beverages, wood products
Other resource-based products	27	Ore concentrates, petroleum/rubber
Low technology manufactures		
Textile/fashion cluster	20	Textile fabrics, clothing, footwear
Other low technology	24	Pottery, simple metal parts/structures
Medium technology manufactures		
Automotive products	5	Passenger vehicles and parts
Process industries	22	Synthetic fibres, chemicals and paints
Engineering industries	31	Engines, motors, industrial machinery
High technology manufactures		
Electronics and electrical products	11	Office/data, processing/telecommunications
Other high technology	7	Pharmaceuticals, aerospace
Total	**230**	

Source**: *Adapted from Lall (2000)***

This study uses the classification of Lall (2000) because it can distinguish more clearly technological content embodied in manufactured products (low technology,

[2] See Appendix 8 for Hinloopen and Marrewijk's detailed classification

[3] Note: Excludes 'special transactions' like electric current, cinema film, printed matter, special transactions, gold, works of art, coins, pets.

medium technology and high technology) between Thailand and Vietnam. Lall (2000) divides goods into five categories as stated in table 3.2.[4]

As Lall (2000) argues, resource-based products are simple and labour-intensive products using capital, scale and skill-intensive in production while low technology products tend to have stable, well-diffused technologies, using capital equipment with simple skill requirements. Medium technology tends to have complex technologies, with moderately high levels of research and development (R&D), and advanced skill needs. Meanwhile, high technology products tend to have advanced and fast-changing technologies, with high levels of R&D embodied in the production of goods (Lall, S. 2000). In terms of primary products, there is no difference in the classification of Lall (2000) with other relevant studies.

3.1.3. Commodity trade structure by sectoral composition of export

Along with considering the stages of production and the technological content, the analyses of sectoral composition of export goods are important to assess the structure of trade commodity trade between two countries. In which, the HS classification is widely used to reveal the changes in composition of export across industries. It came into effect in 1988 and thereafter has been developed and administrated by the World Customs Organization (WCO). The latest revised HS classification was made in 2007. It has four harmonized levels and is organized into 21 sections and 99 chapters (HS2), 1243 headings (HS4) and 5052 subheadings (HS6). Meanwhile, HS8 and HS10 are not harmonized so the description of product categories and their number are different between countries .

This thesis employs the classification of Hanson (2010) to explore the changes in sectoral composition of export between Thailand and Vietnam from 2004 to 2013. Hanson (2010) classifies good exports as across clustered industries in which, four digit HS products are aggregated into eight sectors (defined in terms of aggregates over two digit HS sectors) as follows:

1) Agriculture, meat and dairy, seafood (HS 1-10, 12-14)

[4] See Appendix 9 for Lall's detailed classification

2) Food, beverages, tobacco, wood, paper (HS 11, 15-24, 44-48)

3) Extractive industries (HS 25-27, 68-71)

4) Chemicals, plastics, rubber (HS 28-36, 38-40)

5) Textiles, apparel, leather, footwear (HS 41-42, 50-65)

6) Iron, steel, and other metals (HS 26, 72-83)

7) Machinery, electronics, transportation equipment (HS 84-89)

8) Other industries (HS 37, 43, 49, 66-67, 90-97)

Each sector comprises industries that share similar factor intensities and are likely to rely on similar technology as a basic for foundation (Hanson, G. 2010). For example, the first sector consists of land intensive activities surrounding agriculture production while the second sector includes manufacturing activities that use agriculture, forestry and other land intensive input. To the contrary, the seventh sector requires the production of skill and capital-intensive machinery, electrical materials, electronics and transport equipment (Hanson, G. 2010).

3.1.4. Export diversification between Thailand and Vietnam

As stated, export diversification is important for developing countries like Vietnam and Thailand to minimize negative impacts from external shocks. Export expansion can be either through the extensive margin (exports new products to existing markets, old products to new markets and new products to new markets) or the intensive margin (exports more of current goods to existing markets) (Amurgo-Pacheco, A. 2008). However, this thesis only refers to export diversification through export of new products to existing market and export of more of current goods to exsiting market.

Several methods can be utilized to decompose the extent of export diversification between Thailand and Vietnam such as computing the HI; number of export products; or the share of major export product in total export value. Nevertheless, due to its detail level, the HI is widely utilized in studies to reveal the extent to which one country diversifies its export over a specific market.

The HI (also known as Herfindahl-Hirschman Index (Hirschman, A. O. 1964)) is a commonly accepted measurement of export concentration of a country with another country to reveal the opposite definition, namely export diversification. The formula to compute the HI of Vietnam's export to Thailand as follows:

$$HI = \sum_{j=1}^{N} S_j^2 \; ; \; \text{with} \; S_j = x_j / \sum x_j$$

Where:

X_j is the Vietnam's export value of product j to Thailand. N is the number of product considered; S_j is the ratio of Vietnam's export of product j to Thailand in total Vietnam's export to Thailand. The HI for Thailand's export to Vietnam is calculated in the same way.

The HI takes value between 0 and 1. An index closer to 1 represents extreme concentration (low export diversification) by contrast, an index closer to 0 reveals low concentration (high export diversification). Chandra, V., J. Boccardo and I. Osorio (2007) classify the HI into different categories to evaluate the degree of export diversification of each country. According to them, if the HI of country is lower than 0.05, that country has a highly diversified export; if the HI is between 0.05 and 0.1, the country is said to have a slightly less diversified export; if the HI is higher than 0.1 and lower or equal 0.4, that country's export structure is much more specialized; and if the HI is higher than 0.4, export sector of that country is highly specialized (Chandra, V., J. Boccardo and I. Osorio 2007). By computing the HI at SITC-3 digit, we can point out the changes in level of export concentration (or export diversification) between Thailand and Vietnam during the last decade.

3.1.5. Intra-industry trade

The study of intra-industry trade between Thailand and Vietnam is useful because it allows us to assess the extent to which both countries exploit advantage over the economies of scale and product differentiation as expressed in section 2.2.2, chapter 2. It also reveals the products, or product groups that include a high level of intra-industry trade between Thailand and Vietnam.

To evaluate the degree of intra-industry trade, the thesis uses intra-industry trade index (IIT index). In which, Grubel–Lloyd index is the most widely used measurement to calculate the IIT index (Grubel, H. G. and P. J. Lloyd 1975). Based on the SITC classification of commodity groups at 3-digit, the IIT index is defined as follows:

$$IIT_i = 1 - \frac{\left| X_i - M_i \right|}{X_i + M_i}$$

Where: X_i and M_i are Vietnam's exports to and imports from Thailand of commodity i during a particular time period, respectively. The IIT_i value ranges between 0 and 1, of which the former represents a complete inter–industry trade, while the latter reveals a complete intra–industry trade. If the share of high intra-industry trade (≥0.5) in total trade value is large we can argue that both Thailand and Vietnam are utilizing efficiently the economies of scale and a variety of consumers' demand on goods. Conversely, if this share is low, both countries still do not utilize the advantage from economies of scale and consumer loving for variety. In other words, trade between the two countries is mainly inter-industry trade and the traditional trade principles still dominate Thailand-Vietnam commodity trade structure.

3.1.6. Revealed comparative advantage (RCA index)

Comparative advantage is a crucial concept for explaining the trade pattern between two countries in international trade. This index reveals the ratio between the proportions of an export item in the total exports of a country and that of the world. Liesner (1958) was the first to utilize an index of revealed comparative advantage when Liesner divided the commodities produced and exported to Western Europe by British industries into those commodities which have a comparative cost advantage and those which are at a comparative cost disadvantage (Liesner, H. H. 1958). However, the most frequently used measurement is Balassa Index (Balassa, B. 1965, 1977, Balassa, B. 1989). According to Balassa, the RCA index is calculated as bellow:

$$RCA_{ik} = \frac{X_{ik} / X_i}{X_{wk} / X_w}$$

In which:

X_{ik} and X_i are the country i's export of goods k and its total export, respectively.

X_{wk} and X_w are the world's export of goods k and the world's total export, respectively.

The RCA index is larger than 1 for a given item of export indicating that the country is relatively specialized in the production of this item. It may then be concluded that the country enjoys a comparative advantage on this particular item of export. On the contrary, when the RCA index is lower than 1, the country is said to reveal comparative disadvantage (Balassa, B. 1965, 1977). The overlaps of the RCA index show whether the bilateral trade between two countries is complementary (if it covers small part in total export of each country) or competitive (if it accounts for high rate of total export of each country). This thesis uses the SITC classification at 3-digit level to calculate the RCA index for export commodities (or commodity groups) of Thailand and Vietnam during the period 2004-2013. Observing the changes in the RCA index over a specific period helps us to suggest which products have expansion potential between the two countries in the forthcoming years.

3.2. Criteria to assess structure of bilateral trade

There are various criteria which can be used for assessing the structure of bilateral commodity trade such as the quality of export-import structure; the extent of exploiting comparative advantage and utilizing efficiently resources; criteria on sustainable export-import structure; social and economic benefits; the level of participating in international division of labour; environment issues and so on. However, due to the scope of this thesis and the availability of information, the researcher considers only three criteria, namely the quality of export-import structure, the extent of exploiting comparative advantage and utilizing efficiently resources, criteria on sustainable export-import structure.

3.2.1. The quality of export-import structure

In terms of export, the quality of export structure is expressed through how technological goods with high value added, especially computers, mobile phones exported by one country to other countries grow during a specific period. It also helps us to answer the questions as follows: Is this growth sustainable for long-term period? How is the ratio between medium and high technology products with low technology products or primary products?

In terms of import, import structure reflects what one country importing from other countries. Does it import high technology products or low technology products? Does it import products which embody original technology or the secondhand technology? Does it import many products that are luxury goods? How do import products impact the environment?

3.2.2. The level of exploiting comparative advantage and utilizing efficiently nation's resources

This criterion is shown by the ratio of export products that Vietnam has a comparative advantage comparing with Thailand as well as the rate of export products that Thailand has comparative advantage in comparison with Vietnam. Whether this ratio reflects properly comparative advantage of each country or not? In addition, the extent that national resources are used efficiently for export goods is another element to assess the structure of bilateral commodity trade between two countries. For example, Thailand has a more skilled labour force thus theoretically its export sector will consist of a large share of medium and upper medium technology products.

3.2.3. Criteria on sustainable export-import structure

If a country's export depends heavily on exploiting natural resources such as woods, coals, or crude oils, its export structure is not sustainable. This is because natural resources are limited. Also, countries that rich in natural resources tend to perform growth badly and have worse development outcomes than countries with fewer natural resources.

More specifically, based on empirical evidence, Sachs and Warner (2001) show that even after controlling geographical, demographic, political, or economic differences, countries with more natural resources achieve lower growth (Sachs, J. D. and A. M. Warner 1997, 2001). The dependence on export of natural resources will lower the competitiveness of other economic sectors. Meanwhile, the revenues from resource-based sector could be volatilized due to shocks in the global commodity market. The current sharp fall in oil prices in global market is a typical example of how countries' export primary products could be impacted negatively by external shocks.[5] Therefore, a sustainable trade structure is that its export does not concentrate too much on primary products but on high technology products that are human-capital intensive goods and create higher value added. Its import also should not share a large proportion of luxury products or the products that can damage the environment.

[5] Let's take Vietnam for example, if there is a decline of US$ 1 per barrel in the oil price, then the national budget deficit will be added about 1,000-1,200 billion in Vietnamese Dong (around US$ 50 million). And if the price of oil decreases from US$ 100 per barrel in the beginning of 2014 to US$ 70 per barrel in 2015, the national budget deficit will increase about 30,000 billion in Vietnamese Dong (approximate US$ 1.4 billion). http://vtc.vn/gia-dau-lien-tuc-giam-sau-kinh-te-viet-nam-2015-co-that-su-dang-lo.1.536685.htm, accessed online on 21 January 2015.

Chapter 4 : THE SITUATION OF COMMODITY TRADE STRUCTURE BETWEEN THALAND AND VIETNAM (2004-2013)

This chapter presents the history of trade relations between Thailand and Vietnam. Next, it analyses the status of Thailand-Vietnam commodity trade structure over the past decade. The assessments on commodity trade pattern between the two countries in this period are also provided in chapter 4.

4.1. Overview of trade relations between Thailand and Vietnam (2004-2013)

4.1.1. The history of trade relations between Thailand and Vietnam

Vietnam and Thailand officially established diplomatic relations in 1976. However, the relationship between the two countries has existed for a long time. Hoang (2005) divides Thailand-Vietnam relations before 1976 into different stages as follows: *Before 1883*: The relationship between the two countries started to being formed and developed based on people-people relation and state-stage relation; *1883-1945:* This is the period that Thailand-Vietnam relations were maintained and showed by people-people relation and Thailand became the residence for Vietnamese revolution force; *1945-1954:* The revolution in August 1945 leaded to the establishment of a Democratic Republic of Vietnam. The relationship between Thailand and Vietnam entered into a new chapter. When French colonialism came back to invade Vietnam, the Pridi Panomyong government and the Thai people showed some certain support for Vietnam's resistance. Thailand also became an important diplomatic bridge of Vietnam; *1954-1975:* This is the period of confrontation in Thailand-Vietnam relation. This was represented through Thailand's advocacy to Saigon regime and the US (Hoang, K. N. 2005).

After Vietnam's unification, Vietnam entered into reconstructing the country which was devastated severely by the war. The new situation required Vietnam to promote bilateral relations with Thailand. This was associated with the economic development and democratic process in Thailand had contributed to the normalization of diplomatic relations between the two sides in 1976.

In terms of economic and trade relations, the first agreement signed after the normalization between Thailand and Vietnam was the agreement on economic, trade and technical cooperation on January 1978. Trade exchange between the two countries was about US$ 1.61 million in 1976 and US$ 9.96 million in 1977.[6]

As Vietnam deployed its armed forces in Cambodia between 1978 and 1979, Thailand-Vietnam relationship became tense. In Thai perspective, Vietnam's invasion and occupation of Cambodia threatened Thailand and Southeast Asia's security. This fact obstructed Thailand-Vietnam economic cooperation.

The collapse of Soviet Union by the end 1990's also ended the Cold War period between socialist block and western countries. This combines with the difficulties in internal economic development had forced the Vietnamese government to implement economic reforms since 1986. The Vietnamese government started to develop a market economy in which encourages business operation of the private sector through providing capital or expanding the business fields. Vietnam also began to promote export to external markets (beside the traditionally socialist markets), firstly to Southeast Asian countries.

At the same time, Thai foreign policy to Indochina region was changed significantly. This change was represented with the slogan "turning Indochina from a battlefield into a market place" by the Chattichai government in 1988. Regarding the economic development of Thailand, from 1985 to 1996, Thailand achieved an impressively annual growth rate of GDP (around 9 per cent a year) when the country implemented its export-oriented strategy efficiently. Industry, service and tourism played a more important role in Thailand's economy, whereas the share of agricultural industry decreased year by year.

These events, along with Vietnam's withdraw from Cambodia by the end of 1989, had improved remarkably Thailand-Vietnam relationship (Theerait, K. 2001). Many visits were performed between the two countries at that time. On Vietnam's side were: National Assembly Chairman Le Quang Dao (September 25-30, 1990); Chairman of the Council of Ministers Vo Van Kiet (September 28-30, 1991);

[6] Data provided by Ministry of Planning and Investment.

Secretary General of the Communist Party of Vietnam Do Muoi (October 15-18, 1993); Chairman of the National Assembly Nong Duc Manh (September 3-7, 1996); State President Tran Duc Luong (October 6-8, 1998); Prime Minister Phan Van Khai (May 9-12, 2000).

On Thailand's side, the official visits to Vietnam consist of as follows: Deputy Prime Minister Bitchai Rattakul (November 22-25, 1989); Prime Minister Anand Panyarachun (January 15-17, 1992); His Royal Highness Crown Prince Vajiralongkorn (November 15-20, 1992); Her Royal Highness Princess Maha Chakri Siridhorn (March 17-23, 1993); Parliament President Marut Bunnag (February 2-5, 1994); Prime Minister Chuan Leekpai (March 16-19, 1994); Prime Minister Silpa-Archa Banharn (October 1, 1995); Prime Minister Gen. Chavalit Yongchaiyudh (March 30-31, 1997).

In addition, various agreements and memoranda of understanding had been signed during this time which contributed to consolidate Thailand-Vietnam relations such as Agreement on the Delimitation of the Maritime Boundary in the Gulf of Thailand (1997), Agreement of Drug Control (1998), Agreement on Law and Legal Cooperation (1998), Memorandum of Understanding of Joint Patrol (1999), Agreement on Exemption of Visa for Ordinary Passport Holders (2000), and so on (Sripana, T. 2001). All these events had opened the new stages for cooperation relations between the two sides in all aspects.

As for the economic cooperation field, Thailand and Vietnam ratified a number of agreements such as Agreement of Investment Promotion and Protection (1991); and Agreement of Tourism Cooperation (1994). There were a number of Thai investors in Vietnam during this time. For example, in 1988 and 1989, 5 joint-venture companies between Thailand and Vietnam were established with total US$ 7.2 million registered capital. From January to July, 1991, 10 joint-venture companies were set up, with total registered capital accounting for US$ 23 million. These companies operated mainly in processing industries, service and construction. Thailand's total accumulative FDI continued to increase to US$ 1.05 billion as of 2001 with about 100 investment projects. As a result, Thailand stood at 11st position in the list of foreign investors in Vietnam by 2001. Processing industries, restaurant

and tourism as well as banking services accounted for 67 projects and US$ 838 million.[7]

Similarly, trade volume between Thailand and Vietnam grew dramatically, from US$ 69 million in 1990 increasing to US$ 508 million in 1995 and US$ 1.2 billion in 2000.[8] However, except the year 1990, the value of Vietnam's export to Thailand was always smaller than those of import from Thailand. The major export products to Thailand during this time were electric equipment, crude oil, coffee, coal, and textiles. Meanwhile, Vietnam's imports from Thailand mostly concentrated on motorcycles and parts; petroleum, iron, steel, chemicals, and machinery.

Under the Thaksin government (2001-2006), the relationship between the two countries had been given a high priority. His visit to Vietnam in 2001 was more symbolic than any business-like negotiations (Theerait, K. 2001). The relationship between Thailand and Vietnam was tightened as Vietnam joined the ACMECS in 2004. After that, trade relations between the two nations have continued to develop even there are difficulties in Thailand's economy caused by the downturn of global economy, the unrest in Thai politics as well as the historical flood in 2011.

In recent years, in order to deal with the rapid changes in the region and the world as well as the internal drawbacks of the economy, the Vietnamese government has given out the socio-economic development strategy between 2011 and 2020 with a great ambition to become a basically industrialized economy by 2020. The strategy puts in place main points as follows: 1) Improve regulations of the socialist oriented market economy; ensure macroeconomic stability; effectively mobilize and use resources. 2) Strongly develop industry and build it towards the direction of modernity and improving the quality and competitiveness to create foundations for an industry country. 3) Comprehensively develop agriculture towards the direction of modernity, effectiveness and sustainability. 4) Strongly develop service industries, especially services with high value, great potential and competitiveness. 5) Quickly develop infrastructure, especially transportation infrastructure. 6) Improve the quality of human resources; comprehensively renovate and quickly develop the education and

[7] Data reported from Department of Asia-Pacific, Ministry of Industry and Commerce, Vietnam.

[8] Data reported by Department of Vietnam custom.

training. 7) Science and technology development is seen as the key motivation for process of fast and sustainable development (CPV 2011).

In relations with Thailand, Thailand and other ASEAN countries will continue to play an important role in Vietnam's foreign policy in various aspects from economic field to social and security field. In trade relations, as noted earlier, Thailand and other ASEAN countries are very important trading partners of Vietnam both in terms of export and import so Vietnam will continue to pay a great attention and high priority to these markets. However, Vietnam often remains a huge trade deficit with major ASEAN members, especially Thailand and Singapore thus the country attempts to lower trade deficit towards a more balanced trade relation with ASEAN countries in the upcoming years through reconstructing the economy in general and export-import industries particularly. Also, the Vietnamese government has committed to performing its domestic market liberalization in the AEC; contributing positively to other regional integration initiatives such as the GMS, the ACMECS as well as ASEAN's trade relations with its trading partners.

With respect to Thailand, the economic development strategy in the next years is expressed in detail through the Eleventh National Economic and Social Development Plan (2012-2016). In terms of economic aspect, Thailand puts an emphasis on strengthening the agricultural sector as well as food and energy security through reinforcing natural resources as the foundation for agricultural production base; increasing agricultural productivity; increasing value of agricultural commodities along supply chains; promoting Thailand as a center for food processing within the forthcoming AEC (NESDB 2011).

Additionally, with a wider scope, Thailand brings out the strategy for reconstructing the economy towards quality growth and sustainability. In order to realize this strategy, Thailand puts in place a number of following aspects: Utilize science, technology, innovation and creativity as fundamental factors for economic restructuring; Develop science and technology, research, and innovation as driving forces for sustained and inclusive growth; Enhance the country's competitiveness with a freer and fairer competitive environment; Achieve stability through sound macroeconomic management (NESDB 2011). If Thailand can implement successfully

these targets, the country is likely to transform from an upper middle income country to a high income country during the next decade.

In regarding to Thailand's foreign trade policy in the next years, Thailand is said to remain its concentration on strengthening economic and trade cooperation with CLMV countries not only because they are potential and emerging markets (especially Vietnam) but also because Thailand to be considered in a better position than other ASEAN economies to enhance export to CLMV (Suisse, C. 2012). In other words, Thailand attempts to turn these markets into trade and production which Thai products and services are widely accepted among CLMV consumers. Also, Thailand tends to increase investment activities in the fields that it has comparative advantage such as agro-business, processing and manufacturing industries, banking service and hotels. The country plans to enhance her connectivity with CLMV nations in transport and logistic systems under regional cooperation frameworks. Thailand, along with more advanced countries in ASEAN are expected to continue to promote some assistance in the form of intensifying trade privileges, market access, human capital development, labour migration, and technical cooperation to less advanced countries in reducing development gap between ASEAN-6 and CLMV.

The latest development in economic and trade relations between Thailand and Vietnam is that both sides have agreed to boost diplomatic relations to a strategic partnership during the visit of General Secretary of CPV Nguyen Phu Trong to Thailand in June 2013. The strategic partnership relation between Thailand and Vietnam is emphasised on five main pillars, namely political relations; defence and security cooperation; economic relations; social-cultural cooperation; and regional and international cooperation.

In terms of trade relations, the two countries are committed to strive for annual 20 per cent increase in two-way trade to reach the goal of US$ 15 billion by 2020. In addition, Thailand and Vietnam have encouraged the prompt signing and implementation of a cooperation agreement on labour affairs. Accordingly, Thailand will receive Vietnamese workers, especially in building infrastructure and strengthening transport links along the East-West Corridor. Regarding the investment field, Vietnam commits to create favourable conditions for Thai investors and

encourages Thai businesses to invest in the areas of supporting industry, petro-chemistry, and oil and gas exploration.

Also, both sides are expected to continue to participate positively in ASEAN's initiatives, especially the AEC as well as cooperation programs between ASEAN with its trading partners (ASEAN+1).

In conclusion, trade relations between Thailand and Vietnam have developed significantly since both countries officially established a diplomatic relation in 1976. Economic and trade relations between the two nations should be considered and placed in the relations with other ASEAN countries. There is a high consensus that a friendly cooperation relation between Thailand and Vietnam will provide benefit and prosperity for people in both nations as well as for ASEAN region as the whole.

The trade exchange and trade composition between Thailand and Vietnam over the past decade will be discussed in the next sections.

4.1.2. Trade exchange between Vietnam and Thailand over the period 2004-2013

Key economic indicators of Thailand and Vietnam:

Table 4.1 provides a comparison of key economic indicators between Thailand and Vietnam in 2004 and 2013. It can be seen that the size of Thailand economy (total GDP) was over three times higher than that of Vietnam in 2004. However, after one decade the GDP of Vietnam has increased greatly from nearly US$ 50 billion to US$ 170 billion. This number is nearly half of Thailand's GDP by 2013. This result reflects the better economic growth of Vietnam when compared with Thailand over the past decade.

Similarly, though the GDP per capita in Vietnam still lags behind Thailand, the income gap between the two countries has been remarkably reduced. This performance is even more impressive when the increase level of population in Vietnam is much higher than that of Thailand between 2004 and 2013. However, Thailand's inflation rate still remains much lower as compared with Vietnam. A similar trend could be also observed in terms of unemployment rate (see table 4.1).

That could imply a more stable economic structure of Thailand compared with that of Vietnam.

Table 4.1: ***Comparison of key economic indicators between Thailand Vietnam***

Economic indicators	2004		2013	
	Thailand	**Vietnam**	**Thailand**	**Vietnam**
GDP (Current Prices, US$ billions)	161.3	49.5	385	170.5
Real GDP growth (%)	6.3	7.7	2.9	5.4
GDP per capita (Current Prices, US$)	2,479	603	5,647	1,901
Inflation (%)	2.9	9.8	2.2	6.0
Unemployment rate (% of Labor Force)	1.5	5.6	0.7	4.4
Population (millions)	65.0	82.0	68.2	89.6

Source: ***International Monetary Fund (IMF database)***

With regards to foreign trade, foreign trade plays an important role in open economies like Thailand and Vietnam. Export value of each country to the world has increased dramatically in the past decade. Specifically, Thailand's export was about US$ 96 billion in 2004, rising to over US$ 228 billion in 2013, while the number for Vietnam was approximately US$ 26 billion in 2004 and US$ 138 billion in 2013. It should be noted that both countries have been negatively affected by the global financial crisis 2008-2009. For instance, Thailand's export turnover in 2009 fell down to US$ 152 billion, compared with US$ 175 billion in 2008, while those of Vietnam were US$ 57 billion in 2009 and US$ 62 billion in 2008 (see table 4.2). A similar trend can also be observed in import value of each country in the same period.

Table 4.2: ***Export and import value of Thailand and Vietnam to the world over the period 2004-2013 (US$ billion)***

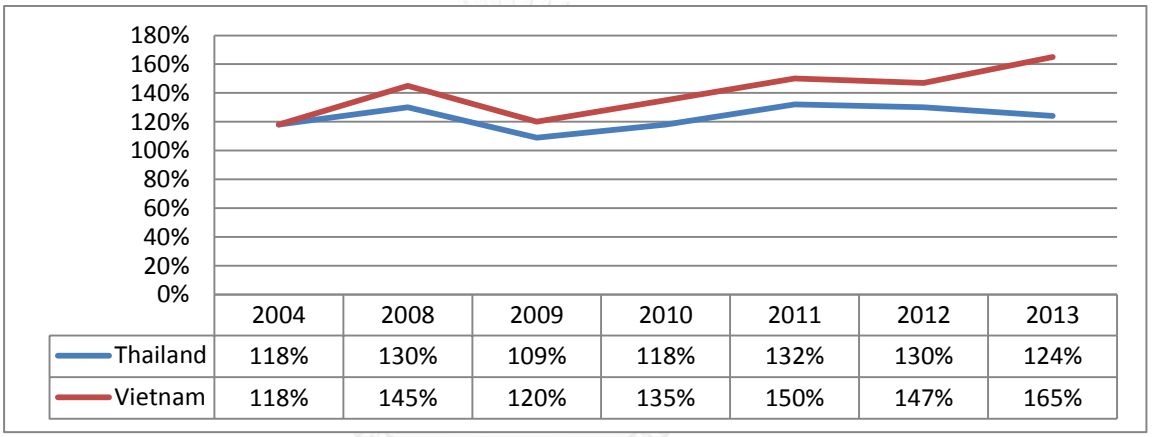
	Year	2004	2008	2009	2010	2011	2012	2013
Thailand	Export	96.2	175.9	152.4	195.3	228.8	229.5	228.5
	Import	94.4	178.6	133.7	182.3	228.4	247.5	250.7
	Trade balance	1.8	-2.7	18.7	13	0.4	-18	-22.2
Vietnam	Export	26.4	62.6	57.1	72.2	96.9	114.5	132.2

	Import	31.9	80.7	69.9	84.8	106.7	113.7	132.1
	Trade balance	-5.5	-18.1	-12.8	-12.6	-9.8	0.8	0.1

Source: ***Author's computation based on UN COMTRADE Statistics.***

Also, table 4.2 shows the rising trend of trade deficit in Thailand in recent years, accounting for 10 per cent of total export value. On the contrary, Vietnam has changed its trade balance from deficit to surplus which may reflect a more efficient export sector.

Figure 4.1: ***Trade openness of Thailand and Vietnam (2004-2013)***



	2004	2008	2009	2010	2011	2012	2013
Thailand	118%	130%	109%	118%	132%	130%	124%
Vietnam	118%	145%	120%	135%	150%	147%	165%

Source*: **Author's calculation based on statistics of UN COMTRADE and Word Bank***

In terms of trade openness which is measured by the ratio of total export-import value to GDP, it can be argued that Thailand and Vietnam are very open economies**.** This is understandable since these countries follow the export-oriented strategy with a large share of Multinational Enterprises (MNEs) in total export volume. Figure 4.1 shows that except the year 2008, trade openness of Vietnam raised sharply from about 120 per cent in 2004, increasing to 165 per cent in 2013, while Thailand's trade openness fluctuated during this period, around 120 per cent. The slight reduction of Thailand's trade openness in 2013 as compared with 2012 can be linked to the damage causing by historical flood in the last months of 2011 as well as the unrest of Thai politics in 2013.

With respect to major trading partners, China, Japan, and the US are the most important trading partners of both countries. Specifically, the share of the US, China, and Japan in Vietnam's total export in 2013 is 18.8 per cent, 12.2 per cent and 10.3 per cent respectively (see Appendix 10), while these three countries account for over 30 percentage of Thailand's export in the same year (see Appendix 12).

In addition, Germany, United Kingdom and France are also crucial importers of Vietnamese products as they constitute more than 10 per cent of Vietnam's export value in 2013. Meanwhile, along with China, Japan and the US, Thailand's exports also focus on some ASEAN countries like Malaysia, Singapore and Indonesia as these countries account for around 15 per cent in its exports.

In related to major exporters to Thailand and Vietnam, China is the main supplying source for the import products by these countries, making up 33 per cent and 15 per cent in total import value of Vietnam and Thailand in 2013 respectively. Along with China, Japan, Korea, the US, and Malaysia are also among largest exporters of Vietnam and Thailand (see Appendix 11 and Appendix 13). For example, Japan and Korea share over 7 per cent and 14 per cent respectively in Vietnam's import value, while they account for about 16 per cent and 3 per cent respectively in Thailand's import value in the same year.

Additionally, it should be noted that Thailand is also a crucial supplying market for the goods imported by Vietnam in 2013, sharing 5 per cent in total import value of the country.

In terms of major traded goods, cars, parts and accessories (US$ 24.4 billion), automatic data processing (US$ 17.7 billion), and refined fuels (US$ 12.7 billion) are three most important export products of Thailand as of 2013, while major import goods of the country include crude oil (US$ 38.9 billion), machinery and parts (US$ 23.1 billion) as well as gold and silver (US$ 17.7 billion).[9] As for Vietnam, the largest export product group in 2013 is mobile phone, parts and accessories, amounting to US$ 21.2 billion. It is followed by textile and garment (US$ 17.9 billion), computers and electronic products, and parts (US$ 10.6 billion). In terms of import, major import

[9] Source: Ministry of Commerce, http://www2.ops3.moc.go.th/, accessed on 5 November 2014.

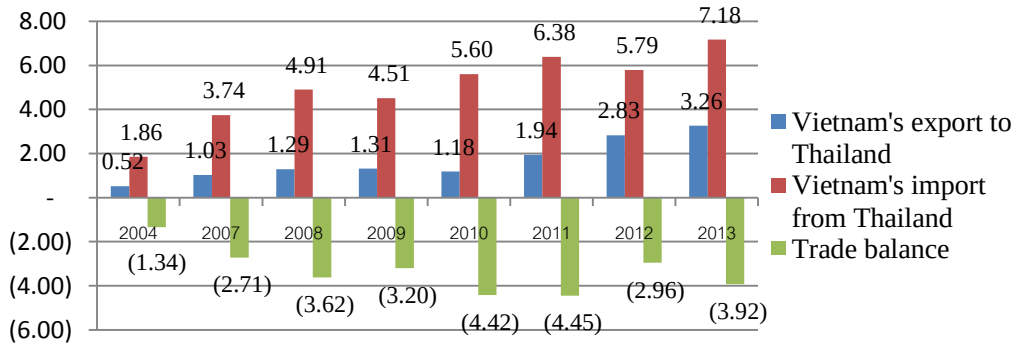
products by Vietnam consist of machinery and parts (US$ 18.7 billion), and computers, electronic products and parts (US$ 17.7 billion).[10]

The status of trade exchange between the two sides (2004-2013):

Trade exchange value between Vietnam and Thailand has witnessed a remarkable growth during the last decade, reaching to more than US$ 10 billion in 2013 as compared with US$ 2.3 billion in 2004, an increase of four times (Figure 4.2). As a result, Thailand has been on the top 10 trading partners of Vietnam in the world, accounting for 3.7 per cent of Vietnam's trade volume by 2013. Meanwhile, trading with Vietnam makes up 2.1 per cent in total trade volume of Thailand with the world in the same year.

In ASEAN, Thailand, along with Singapore and Malaysia, are the most important trading partners of Vietnam. Generally speaking, apart from the global economic crisis 2008-2009, there is an upward trend in trade exchange between Vietnam with these countries during the last decade (see Appendix 14).

Figure 4.2: ***Trade exchange between Thailand and Vietnam from 2004 to 2013 (unit: US$ billion)***



Source: ***Author's computation based on statistics of UN COMTRADE and General Department of Vietnam Custom***

Regarding the trade deficit, Vietnam always remains trade deficit during the past ten years with Thailand, from US$ 1.3 billion in 2004 increasing to US$ 3.9 billion in

[10] Source: General Department of Vietnamese Customs, http://www.customs.gov.vn/, accessed online on 5 November 2014.

2013. In trade relations with some ASEAN countries, except the year 2011 (trade surplus with Indonesia) and the year 2012 (trade surplus with Indonesia and Malaysia) Vietnam also experiences the chronic trade deficit with Indonesia, Malaysia and Singapore (table 4.3). Especially, Singapore has reached a huge volume of trade surplus with Vietnam, about US$ 7.8 billion in 2013, attributed mainly to Vietnam's increasing import in fuels and lubricants (US$ 2.3 billion).[11]

This tendency can be partly explained by the fact that Vietnam's manufacturing sector still lags behind the manufacturing sector of Singapore, Malaysia and Thailand while there are overlaps in comparative advantage products between Vietnam with these countries. It should be pointed out that trade deficit of Vietnam with Thailand and Singapore has increased fast since the year of 2006 as Vietnam performs commitments on Common Effective Preferential Tariff (CEPT) program which is considered as one of the most important mechanisms in the AFTA related to opening market and tariff reduction. Perhaps, these countries have utilized this change to promote export of goods to Vietnam's market.

Table 4.3: ***Trade balance between Vietnam with some ASEAN countries (2004-2013, US$ million)***

Year	2004	2008	2009	2010	2011	2012	2013
Indonesia	-210.4	-977.6	-792.0	-475.7	111.34	110	-321.2
Malaysia	-591	-565.6	-729.5	-1,320.2	-1,148.9	1,088.2	-1,811.6
Singapore	-2,133	-6,664.1	-2,172.7	-1,979.8	-4,241.3	-4,323.3	- 7,812.5
Thailand	-1,340	-3,617	-3,200	-4,420	-4,445	-2,959.7	-3,912

Source: ***Author's measurement based on UN COMTRADE statistics.***

However, if we compare the ratio of export value to total export-import value, Vietnam-Thailand trade relations have been more balanced over the last decade as this ratio for Vietnam has been raised to around 30 per cent in 2013, compared with about 21 per cent in 2004. In other words, growth rate in Vietnam's export to Thailand is higher than that of Vietnam's import from Thailand during this time.

[11] Data collected from UN Comtrade database.

As for the value of major export product groups between the two countries, it can be drawn from table 4.4 that the value of top 10 product groups in Thailand's export to Vietnam has increased dramatically, reaching more than US$ 4.6 billion in 2013, from about US$ 1.36 billion in 2004. However, the share of top 10 export product groups to Vietnam declined from 72.3 per cent in 2004 to 65 per cent in 2013. This possibly indicates that Thailand has diversified its export products over Vietnam's market.

It can be seen that mineral fuels, mineral oils, machinery, plastic and articles thereof as well as electrical products are among the most crucial product groups that Thailand exports to Vietnam during the last decade.

Table 4.4: ***Top 10 product groups of Thailand's export to Vietnam (HS2 digit, value in million, share in percentage)***

2004	Value	Share	2013	Value	Share
Mineral fuels, mineral oils and products of their distillation	354.13	18.91	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	1,089.8	15.17
Plastics and articles thereof	228.33	12.19	Plastics and articles thereof	699.69	9.74
Machinery and mechanical appliances; parts thereof	186.17	9.94	Mineral fuels, mineral oils and products of their distillation	604.83	8.42
Electrical machinery and equipment and parts thereof; sound recorders	106.49	5.69	Electrical machinery and equipment and parts thereof; sound recorders	548.84	7.64
Commodities not specified according to kind	102.67	5.48	Vehicles other than railway or tramway rolling-stock	451.69	6.29
Vehicles other than railway or tramway rolling stock	91.21	4.87	Rubber and articles thereof	370.95	5.16
Salt; sulfur; earths and stone; plastering materials	88.51	4.73	Organic chemicals	252.18	3.51
Iron and steel	87.63	4.68	Beverages, spirits and vinegar	239.55	3.34
Raw hides and skins (other than fur skins) and leather	62.18	3.32	Articles of iron or steel	206.53	2.88
Rubber and articles thereof	54.64	2.92	Paper and paperboard; articles of paper pulp, of	204.16	2.84

			paper or of paperboard		
Total	**1,362**	**72.3**	**Total**	**4,668.3**	**65**

Source: ***Author's estimation based on UN COMTRADE statistics***

With respect to Vietnam, although the share of top 10 product groups in its export to Thailand remains higher than that of import from Thailand, this share has reduced to 76.8 per cent in 2013 as compared with 83.3 per cent in 2004 (table 4.5). Table 4.5 demonstrates that electrical and electronic equipment, parts and thereof; iron and steel; mineral fuels and oils; fish and crustaceans; plastic products still remain in the top 10 export products to Thailand between 2004 and 2013. Especially, exports of electrical and electronic equipment have grown sharply from around US$ 210 million to US$ 1.3 billion, sharing 40 per cent of Vietnam's export to Thailand over the past decade. Yet, Vietnam's major export products to Thailand still include a number of natural resource-based products and labour-intensive products during this time.

Table 4.5**:** ***Top 10 product groups of Thailand's import from Vietnam (HS2 digit, value in million, share in percentage)***

2004	**Value**	**Share**	**2013**	**Value**	**Share**
Electrical and electronic equipment, parts thereof; sound recorders	219.35	49.93	Electrical and electronic equipment, parts thereof; sound recorders	1,314.19	40.20
Mineral fuels, mineral oils and products of their distillation	50.83	11.57	Iron and steel	250.34	7.66
Machinery and mechanical appliances; parts thereof	24.28	5.53	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	212.49	6.50
Fish and crustaceans, molluscs and other aquatic invertebrates	17.53	3.99	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	210.58	6.44
Plastics and articles thereof	12.87	2.93	Fish and crustaceans, molluscs and other aquatic invertebrates	111.47	3.41
Articles of iron or steel	11.49	2.62	Optical, photographic, cinematographic, etc., apparatus.	105.47	3.23
Essential oils and resinoids; perfumery, cosmetic or toilet preparations	10.81	2.46	Plastics and articles thereof	96.66	2.96
Oil seeds and oleaginous fruits	8.90	2.03	Mineral fuels, mineral oils and products of their	83.72	2.56

			distillation;		
Vehicles other than railway or tramway rolling stock	5.20	1.18	Man-made filaments; strip and the like of man-made textile materials	70.57	2.16
Raw hides and skins (other than fur skins) and leather	4.62	1.05	Edible fruit and nuts; peel of citrus fruit or melons	57.94	1.77
Total	**365.94**	**83.30**	**Total**	**2,513.46**	**76.89**

Source: ***Author's estimation based on UN COMTRADE statistics***

In general, there are similarities in export product groups in Thailand-Vietnam trade relations. This probably implies that intra-industry trade has played a more important role in commodity trade between the two countries.

4.2. The situation of commodity trade structure between Thailand and Vietnam over the period 2004-2013

4.2.1. Commodity trade structure as the stages of production

Based on the classification of Gaulier, Lemoine, and Kesenci (2007) over BEC items at 3-digit, changes in export and import by stages of production between Thailand and Vietnam over the period of 2004 and 2013 are explored in this part. In general, Thailand-Vietnam trading relation mostly focuses on trade in intermediate goods and trade in final goods.

As for Thailand's export to Vietnam, it can be observed from Appendix 1 that Thailand's export value in all stages of production has significantly increased between 2004 and 2013. For example, primary goods and intermediate exported by Thailand raised more than 3 times. Especially, the highest growth rate occurs in final goods as it rose from about US$ 270 million in 2004 to nearly US$ 2.3 billion in 2013 (more than eightfold). It is interesting to note that except final goods, export of primary goods and intermediate goods to Vietnam declined in 2012 mostly because of difficulties in the domestic manufacturing sector which affect negatively Thailand's export to the world as a whole.

A similar trend can be seen in Appendix 2 with Vietnam's export to Thailand during this period. Export of intermediate goods (especially semi-finished goods) and final goods (especially capital goods) from Vietnam to Thailand have grown nearly 5

times, amounting to US$ 274 million in 2004 and US$ 1.28 billion in 2013 for the former; and 20 times, from US$ 97 million in 2004 to US$ 1.83 billion in 2013 for the latter respectively. Except primary goods, the growth in Vietnam's export of intermediate goods and final goods to Thailand remained continuous between 2004 and 2013, even in the period of the global financial crisis 2008-2009. However, Thailand still obtains the large trade surplus in trading with Vietnam in all stages of production.

Regarding the share of each stage of production in import value and export value between Thailand and Vietnam, there are remarkable changes observed from table 4.6 below.

In related to Thailand, the share of primary goods in its export to Vietnam remains small and mostly unchanged over the last ten years. Although trade in intermediate goods still shares the largest proportion, it has dipped sharply, from 78 per cent in 2004 dropping to 62 per cent in 2013. This is due to the fast decline in the share of semi-finished goods despite the growth in proportion of parts and components. On the contrary, export share of final goods to Vietnam goes up considerably to nearly 35 per cent in 2013 compared with about 18 per cent in 2004. Of which, the proportion of consumption goods peaks up above 20 per cent in 2013, comparing with 9.8 per cent in 2004 while those for capital goods are 12.3 per cent and 8.1 per cent respectively during the past decade.

Table 4.6: ***Changes in Thailand's exports to and imports from Vietnam as the stages of production (unit: percentage)***

	Thailand's export to Vietnam		**Thailand's import from Vietnam**	
	2004	2013	2004	2013
Primary goods	**3.38**	**2.63**	**15.39**	**4.46**
Intermediate goods	**78.63**	**62.65**	**62.49**	**39.39**
Semi-finished goods	63.04	44.24	14.14	27.42
Parts & components	15.59	18.4	48.35	11.96
Final goods	**17.99**	**34.73**	**22.12**	**56.15**
Capital goods	8.16	12.36	8.51	38.27

Consumption goods	9.83	22.37	13.61	17.88
Total	100	100	100	100

Source: ***Author's calculation based on UN COMTRADE statistics.***

With regards to Vietnam, the share of primary goods in its export to Thailand went down sharply, accounting for 4.4 per cent in 2013 as compared with more than 15 per cent in 2004. Meanwhile, intermediate goods share the largest proportion (over 60 per cent) of Vietnam's export to Thailand in 2004 but this share reduced to about 40 per cent after a decade. Conversely, there is a sharp growth in the proportion of final goods exported to Thailand over the past ten years. This growth is attributed mainly to the rise in export of capital goods, standing at US$ 1.2 billion, or nearly 40 per cent in total Vietnam's export to Thailand in 2013.

Overall, over the last ten years, there has been a rapid fall in the shares of primary goods and intermediate goods in Vietnam's export to Thailand, whereas is the significant growth in the export share of final goods. A similar trend can be drawn with the Thailand's export of intermediate goods and final goods. This possibly indicates that Vietnam has been in charge of final process in the value chain of production in trading with Thailand. The increase in consumption goods value may reflect the increasing demand for various and different goods between the two sides, thanks to the remarkable growth in income per capita of Thailand and Vietnam during the past decade.

4.2.2. Commodity trade structure as the technological content

Using SITC classification at 3-digit, the structure of commodity trade by technological content between Thailand and Vietnam is examined according to five categories, namely primary products; resource-based manufactures; low technology manufactures; medium technology manufactures; and high technology manufactures.

In terms of export from Thailand to Vietnam, the value of primary products has expanded from US$ 224 million to US$ 626 million between 2004 and 2013. Similarly, export value of manufactured products to Vietnam has risen 4 times, reaching US$ 6.5 billion in 2013. The rise of medium technology manufactures (peaking at US$ 3.2 billion), especially processed and engineering products

(accounting for US$ 1.2 billion and US$ 1.5 billion respectively) contributed significantly to this growth (see Appendix 3).

Table 4.7: ***Thailand's exports to Vietnam according to technological content (SITC-3 digit)***

	2004	2008	2013
Primary products	**12.71%**	**6.49%**	**8.75%**
Manufactured products	**87.29%**	**93.51%**	**91.26%**
Resource-based manufactures	***28.11%***	***35.00%***	***27.01%***
Agro/forest based products	7.22%	11.19%	14.53%
Mineral-based products	20.89%	23.81%	12.47%
Low technology manufactures	***15.80%***	***12.26%***	***12.89%***
Textile/fashion cluster	6.78%	4.15%	5.03%
Other low technology	9.02%	8.10%	7.86%
Medium technology manufactures	***37.57%***	***41.91%***	***44.82%***
Automotive products	5.15%	6.28%	6.29%
Process	19.35%	17.66%	17.47%
Engineering	13.06%	17.98%	21.05%
High technology manufactures	***5.81%***	***4.34%***	***6.54%***
Electronic and electrical products	3.88%	3.07%	4.54%
Other	1.93%	1.27%	2.00%
Total	100%	100%	100%

Source: ***Author's calculation based on UN COMTRADE statistics.***

As for proportion of each category, table 4.7 reveals that goods exported from Thailand to Vietnam are mainly manufactured products as its share remains around 90 per cent between 2004 and 2013 while the share of primary products decreases to 8.7 per cent, comparing with 12.7 per cent over the corresponding period. In manufactured products, medium technology products always constitute the largest proportion as it amounts to 37 per cent and 44 per cent during this time in which processing and engineering products account for approximately 40 per cent.

On the other hand, there are insignificant changes in the proportion of resource-based products and high technology products while the share of low technology

products in 2013 declined slightly to 12 per cent in comparing with 15 per cent in 2004. It therefore can be affirmed that Thailand, to some extent is having difficulties in upgrading to the production of high technology manufactures. In spite of that, medium and high technology products still account for more than a half of total export value from Thailand to Vietnam over the last decade.

As for Vietnam's export, table 4.8 demonstrates that the proportion of primary products in its export value to Thailand has fallen to 10.9 per cent in 2013 as compared with one-fifth in 2004. By contrast, we can see the rise in the share of manufactures, growing from 79 per cent to 89 per cent after a decade.

There is a considerable growth in all categories of export manufactures to Thailand. For example, over the last decade, exports of resource-based products and low technology manufactures increase more than ten times while the growth rate of medium technology manufactures is lower, about three times (reaching to US$ 801 million in 2013) (see Appendix 4). However, while the share of resource-based and low technology products rose to one-fourth in 2013 as compared to 15 per cent in 2004, the share for medium technology goods dropped remarkably, at 24 per cent in 2013 from more than 50 per cent in 2004.

It is very interesting to note that Vietnam's export share of high technology products has risen very fast, jumping from only 8.7 per cent in 2004 to 35.7 per cent in 2008 and 39.6 per cent in 2013 with the major contribution from export of electronic and electrical products. This rise is principally at the expense of primary goods and medium technology manufactures as well as it reflects the growth of FDI into the production of high technology goods in Vietnam, especially during the last 5 years. Nevertheless, the share of primary products, resource-based and low technology products in Vietnam's exports to Thailand still remain high, at 35 per cent. This implies that Vietnam's export to Thailand still depends largely on natural resources and cheap labour advantage.

Table 4.8: ***Thailand's imports from Vietnam according to technological content (SITC-3 digit)***

	2004	2008	2013

Primary products	**20.77%**	**26.33%**	**10.94%**
Manufactured products	**79.23%**	**73.67%**	**89.06%**
Resource-based manufactures	***5.80%***	***6.01%***	***8.28%***
Agro/forest based products	3.29%	3.20%	5.64%
Mineral-based products	2.51%	2.81%	2.64%
Low technology manufactures	***10.01%***	***11.62%***	***16.86%***
Textile/fashion cluster	3.43%	7.75%	5.64%
Other low technology	6.58%	3.87%	11.22%
Medium technology manufactures	***54.71%***	***20.30%***	***24.56%***
Automotive products	1.17%	3.20%	6.37%
Process	5.26%	9.50%	7.34%
Engineering	48.29%	7.60%	10.84%
High technology manufactures	***8.71%***	***35.74%***	***39.36%***
Electronic and electrical products	8.66%	31.60%	38.58%
Other	0.16%	4.15%	0.77%
Total	100%	100%	100%

Source: ***Author's calculation based on UN COMTRADE statistics.***

4.2.3. Commodity trade structure by sectoral composition of export

Based on HS classification of Hanson (2010), the sectoral changes of commodity exports between Thailand and Vietnam are revealed in table 4.9, table 4.10 and table 4.11 below.

With respect to Thailand's export, table 4.9 shows that in 2004, sector 3 constituted the largest part in its export to Vietnam, amounting for 26 per cent. It was followed by sector 4 and sector 7. By contrast, sector 1 shared the lowest percentage. After ten years, exports of machinery, electronic and transportation equipment to Vietnam have overtaken those of extractive industries to occupy the most important export sector, accounting for 31.6 per cent (US$ 2.2 billion). On the contrary, the share of sector 4 drops remarkably to only 10.4 per cent though export of this sector achieves more than US$ 1.7 billion in 2013, an increase of over 4 times as compared to 2004.

Regarding export shares of sector 1 and sector 2, the former increases from only 1.7 per cent to 4.8 per cent, while the share of the latter has doubled, accounting for 12.5 per cent over the past decade. Meanwhile, there is almost no change to the proportion of sector 5 in Thailand's export to Vietnam during the corresponding time.

Table 4.9: ***Thailand's export to Vietnam according to industries (HS-2 digit, value in millions, and share in percentage)***

Sectors	2004		2008		2013	
	Value	Share	Value	Share	Value	Share
(1) Agriculture, meat and dairy, seafood	31.3	1.76	113.3	2.28	350.4	4.88
(2) Food, beverages, tobacco, wood, paper	124.6	6.99	469	9.45	898.5	12.51
(3) Extractive industries	468.6	26.29	1165	23.48	751.5	10.46
(4) Chemicals, plastics, rubber	408.1	22.90	1086.7	21.90	1760.3	24.51
(5) Textiles, apparel, leather, footwear	150.2	8.43	315.8	6.37	576.3	8.02
(6) Iron, steel, and other metals	169.2	9.49	415	8.36	438.7	6.11
(7) Machinery, electronics, transportation equipment	396.4	22.24	1326.3	26.73	2271.1	31.62
(8) Other industries	33.8	1.90	70.2	1.41	136.4	1.90
Total	1782.2	100	4961.3	100	7183.2	100

Source: ***Author's calculation based on UN COMTRADE statistics.***

As for Vietnam's export to Thailand, it can be seen from table 4.10 that sector 7 always remains the first position. Export from this sector rises over three times, reaching at US$ 1.7 billion in 2013 which amounts to over a half share of total exports to Thailand in the same year. The second position is hold by sector 6, sharing 12 per cent in 2013 as compared with 4.6 per cent in 2004. The same with Thailand, the share of sector 3 also declines from 13.5 per cent to 4.1 per cent between 2004 and 2013.

On the other hand, there are slight changes to the proportion of other sectors. It should be pointed out that the share of sector 1, 2, 3, 4, 5 and 8 are not too different as it ranges between 4 per cent and 7 per cent in 2013.

Table 4.10: ***Vietnam's export to Thailand according to industries (2004-2013, value in millions, share in percentage)***

Sectors	2004		2008		2013	
	Value	Share	Value	Share	Value	Share
(1) Agriculture, meat and dairy, seafood	32.2	7.34	107.6	7.47	227.3	6.95
(2) Food, beverages, tobacco, wood, paper	15.1	3.44	34.8	2.41	146.8	4.49
(3) Extractive industries	59.4	13.54	269.2	18.68	137	4.19
(4) Chemicals, plastics, rubber	32.1	7.32	96.7	6.71	217.1	6.64
(5) Textiles, apparel, leather, footwear	21.3	4.86	111.8	7.76	230.5	7.05
(6) Iron, steel, and other metals	20.3	4.63	162	11.24	392.8	12.02
(7) Machinery, electronics, transportation equipment	253.6	57.81	570.9	39.61	1739.2	53.20
(8) Other industries	4.7	1.07	88.2	6.12	178.5	5.46
Total	438.7	100	1441.2	100	3269.3	100

Source: ***Author's calculation based on UN COMTRADE statistics.***

It can be asserted that that trade between the two sides over the period of 2004-2013 focuses mainly on sector 7 (machinery, electronics and transport equipment), sharing 38 per cent in 2013 as comparing with 27 per cent in 2004 and 29 per cent in 2008 (see Appendix 5). Sector 7 as stated early requires the participation of skilled labour and capital-intensive machinery to manufacture electrical materials, electronic and transport equipment. Thus, it can be argued that commodity trade between Thailand and Vietnam, at a certain degree is moving to a higher position in the value chain of production. This is also consistent with the large share of intermediate goods and capital goods as discussed in section 4.2.1 as well as the large share of medium and high technology products in Thailand-Vietnam commodity trade as stated in section 4.2.2.

4.2.4. Export diversification between Thailand and Vietnam

Export diversification between the two countries is measured by the HI. Table 4.11 provides information on the export concentration level between the two sides over the past ten years.

In 2004, the HI of Vietnam was relatively high, at 0.363, compared with 0.124 of Thailand. To put it differently, Vietnam's export to Thailand was much more concentrated on several products than Thailand's export to Vietnam. As said before, this is due to the fact that the manufacturing sector and even agricultural sector of Thailand are more diversified than those of Vietnam.

Table 4.11: ***HI of Thailand and Vietnam (SITC, 3-digit)***

Year	Vietnam's export to Thailand	Thailand's export to Vietnam
2004	0.363	0.124
2005	0.419	0.129
2006	0.385	0.108
2007	0.329	0.112
2008	0.267	0.159
2009	0.300	0.087
2010	0.285	0.106
2011	0.134	0.107
2012	0.184	0.111
2013	0.180	0.105

Source: ***Author's calculation from UN COMTRADE statistics.***

However, this trend has changed rapidly in recent years. Vietnam has started to diversify its export goods to Thailand market as its HI to this market has reduced to 0.180, about 50 per cent decline compared with 2004. Meanwhile, since Thailand's export was relatively diversified in 2004, its HI has not changed so much in the last decade, standing at 0.105 in 2013. The increasing export diversification over Thailand market indicates that Vietnam has exported a relative variety of products, parts or components to Thailand's market, especially high technology goods. This is likely because of the close geographical distance, the better infrastructure and the large

share of intermediate goods between Thailand and Vietnam even there are similarities in the top ten export product groups of the two countries.

In comparison with several selected ASEAN countries, table 4.12 reveals that the concentration level in Vietnam's export to Thailand is only higher than that of Malaysia (0.162) in 2013. The HI of Singapore is higher than the HI of Vietnam over Thailand market since Singapore is a developed economy and as stated earlier, it tends to specialise in production as the GDP per capita reaches US$ 20,000. Especially, the export concentration degree of Indonesia in the Thai market tends to increase in this period (0.178 in 2004 and 0.205 in 2013) though Indonesia is still considered as a developing country. In general, after one decade there are insignificant differences in terms of export diversification between Vietnam and other ASEAN countries over the Thai market.

Table 4.12: ***HI of some ASEAN countries to Thailand market (2004-2013, SITC-3 digit)***

	2004	2008	2009	2010	2011	2012	2013
Indonesia	0.178	0.182	0.227	0.191	0.184	0.208	0.205
Singapore	0.192	0.187	0.199	0.218	0.197	0.199	0.195
Malaysia	0.220	0.174	0.198	0.161	0.169	0.164	0.162
Vietnam	0.363	0.267	0.300	0.285	0.134	0.184	0.180

Source: **Author's computation based on *UN COMTRADE statistics.***

4.2.5. Intra-industry trade between Thailand and Vietnam

Using database from SITC classification system at 3-digit (reversion 3), the extent to which intra-industry trade between Thailand and Vietnam occurring over the last decade is investigated in table 4.13, table 4.14, table 4.15 and table 4.16 below.

First of all, trade between the two countries is divided into one-way trade (only one country exports for a specific product) and two-way trade (both countries export for a specific product) with their shares (see table 4.13). Total products groups traded between Thailand and Vietnam increases to 249 groups in 2013 when compared with 134 groups in 2004. In which, the value of two-way trade grows dramatically, reaching to more than US$ 10 billion in 2013 as compared with US$ 2.1 billion in

2004. Thus, two-way trade shares the major proportion, accounting for 90 per cent in 2004 and 98.3 per cent in 2013. This reflects trade expansion as well as trade diversification between the two sides over the past decade and is consistent with the analyses of export diversification in section 4.2.4.

Table 4.13: ***One-way trade and two-way trade between Thailand and Vietnam (SITC-3 digit)***

Year	Total traded products	One-way trade			Two-way trade		
		Number of products	Value (million)	Share of total trade	Number of products	Value (million)	Share of total trade
2004	234	51	234.3	9.84%	183	2146.7	90.16%
2008	240	35	154.9	2.42%	205	6248.4	97.58%
2013	249	32	169.50	1.62%	217	10281.6	98.38%

Source: ***Author's calculation based on UN COMTRADE statistics***

Next, in order to gain an overall understanding of the extent of intra-trade industry in Thailand-Vietnam bilateral trade, the researcher summarizes the distribution of the IIT index over a 3-year period in table 4.14.

It can be seen that the share of commodity groups with low IIT index (lower than 0.5) dominates trade between the two sides during the last ten years. However, this share has reduced to 71.4 per cent in 2013 as comparing to 82.5 per cent in 2004 and 78.5 per cent in 2008. On the contrary, the number of commodity groups with high IIT index (equal and higher than 0.5) rises from 32 groups in 2004 to 62 groups in 2013 which leads to the increase in the share of this group, amounting to 28.5 per cent as compares with 17.4 per cent during the same period. Similarly, the share of products with high IIT index in total trade between the two sides went up to approximately 20 per cent in 2013 as compared with only 8.7 per cent in 2004.

The increase in the share of products with high IIT index may demonstrate a more equal extent in trade relations between the two nations though Vietnam is still

on the side that experiences deficit in trading with Thailand during the last decade. It also implies that both countries at some extent have started to exploit the advantage from economies of scale (cost advantage) and consumers loving for variety (the increasing demand for variety of products). In other words, even if there are overlaps in major export products, Thailand and Vietnam still can boost bilateral trade if the two countries determine specific and potential products with slight differentiation to concentrate on production.

Table 4.14: ***Distribution of IIT index of Thailand-Vietnam trade, 2004-2013 (SITC-3 digit)***

IIT Band	2004		2008		2013	
	Number of products	Share	Number of products	Share	Number of products	Share
0.00 < 0.50	151	82.51%	161	78.54%	155	71.43%
0.50 ≤ 1.00	32	17.49%	44	21.46%	62	28.57%
Total	183	100%	205	100%	217	100%

Source: ***Author's calculation based on UN COMTRADE statistics***

In terms of intra-industry trade for specific commodities, top 10 IIT index and its share in Thailand-Vietnam commodity trade are reported in table 4.15 and table 4.16. In general, there are remarkable changes in the top 10 products with high IIT index between 2004 and 2013.

In 2004, top 10 IIT index of Thailand-Vietnam bilateral trade ranges between 0.84 and 0.99, sharing 1.32 per cent of total trade exchange value. Most products with high IIT index were resource-based manufactures such as alcoholic beverages (112), worn clothing, textile articles (269), nitrogen-function compounds (514), glass (664), or low technology manufactures such as men, boys clothing (842), women, girl clothing (843), office, stationery supplies (895), or primary products such as fruit, vegetable juices (059). There is only one product, namely transmission shaft with high IIT index (0.99) belonging to medium technology manufactures (see table 4.15).

Table 4.15: ***Top 10 products with high IIT index between Thailand and Vietnam in 2004 (SITC-3 digit)***

Code	Commodity	IIT	Share of total trade
748	Transmissions shafts etc	0.995	0.43%
842	Mens, boys clothing	0.959	0.01%
843	Womens, girls clothing	0.954	0.01%
269	Worn clothing, textl.artl	0.947	0.00%
664	Glass	0.932	0.27%
059	Fruit, vegetable juices	0.893	0.01%
112	Alcoholic beverages	0.878	0.07%
288	Non-ferrous waste scrap	0.873	0.02%
895	Office, stationery supplies	0.859	0.07%
514	Nitrogen-function compounds	0.841	0.43%
Total			**1.32%**

Source: ***Author's calculation based on UN COMTRADE statistics***

In 2013, the share of top 10 IIT index in total trade value between Thailand and Vietnam has declined to 1.1 per cent. There are still low technology products such as iron, steel bar, shapes (676) gold, silverware, jewellery (897), aluminium (684); as well as primary products like tea and mate (074) and sugar confectionery (062) on the list of products with high IIT index.

Table 4.16: ***Top 10 products with high IIT index between Thailand and Vietnam in 2013 (SITC-3 digit)***

Code	Commodity	IIT	Share of total trade
897	Gold, silverware, jewellery, nes	0.996	0.05%
684	Aluminium	0.995	0.32%
881	Photograph apparatus, etc.nes	0.954	0.03%
771	Electrical power machinery, parts	0.949	0.27%
763	Sound recorder, phonograph	0.939	0.03%
676	Iron, steel bar, shapes etc.	0.932	0.15%
581	Plastic tube, pipe, hose	0.931	0.11%
774	Electro-medical, x-ray equipment	0.923	0.01%

074	Tea and mate	0.917	0.02%
062	Sugar confectionery	0.888	0.19%
Total			**1.17%**

Source: ***Author's calculation based on UN COMTRADE statistics***

However, there are more medium technology products like plastic tube, pipe and hose (581); sound recorder, phonograph (763). Especially, several high technology products have appeared on top 10 IIT index, including: electric power machinery, parts and thereof (771); electro-medical, X-ray equipment (774); and photographic apparatus and equipment (881) (see table 4.16). This is reasonable since intra-industry trade has taken place mainly in the manufacturing sector. Also, this again shows the sign that to a certain level trade between the two sides is moving to higher positions in the value chain of production.

4.2.6. Revealed comparative advantage (RCA index)

It is necessary to examine comparative advantage products of Thailand and Vietnam which helps to assess the extent to which traditional trade theories impact bilateral commodity trade between the two sides. In addition, using the RCA index also allows us to assess whether export structure between the two countries is complementary or competitive, or both.

Table 4.17 provides a general understanding of comparative advantage for the two countries between 2004 and 2013. There is almost no change in the number of export product groups from Thailand to the world while Vietnam adds 6 products to its number of export commodities (252 products in 2013).

Table 4.17: ***Summary of RCA index in Thailand and Vietnam's export (SITC-3 digit)***

Thailand's exports (number of product groups)					
	Total	RCA<=1	Share of Export Value	RCA>1	Share of Export value
2004	257	167	23.77%	90	76.23%
2008	259	169	22.53%	90	77.47%
2013	258	170	28.32%	88	71.68%
Vietnam's exports (number of product groups)					

2004	246	199	16.57%	47	83.43%
2008	250	190	18.16%	60	81.84%
2013	252	189	24.23%	63	75.77%

Source: ***Author's calculation based on UN COMTRADE statistics***

With respect to Thailand's RCA distribution, the majority of export products has a comparative disadvantage (RCA<= 1), accounting for around 170 product groups while those of comparative advantage product groups amount to around 90 groups between 2004 and 2013. The share of products with comparative advantage in total export value is huge (over 70 per cent) though it has a declining trend in recent years.

As for Vietnam, similar to Thailand, a large quantity of product groups are comparative disadvantage products whereas the product groups with comparative advantage remain small. Additionally, the number of export goods with comparative advantage of Vietnam is much smaller (twofold) than that of Thailand because of the substantial difference in production capability between the two countries. Yet, these categories of Vietnam have significantly increased to 63 products in 2013 as compared with 47 products on 2004, resulting from its rapid economic growth throughout the last ten years.

Moving to top 10 RCA index, it can be seen from table 4.18 that Thailand enjoys a strong comparative advantage mostly in primary products (such as natural rubber, rice, natural abrasives and crustacean), resource-based manufactures (such as prepared or preserved fish and fruit, synthetic fibres, or sugars) in 2004.

Table 4.18: ***Top 10 export products with high RCA values in Thailand's exports (SITC-3 digit)***

2004			**2013**		
Code	Commodity	RCA	Code	Commodity	RCA
231	Natural rubber, etc.	37.53	231	Natural rubber, etc.	24.90
042	Rice	28.92	042	Rice	13.44
277	Natural abrasives, nes	16.23	037	Fish etc.prepared, preserved.nes	13.34
037	Fish etc.prepared, preserved.nes	16.08	883	Cinematograph film	8.83
047	Other cereal meal,flours	8.48	621	Materials of rubber	8.54

017	Meat, prepared, preserved. nes	6.75	017	Meat, prepared, preserved.nes	8.34
036	Crustaceans, molluscs etc	6.49	047	Other cereal meal,flours	7.14
058	Fruit, preserved, prepared	6.15	782	Goods, special transport vehicles	5.97
266	Synthetic fibres	6.07	061	Sugars, molasses, honey	5.78
061	Sugars, molasses, honey	5.79	762	Radio-broadcast receiver	5.59

Source: ***Author's calculation based on UN COMTRADE statistics***

By 2013, primary products and resource-based manufactures still share the top 3 RCA index although their RCA index in 2013 are not as high as those in the year 2004. Yet, there have appeared more medium and high technology products on this list. They consist of cinematograph film (883); goods, special transport vehicles (782); and radio-broadcast receiver (762). In other words, to some extent Thailand has moved to higher stages of production which requires the participation of higher skilled labors and higher technology content.

Regarding Vietnam, what can be noted from table 4.19 is that its export products with high RCA values remain almost unchanged between 2004 and 2013. Vietnam still has a strong comparative advantage over primary products (especially rice (042), crustaceans (036), natural rubber (231), spices (075), and coffee (071)) and low technology manufactures (like men and boys clothing (841 and 843), and footwear (851)) throughout the period 2004-2013. There is only one product, namely photograph apparatus (881) being in the top 10 RCA index in 2013.

Table 4.19: ***Top 10 export products with high RCA values in Vietnam's exports (SITC-3 digit)***

2004			**2013**		
Code	Commodity	RCA	Code	Commodity	RCA
042	Rice	36.92	881	Photograph apparatus. etc. nes	27.80
036	Crustaceans, molluscs etc	29.58	246	Wood in chips, particles	21.81
231	Natural rubber, etc.	19.10	075	Spices	17.47
075	Spices	18.79	042	Rice	15.81
071	Coffee, coffee		231	Natural rubber, etc.	12.78

	substitute	18.71			
851	Footwear	15.37	071	coffee, coffee substitute	11.35
841	Men, boys clothing, x-knit	9.03	036	Crustaceans, molluscs etc	10.02
843	Men, boys clothing, knit	8.79	851	Footwear	9.42
074	Tea and mate	8.64	841	Men, boys clothing, x-knit	7.96
844	Women, girls clothing, knit	6.99	037	Fish etc.prepared, preserved.nes	7.91

Source: ***Author's calculation based on UN COMTRADE statistics***

Generally speaking, there are similarities in the top 10 products with high RCA index between Vietnam and Thailand. Both countries enjoy a strong comparative advantage in agricultural products and aquatic products. This is understandable because Thailand and Vietnam all are rich in natural resources. However, Thailand nowadays has joined the higher stages of production as it become an industrialized economy with comparative advantage in capital-intensive products, on the contrary as noted earlier Vietnam's export still depends heavily on primary products and labour-intensive products. Accordingly, it therefore can be argued that trade structure between Thailand and Vietnam over the past ten years is a complementary trade relationship.

4.3. Assessments on the structure of commodity trade between Thailand and Vietnam over the period 2004-2013

The above analyses show a relatively comprehensive picture on the situation of commodity trade structure between Thailand and Vietnam during the past decade. From these analyses and the criteria discussed in chapter 3, this section provides major assessments on the structure of Thailand-Vietnam commodity trade for this period.

4.3.1. The quality of export-import structure

Structure of exports:

Export structure of Vietnam to Thailand after a decade has improved towards decreasing export share of primary products and increasing export share of

manufactured products. Especially, there has been a big jump both in terms of export value and the share of machinery, electronic and transportation equipment in total export to Thailand. Except electronic products, in the top 10 export products (at HS 2-didit level) to Thailand also included vehicles and optical, photographic, and cinematographic equipment. These are products that require medium and high technology, or skilled labours in the production process. This means that to some extent, Vietnam has started to move to higher stages of production in trading with Thailand in recent years.

As a more advanced economy, Thailand has a more diversified export sector than that of Vietnam. To a certain level, Thailand-Vietnam commodity trade structure in general and the degree of export diversification in particular reveal accurately the economic development status of each country. However, Vietnam has also started to diversify its export to Thailand as its HI over Thailand market in 2013 is twice lower than that of 2004. Also, in this period Vietnam's share of major export product groups to Thailand has declined significantly, especially electronic products, almost corresponding with the level of some advanced ASEAN countries.

The major shortcoming of Vietnam's export over Thailand market is that the value added in export products remains low as compared with Thailand's export to Vietnam. This is because Vietnam's exports rely largely on advantage of cheap labour and natural resources. Currently, labour costs in Vietnam are 50 per cent of those in China and around 40 per cent of those reported in Thailand and the Philippines (Dam, T. P. M., and Edward Barbour-Lacey 2015). Along with electric and electronic products, Vietnam's exports share a significant proportion of agricultural products and raw materials especially crude oil, or textiles, and footwear goods to Thailand market.

Even with the manufacturing sector, Vietnam can often take part in stages of processing and assembling goods which belong to the lowest positions in the value chain of production but it does not dominate crucial stages such as design and marketing. According to the World Bank, the value added by these stages in export of textile and garment, footwear, and electronic products and computers in Vietnam is only between 10 per cent and 15 per cent while those for seafood and plastic products,

machinery and equipment are higher, at around 20 per cent (Bank, W. 2009). Consequently, the quality and diversification degree of export products over Thailand market are low.

Structure of import:

Overall, Vietnam's import composition in trading with Thailand remains reasonable. Import goods from Thailand at certain levels have satisfied inputs demand for production activities as well as the increasing needs for consumption goods of over 90-million people. Especially, import of parts and components and import of capital goods from Thailand have contributed positively to the development of Vietnam's manufacturing sector. The share of these categories accounts for one-third of total import value by 2013.

On the other hand, Vietnam's import structure from Thailand reveals a number of concerns. The value and proportion of materials for production, especially processed oil, parts and components, or low technology products remain large which can be seen as direct obstacles to improve value added in Vietnam's export goods.

In addition, imports of consumption goods, especially luxury products such as cars, motorcycles, wine and tobacco share a significant percentage in total import value from Thailand. Moreover, these product groups tend to increase in recent year. For example, the value import of motors cars, parts and accessories has increased from about US$ 310 million in 2011 to more than US$ 520 million in 2014 as latest updated data.[12] Such products have contributed considerably to the large trade deficit of Vietnam with Thailand. They are also contributing to the widening of inequality among Vietnamese people.

[12] Data collected from Ministry of Commerce, Thailand, http://www.ops3.moc.go.th/menucomen/export_topn_country/report.asp

4.3.2. The level of exploiting comparative advantage and utilizing efficiently nation's resources

Export and import structure of Thailand-Vietnam commodity trade over the past decade to some extent has represented accurately the development status and the demand for various goods between the two sides.

As mentioned earlier, Thailand is admitted widely to enjoy strongly a comparative advantage in agro-based products, processed and engineering products as well several high technology products (capital-intensive goods). In fact, the share of these goods in Thailand's export to Vietnam is large. By contrast, Vietnam enjoys principally a comparative advantage in primary products, or processing products (labour-intensive goods) which are also major products exported to Thailand.

As a low income country, industrialization process of Vietnam economy demands numerously inputs, especially fuel and materials so Thailand is an important supply of those intermediate goods. This explains why Vietnam annually imports a huge volume of refined petroleum and processed rubbers from Thailand.

Trade between the two countries mainly occurs in intermediate goods.[13] The increase in trade in intermediate goods such parts, components, and semi-finished products between Thailand and Vietnam implies the expansion of FDI enterprises, including Thai multinational companies in Vietnam market as this sector shares the large proportion in import of these goods. Also, this rise indicates that Vietnam is increasingly taking part in the regional production network which is a crucial criterion to assess the extent of international integration of one country.

However, Vietnam has always suffered huge trade deficit in intermediate goods with Thailand between 2004 and 2013. In addition, though Vietnam is considered as a typical agricultural country, it annually imports a great volume of agricultural products, foods, beverages, and wood from Thailand. Vietnam also imports a considerable volume of textiles and footwear produced in Thailand while it enjoys a strong comparative advantage in such products. This fact reflects obviously

[13] According to author's computation, trade in intermediate goods has grown dramatically from US$ 1.5 billion in 2004 to US$ 5.7 billion in 2013, accounting for more than a half of Thailand-Vietnam trade volume.

differences in production capability between the two sides. In other words, it exhibits the limits to production of Vietnamese businesses as this sector has not yet utilized national resources in manufacturing products with good quality and reasonable prices.

4.3.3. Criteria on sustainable export-import structure

Thailand-Vietnam trade relation has been promoted significantly over the period 2004-2013 as compared with the previous period and both countries have gained benefit from this development. However, as stated Vietnam always experiences trade deficit in almost sectors, even with its comparative advantage products, thus Vietnam's trade composition with Thailand is somewhat unsustainable.

Various export products relying on natural resources such as crude oil, natural rubber, seafood and fruit appear in top 10 product groups exported to Thailand, although the share of such products has lowered in 2013 as compared with 2004. The dependence on export of primary products probably slows down the economic growth of Vietnam especially in case of having shocks in international prices of essential commodities. Furthermore, the dependence on primary products is also lowering the competitiveness of other economic sectors as the majority of resources focuses on production of these products. In addition, exploiting natural resources has often negative impacts on the environment and people's health.

Also, Vietnam's export to Thailand and other more advanced countries depends largely on cheap labour advantages, while the value added from using cheap labour as the main input factor is low. On the other hand, the comparative advantage over low cost of labour will end at certain time in the near future as Vietnam goes into the stage of ageing population and this advantage soon or late will transfer to other developing countries like Myanmar, Cambodia and Laos. To put it differently, export growth based on capital and cheap labour resource is unsustainable.

Besides that, export expansion from Vietnam to Thailand is highly contributed by Foreign Direct Investment (FDI) sector. According to data provided by General Statistic Office of Vietnam, in the ten months of 2014, exports from the FDI sector

reach US$ 82.5 billion, accounting for 67 per cent of total export of Vietnam.[14] It cannot deny the role of FDI enterprises to the increase in export goods to Thailand particularly and to the world as the whole. Yet, a principal proportion of profit is transferred to the home of these countries. Also, FDI companies seem to be not willing to transfer the original technology for domestic businesses.

Finally, the significant import share of parts and components, materials or other inputs from Thailand on the one side is necessary for production process but on the other side it can affect negatively production activity of businesses if the supply source is interrupted (because of domestic unrest or natural disaster for example) or the prices of these goods are unstable.

By and large, Thailand is an important trading partner of Vietnam not only in ASEAN but also in the world. Trade composition between Thailand and Vietnam has changed positively over the past ten years in which Vietnam is increasingly exporting more high technology goods to Thailand. Additionally, to some degree, import goods from Thailand have contributed positively to the industrialization process of Vietnamese economy.

Nevertheless, Vietnam has undergone a chronic deficit in trading with Thailand in almost every sector over the past ten years. Also, there is a considerable share of import goods that Vietnam has a comparative advantage from Thailand as well as the proportion of consumption goods in total import goods remain high. In a nutshell, commodity trade between Thailand and Vietnam can be argued as a complementary competitive relationship.

The factors (or reasons) of the advantages and disadvantages in the structure of commodity trade between Thailand and Vietnam will be investigated in the next section.

[14] "Các doanh nghiệp FDI đang đóng vai trò gì trong cán cân thương mại của Việt Nam? (What are FDI enterprises playing role in trade balance of Vietnam?" https://scb.com.vn/showarticledetail.aspx?stn=9&tp=33&id=508&AspxAutoDetectCookieSupport=1, accessed online on March 1, 2015.

4.4. The factors determine the situation of Thailand-Vietnam commodity trade structure between 2004 and 2013

4.4.1. The factors determine the improvements

The improvements of trade composition between Thailand and Vietnam in the past decade have resulted mainly from a number of factors as follows:

First of all, both Vietnam and Thailand pursue an economic model in which foreign trade plays a crucial role (export-driven economic growth model), similar to Newly Industrialised Economies (NIEs) such as Korea, Taiwan, Hong Kong, and Singapore. In this model, the proportion of export and import over GDP is large (more than 100 per cent). Being as very open economies, both countries have favorable conditions to promote export commodities to other nations. Looking back the history, trade relations between the two sides only have taken off as Vietnam opens its market to ASEAN countries since 1995 as well as when Thailand considers Vietnam and other Indochina countries as potential markets for Thai businesses since the 1990's.

Secondly, the economic integration level and trade liberalization in ASEAN and East Asian region are becoming stronger. Both sides have participated in regional trade agreements such as ASEAN Free Trade Area (AFTA), ASEAN's FTA plus one with big trading partners like Japan, China, Korea, India and so on. Bilateral free trade agreements and regional free trade agreements have big impacts on trade structure of participating countries.

Specifically, the reduction of taxes and trade barriers among ASEAN countries with special concessions to less advanced ASEAN countries (CLMV countries) according the commitments in the AFTA and the AEC has facilitated the export activity of Vietnam to Thailand and other ASEAN countries. For instance, as mentioned in the Common Effective Preferential Tariff (CEPT) of the AFTA, ASEAN-6 (old members) have to reduce the tariff rate to 0-5 per cent by the year 2002 with the products in inclusion list, while with new ASEAN members the deadline is given longer, by 2006 with Vietnam, 2008 with Laos and Myanmar, and 2010 with Cambodia. In a sensitive list, old ASEAN members have to decline the tariffs to 0-5 per cent by the year 2010, while the given time for new members is

longer, by 2013 with Vietnam, 2015 with Laos and Myanmar, and 2017 with Cambodia *(ASEAN Secretariat, 1999)*.[15]

Thirdly, the close geographical distance, scale of economies, the similar consumption culture and the improvements in transportation system also enhance the export activities between the two sides.

Geographical position is an important factor that determines trade relations. Trade exchange often occurs between countries in the same geographical region because the greater is the distance between two countries, the higher are the costs associated with transporting goods, thus lowering the gains from trade and reducing trade itself (Baxter, M. and M. A. Kouparitsas 2006).[16] Due to close distance, the share of intra trade is large among countries in the European Union (EU), counting for more than 60 per cent of total trade volume (67 per cent for import, 52 per cent for export).[17] The similar trend can be also seen in intra trade in East Asian region.

Thailand and Vietnam are two mainland Southeast Asian countries and the distance between Bangkok City and Ho Chi Minh City is short, about over 700 km^2 (this distance even is nearly three times shorter than the distance between the two largest cities of Vietnam, namely Hanoi City and Ho Chi Minh City). Infrastructure system, especially road system connecting the two sides has been improved remarkably in the last decade. The two countries are also members of East-West Economic Corridor and Southern Economic Corridor which attract numerous investment projects from relevant ASEAN countries as well as from outside countries, especially Japanese companies. Also, the Master Plan of ASEAN Connectivity which was adopted by ASEAN in the 15th ASEAN Summit in Cha-am Hua Hin, Thailand in

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[15] See more detailed contents of the AFTA at http://www.asean.org/communities/asean-economic-community/item/asean-free-trade-area-afta-an-update, accessed online on March 2, 2015.

[16] Of course, there are exceptions. For example, exports to EU and the US make up a large percentage in total Vietnam's export. This is due to large scale of these economies which creates great opportunities for export sector from small and medium developing countries like Vietnam.

[17] "Intra-EU trade in goods-recent trends", http://ec.europa.eu/eurostat/statistics-explained/index.php/Intra-EU_trade_in_goods_-_recent_trends#Intra-EU_trade_in_goods_compared_with_extra-EU_trade_in_goods, accessed online on March 2, 2015.

2009 emphasized on physical connectivity (include transport, information and communications technology and energy) as one of key elements for future of ASEAN's development. Currently, land transport projects, especially the ASEAN Highway Network and the Singapore Kunming Rail Link are building. These projects are contributing to the reduction of time for transporting goods. This helps Vietnamese exporters to reduce the costs of transportation and the price of commodities so that Vietnam's goods become more competitive in Thailand's market.

Meanwhile, the rise of population size and the scale of economy in both sides (especially Vietnam) have contributed largely to the trade expansion between Thailand and Vietnam. Along with economic growth, there are more people entering into middle class and they have become the major consumers with various needs of medium and high technology products. In addition, Vietnam and Thailand have similarities in terms of consumption culture. For example, both sides consume similar foods like rice, fish as well as prefers to consuming foreign goods rather than domestic goods. There are also clear differences in consumption behaviour between different classes of consumers in both Thailand and Vietnam. That helps (or forces) businesses to produce numerous different goods to satisfy consumers' various demands. Indeed, the rising trade in similar products (intra-industry trade) implies that both countries in certain level have utilized the advantage in economies of scale and product differentiation.

Fourthly, existing literature suggests that FDI influences the host countries' industrial process by acting as a catalytic factor in FDI recipients' shift from being an agricultural-based economy to being a manufacturing-based economy through export-import activities of FDI companies. On the other hand, multinational corporations (MNCs) play a key role in channeling products from host countries to the international market through their distribution networks. Vietnam is not the exception. Over the past 20 years, FDI inflows into Vietnam have expanded dramatically in terms of the proportion of investment, import-export turnover and GDP percentage. As noted earlier, two-third of Vietnam's export is shared by this sector. Specifically, manufacturing and processing sectors have attracted a great share of Vietnam's total

FDI over the past five years, amounting to around 70 per cent of the country's total registered capital.[18]

Regarding Thailand's FDI into Vietnam's market as of 2013, Thailand has 333 projects, accounted for nearly US$ 6.5 billion in total cumulative registered capital. Thailand is on the top 10 investors with more than 100 countries having investment projects in Vietnam (VCCI 2014). The average value of a Thai FDI project achieves US$ 18 million which is higher than average rate of one FDI project in Vietnam. With respect to the field of investment, the majority of Thai FDI in Vietnam concentrates on processing and manufacturing sector, accounted for 179 projects and US$ 5.6 billion, sharing 47.8 per cent and 84.5 per cent of total investment project and investment value respectively.[19] The remaining focused on agricultural sector, construction sector, and services sector. Most Thailand's FDI concentrates on the southern part of Vietnam where there are industrial zones and export processing zones such as Ho Chi Minh City, Ba Ria- Vung Tau province, Dong Nai province, and Binh Duong province.

The big Thai investors in Vietnam include CP group and Royal Foods company (processing foods); BJC group (foods and beverages), SCG group (paper, cement, oil, chemicals). In general, though there are not many investment projects in high technology manufactures, Thai FDI projects focus on the fields encouraged by the Vietnamese government. Thus, it can be argued that FDI from Thailand has contributed positively to shifting trade structure of Vietnam to a more advanced pattern, both in terms of increasing trade in intermediate goods and trade in final goods.

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[18] "Using Vietnam to target the emerging ASEAN region", http://www.vietnam-briefing.com/news/using-vietnam-target-emerging-asean-region.html/, accessed online on March 3, 2015.

[19] Data collected from Department of Foreign Investment, Ministry of Planning and Investment. See more at http://fia.mpi.gov.vn/tinbai/2423/Tinh-hinh-DTNN-cua-Thai-Lan-tai-Viet-Nam, accessed online on March 3, 2015.

4.4.2. The reasons of shortcomings in Thailand-Vietnam commodity trade structure

There are several reasons that lead to the undiversified commodity trade structure between Thailand and Vietnam over the past decade.

First, Vietnam's economic development model with export growth based on the widening of capital, cheap labour and natural sources reveals numerous deficiencies such as low value added and polluted environment. In addition, these sources as stated are going to terminate in the near future. As a result, Vietnam is likely to fall into the middle income trap if the country does not transform its growth model from width to depth based on advanced factors such as technology and skilled labour that can be created by own countries.

Second, Vietnam is lacking strong related and supporting industries. Supporting industries play an important role in producing inputs for innovation and internationalization as well as in helping companies to participate in regional and global value chain (Porter, M. E. 1990). Vietnam is still importing between 70 per cent and 80 per cent of fuels and materials such as 85 per cent for petroleum; 80 per cent for production of wood products; 65 per cent for plastic; 70 per cent for breeding industry.[20] As discussed earlier, the large share of Thailand's export to Vietnam as mentioned is intermediate inputs such as materials, parts and components. Also, many Thai companies in Vietnam have to import these inputs from home country or third countries in the region for production. The main cause is that Vietnam has not yet built competitive related and supporting industries. Consequently, the value added in export products by Vietnam remains low as it only takes part in processing and assembling stages.

Third, the competitiveness of Vietnamese enterprises which is the measurement for the development level of a country is low. Vietnam's export depends greatly on the FDI sector while the participation of domestic businesses remains limited. This, as

[20] "Mấy suy nghĩ về vấn đề nhập siêu của Việt Nam (Some thoughts on Vietnam's huge trade deficit)", http://www.tapchicongsan.org.vn/Home/Nghiencuu-Traodoi/2010/106/May-suy-nghi-ve-van-de-nhap-sieu-cua-Viet-Nam.aspx, accessed online on March 4, 2015.

noted reveals the drawbacks in capital, technology, production method, administrative method as well as skill of labours existing in domestic companies. Besides that research and development (R&D), and advertising activities are not performed regularly (quarterly or annually).

On the other hand, Vietnamese businesses do not pay enough attention to the Thai market in particular and other ASEAN markets in general, as well as the regional integration process, especially the AEC. For example, according to business survey carried out by Institute of Southeast Asian Studies (Singapore), 76 per cent of domestic businesses said "do not know about the AEC"; 94 per cent said the same about the AEC Scorecard; 63 per cent thought that the AEC has no impact or insignificant impact on their business (Das, S. B., J. Menon, R. C. Severino and O. L. Shrestha 2013). They all are largest rates in ASEAN. By contrast, Thailand has a good preparation for the AEC both at government and business level so far. At government level, the Thai government puts emphasis on the improvement of infrastructure and logistic systems; developing special economic zones; establishing department of industry promotion, office of small and medium enterprises (SMEs) promotion; and small and medium development banks. In addition, the Thai government has established a center for ASEAN trade promotion. It also encourages people to learn English and native ASEAN languages, especially in Thai educational institutions. At the business level, Thai SMEs are developed as clusters. Combined with trade promotion center, Thai businesses have organized numerous conferences and fairs (in Vietnam for instance) to learn about and to enter the market of ASEAN countries.

Fourth, infrastructure and logistic systems and custom procedures in Vietnam have improved remarkably in recent years but there is still a large gap as compared with more advanced ASEAN countries. According to the global competitiveness report 2014-2015, Vietnam is ranked at the 81th position for the index of transport and energy infrastructure. In ASEAN, Vietnam stands behind Singapore (2nd position), Malaysia (25th position), Thailand (48th position) and Indonesia (56th position).[21] Most

[21] See full report at http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf, accessed online on March 4, 2015.

of the stages of logistics are performed by foreign companies as they account for 70 per cent to 80 per cent of the logistic service market in Vietnam. The share of domestic businesses is small due to lack of skilled labour in this field.[22]

Although Vietnam has simplified and reduced the time for custom procedures, according to the Doing Business Report from World Bank in 2013, Vietnam remains low position in variety of indices such as 109/189 in establishing business; 156/189 in electric supply; and 149/189 in taxes payment. In ASEAN, with the 99th position in the doing business rankings, Vietnam stands behind Singapore (1st position), Malaysia (6th position), Thailand (18th position), and Brunei (59th position).[23]

Fifth, there are similarities in comparative advantage between Thailand and Vietnam.

As stated by Ricardo, a country will export goods that it has a comparative advantage and import goods that it has a comparative disadvantage. In general, developed countries have comparative advantages over capital-intensive goods thus the share of high technology goods such as computers and automobiles in their total exports is large, on the contrary developing countries tend to produce low technology goods because of their comparative advantage in labour-intensive goods or resource-based goods.

Over the past decade, both Thailand and Vietnam have exported outside more medium and high technology goods however, both countries still enjoy obviously comparative advantages in agricultural products, aquatic products or low technology products such as rice, natural rubbers, textiles, fish, and crustaceans. The overlaps of RCA index account for 31 products and 29 products in 2004 and 2013 respectively (see details in Appendix 6 and Appendix 7) while the production capability of Vietnamese businesses is much lower than those of Thai companies. This is also the

[22] A survey carried out by Institute of Research and Development in Ho Chi Minh City shows that 53 per cent of domestic businesses are lacking qualified labour force; 30 per cent of businesses have to re-train employees, and there is only 6.7 per cent said they feel satisfied with qualification of current employees.

[23] See the full report at http://www.doingbusiness.org/reports/global-reports/doing-business-2014, accessed online on 4 March 4, 2015.

reason for the annual trade deficit that Vietnam has experienced in trading with Thailand over the past ten years.

Chapter 5 : CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the main research findings and analyses from previous chapters. In addition, it also provides several recommendations to promote Thailand-Vietnam commodity trade in the upcoming years.

5.1. Summary of main research findings

Trade relations between Thailand and Vietnam have developed significantly since the two countries officially established a diplomatic relation in 1976, especially when Vietnam joined ASEAN in 1995. Trading relations with Thailand have played a more important role in Vietnam's foreign trade as Thailand has been among the top largest trading partners of Vietnam in recent years. Nevertheless, Vietnam has always experienced the chronic trade deficit with Thailand between 2004 and 2013 not only because of the similarities in major export products between the two nations but also because of low competitiveness of Vietnamese businesses as compared with Thailand.

In the study of Thailand-Vietnam commodity trade structure over the past ten years, it can be seen that trade composition between the two countries has changed positively towards increasing share of traded manufactures and decreasing share of traded primary products. In addition, there has been a high share of trade in intermediate goods between the two countries, especially in Thailand's export while there has been a considerable growing share of final goods in Vietnam's export. This shows the increasing integration level of Thailand-Vietnam trade relations into the regional production network.

It is also worth noting that the share of high technology products, especially electric and electronic products, parts and thereof in Vietnam's export to Thailand has gone up dramatically, thanks to the export growth of the FDI sector. However, Vietnam has taken part only in assembling and processing stages with low value added, meanwhile its export to Thailand still depends heavily on comparative advantages over cheap labour and natural resources. With the large share of trade in intermediate goods and trade in manufactures, the share of high intra-industry trade

between the two countries has improved mainly because of the economic improvements that Vietnam gained during the last ten years.

Also, it is understandable that despite its improvements, Vietnam's exports have been less diversified as compared with Thailand. However, there are insignificant differences in the level of export diversification over Thailand market between Vietnam and some ASEAN countries like Singapore, Malaysia and Indonesia.

In addition, both countries enjoy a strong comparative advantage in a number of primary products but there has been more medium and high technology products with high RCA index in Thailand's export than those in Vietnam's export over the past ten years. However, trade between Thailand and Vietnam still grows because both sides at certain levels have exploited the economies of scale and product differentiation. The thesis therefore concludes that trade composition between Thailand and Vietnam over the past decade is a complementary relationship.

The thesis also discusses the factors that have contributed positively to changes in the structure of commodity trade between the two countries, including: both countries follow export-driven economic growth model; the increasing level of economic integration and trade liberalization in ASEAN and East Asian region; the close geographical distance, the increasing scale of economies, and the improvements in transportation system between the two countries; and the rise of FDI flows (including Thai FDI) into Vietnam. Meanwhile, the drawbacks of Thailand-Vietnam commodity trade composition, on the Vietnamese side are mainly attributed to several following factors: the deficiencies in Vietnam's economic growth model based on the expansion of capital, cheap labour and natural sources; weak related and supporting industries; low competitiveness of Vietnamese enterprises; weak infrastructure and logistic systems; and overlaps in comparative advantage of export products between Thailand and Vietnam.

In the next section, the thesis will provide recommendations for promoting commodity trade between Thailand and Vietnam in the upcoming years.

5.2. Recommendations for promoting Thailand-Vietnam commodity trade

Before bringing out the suggestions for promoting Thailand-Vietnam commodity trade in the forthcoming years, it is necessary to explore the regional and global context of Thailand-Vietnam trade relation. The thesis argues that trade and trade structure between Thailand and Vietnam are possibly affected by the establishment of the AEC, the increasing regional economic associations, and the growing trend of transferring FDI from China to ASEAN countries.

The establishment of the AEC by the end 2015 is considered as further efforts of ASEAN in order to promote the process of regional economic integration among ASEAN members. To achieve the AEC, ASEAN has specified 8 areas of cooperation with the goal of transforming ASEAN into a region with a free movement of goods, services, investments, skilled labour and capital.[24] The AEC also set up 12 priority integration sectors which are most important sectors in export of ASEAN members,[25] as well as ratified Mutual Recognition Arrangements (MRAs) on various fields.[26] The full implementation of the AEC will see the ASEAN region with four following characteristics: 1) A single market and production base; 2) A highly competitive economic region; 3) A region of equitable economic development; and 4) A region fully integrated into the global economy (ASEAN 2008).

When the AEC comes into effect in the end 2015, it is likely to have impacts on trade composition between Thailand and Vietnam. Vietnam will have more opportunities to enter in Thailand market and other advanced ASEAN markets since Vietnam has given longer time to eliminate tariff barriers. In addition, Vietnam has to simplify custom procedures in accordance to commitments in the AEC which in turn

[24] These areas are as follows: Human resource development and capacity of building; Recognition of professional qualification; Closer consultation on macroeconomic and financial policies; Trade financing measures; Enhanced infrastructure and communications connectivity; Developments of electronic transactions through ecommerce-ASEAN; Integrating industries across the region to promote regional sourcing; and Enhancing private sector involvement for the building of the AEC.

[25] These sectors consist of agro-based goods, air transport, automotive products, e-ASEAN, electronics goods, fisheries, health care products, rubber-based goods, textiles and clothing, tourism, wood-based products, and logistics.

[26] These fields are engineering services, architectural services, nursing services, surveying qualifications, medical practitioners, dental practitioners, and accountancy services.

expects to improve business environment as well as competitiveness of Vietnam's enterprises. As a result, products manufactured in Vietnam will become more competitive in Thailand market.

However, with trade liberalization in the AEC, Vietnamese businesses also have to deal with higher competition from companies of Thailand and other ASEAN countries. Before the establishment of the AEC, huge volumes of Thai products have entered the Vietnamese market. Also, with the free flow of capital and investment, Thai investors are increasingly entering in very potential retail market of Vietnam through buying local retail companies and foreign companies or through establishing new retail stores. Thus the scenario that the Vietnamese market is flooded by Thai products is likely to happen if Vietnamese businesses fail to produce competitive goods. Moreover, as ASEAN's labor market is liberalized Vietnam has to deal with the brain-drain situation as Vietnamese labors move to Thailand other advanced ASEAN countries where they can reach higher salaries. This threat affects negatively the competitiveness of Vietnamese companies.

On the other hand, regional economic associations have been the main trend in the world in recent years, with the very fast increase in the number of FTAs signed, both in terms of bilateral agreements and multilateral agreements. ASEAN has signed FTA with most of its important trading partners in the region such as ASEAN-Japan FTA, ASEAN-China FTA, and ASEAN-Korea FTA. The increasing economic integration process among East Asian countries is predicted to have an effect on trade relations between Thailand and Vietnam. Therefore, Thailand-Vietnam trade relations should be placed in production network of the East Asian region. The two countries have to determine which products, or parts and components of products they should concentrate on production. Also, the fast growth in trade in intermediate goods among East Asian countries, as stated earlier continues to impact supplying and importing resources of Vietnam as well as the development of Vietnam's supporting industries. Along with trade liberalization in the East Asia region, it is clear that Vietnam's export goods to Thailand and vice versa have to compete not only with other ASEAN countries but also with outside ASEAN countries, especially China- the biggest trading partner of both nations.

Apart from that, the growing trend of transferring FDI from China to ASEAN countries, especially Indonesia, Thailand and Vietnam is said to impact trade structure between Thailand and Vietnam in the next years. China received the largest FDI in the developing world from 1993 to 2012 thanks to her surplus of labour, a large market and favorable policy. Nevertheless, the ASEAN-5 (including Singapore, Indonesia, Malaysia, Thailand and the Philippines) has overtaken China in terms of attracting FDI, accounted for US$ 128 billion in 2013 as compared with US$ 117 billion in 2012. FDI into China faced a 3 per cent decline whereas FDI inflows into ASEAN-5 represented a 7 per cent increase in 2013 as compared with 2012.[27] This difference is bigger if we add FDI flows into Vietnam. This trend can be explained by the rising costs from increasing wages, an appreciating Chinese currency and a shrinking working population which are pushing multinational companies to relocate. On the contrary, the increasing FDI in the manufacturing sector of ASEAN countries, especially Indonesia, Vietnam and Philippines has resulted from large pools of labour, strong domestic demand, low cost, and favorable policy over FDI. Also, much of investment from Japan, for example, has been moved to Thailand, Indonesia and Vietnam to diversify risks away from China. It therefore can be asserted that the movement of FDI from China to ASEAN countries, especially in the manufacturing sector, will impact greatly the trade composition between Thailand and Vietnam due to its large share in export and import of those countries as discussed in the previous chapter.

Based on the analysis of Thailand-Vietnam commodity trade structure between 2004 and 2013 as well as the context of Thailand-Vietnam trade relation, the thesis makes some recommendations to move the trade structure to higher value added products and more products with technological improvements between the two countries in the upcoming years. The suggestions of this thesis can be applied not only for trade composition of Vietnam with Thailand but also for Vietnam's trade relations with other countries. They consist of export and import orientation policy;

[27] "Why ASEAN overtook China's Foreign Investment Last Year", http://www.china-briefing.com/news/2014/03/17/why-asean-overtook-chinas-foreign-investment-last-year.html, accessed online on 16 March 2015.

export diversification policy; improving businesses' competitiveness; and strengthening economic and trade relations between the two sides.

5.2.1. Export and import orientation policy

In terms of export orientation policy, it has become an urgent task for Vietnam to transform its economic development model based on advantage of natural resources and cheap labour to economic growth model based on high labour productivity and advanced technology. Simultaneously, the export structure to Thailand has to be changed towards the production of products based on advantage of skilled labour and high technology in the circumstance that the comparative advantage over cheap labour is predicted to end in the coming years.

On the other hand, Vietnam should continue to lower export ratio of primary products, or low technology products in total export value to Thailand. The ratio of materials, semi-finished products parts and components (intermediate goods) produced in internal nation need to be increased to at least 60 per cent-70 per cent as compared with only 30 per cent at present. To do that, Vietnam should develop strong related and supporting industries. Related and supporting industries can be developed through attracting more FDI from Thailand and other countries. Thus, there should be preferences in business income taxes for FDI companies. The Vietnamese government also should encourage the transfer of advanced technology and management method from the FDI sector to domestic businesses. Vietnam is put in an advanced position to attract FDI in the context that FDI flows from East Asian countries and other regions are predicted to move from China to major ASEAN countries, including Vietnam as the AEC with trade liberalization comes into effect by 2015. This helps Vietnamese companies to upgrade technology and take part more in regional and global value chain.

In international trade, it would be unwise for a country to produce every product entirely by itself so Vietnam should choose a number of products or some parts of products as well as stages of production that it has a comparative advantage as compared with Thailand to concentrate on production. For example, textile, garment, and footwear are predicted to remain in the top export products of Vietnam to

Thailand in the coming years thus obtaining higher value added requires Vietnam to dominate the stage of designing different types of such products. Additionally, Vietnam now attempts to develop its automobile industry however it is necessary to consider seriously whether or not Vietnam should develop the automobile industry in the context that Thailand and other ASEAN nations have built up their own comparative advantage over this industry since at least a decade ago. Or, it could be that if Vietnam still insists on developing its automobile industry, the country needs to consider carefully which types of automobiles it should choose to manufacture.

In terms of an import orientation policy, Vietnam should have the priorities to promote imports of advanced machinery or origin technology which are necessary to improve the production capability of Vietnamese businesses, meanwhile limit the imports of second-class technology that can cause negative impacts on the environment. In addition, the import of consumption goods, especially luxury goods from Thailand also should be restricted since it does not increase much value added to the economy as well as they contribute to expansion of inequality among people. The restriction can be implemented by encouraging consumers to consume more Vietnamese products. To do this, businesses should organize more fairs or trade promotion activities in domestic market. Yet, this is a short-term method, in the long-term period the development of domestic production sector will determine Vietnam's trade structure.

5.2.2. Export diversification policy

Export diversification plays an important role in sustainability of Vietnam's exports to Thailand market where there are variety needs of products. As suggested by previous studies, the process of diversifying Vietnam's export will last for many upcoming years before it turns to the specialization of export activity as the GDP per capita of the country achieves around US$ 25,000. Some following notions should be considered to diversify Vietnam's export to the Thai market.

It can be seen that the income level is relatively unequal between the countryside and urban area as well as between different regions in Thailand. Thus, Vietnam's export goods should be various and appropriate with specific customers. It should be

noted that many Thai consumers may not require the very high quality of products but those products need to be different in figure, design with previous ones.

Export diversification can be improved in manufactures, especially those including high number of auxiliary parts or intermediate products in production process such as machinery, electronic devices, etc. Therefore, Vietnam should promote trading in intermediate goods through liberalizing trade and removing taxes. Although Thailand and Vietnam have similar major export goods such as machinery, or electrical and electronic products but clearly in the era of globalization, it is not a wise option for a country to produce all parts of one product. Thus, again the deep studies of comparative advantage in products, components and parts between Vietnam and Thailand are necessary to have appropriate strategies for choosing products or parts of one product that Vietnam should focus on production. Again, the development of related and supporting industries will determine the diversification level in Vietnam's export products.

In addition, in order to export more products to Thailand, the market research, trade promotion and marketing activities for Vietnamese products in Thailand's market should be carried out regularly. In recent years, with the Thai government's support, these activities have been well-performed by Thai businesses. Hence, the Vietnamese government should act as an intermediary in proving domestic businesses with the information related to Thailand's market through the establishment of centers for trade promotion. The fairs and exhibitions should be organized annually to introduce and advertise Vietnamese products to Thai consumers.

5.2.3. Improving businesses' competitiveness

Competitive capability of businesses will determine the success level in the integration process of one country. However, Vietnamese businesses' competitiveness as discussed exhibits weak points in technology, capital and quality of human resources as comparing with those of Thai businesses. Therefore, improving competitiveness for Vietnamese companies has become an urgent task, especially when there is a very high level of trade liberalization in Vietnam and other ASEAN markets by the end 2015.

To improve businesses' competitiveness, first domestic businesses should invest more in research and development (R&D) activities to manufacture goods with high quality that can satisfy increasing demand of Thai consumers on such products. Technical and environment standards in domestic market should be adjusted towards international standards to meet non-tariff barriers (NTBs) of Thailand's market. Simultaneously, domestic business should focus on improving the quality of human resources through cooperation programs related to human resource development with universities and other educational institutions. On the contrary, educational programs in universities and vocational centers should be engaged with human needs in reality from businesses. In addition, the Vietnamese government should have the priorities for export businesses through granting them credit loans with low interest rate, especially SMEs and businesses operating in preferential industries such electronic industry.

On the other hand, the Vietnamese government should create a transparent business environment in order to improve businesses' competitive capability. A transparent business environment could be created by reducing administrative procedures both in terms of quantity and the time for export-import companies. It requires the great effort from the Vietnamese government to achieve its target over the indices related to business environment like establishing business, electric supply, taxes payment and so on at the same level to average ASEAN-6 in the upcoming years.

5.2.4. Strengthening economic and trade cooperation relations between Thailand and Vietnam

Thailand and Vietnam can reduce the time and cost of transportation as well as improve logistic systems by promoting the implementation of various cooperation programs in infrastructure development between the two countries or under regional cooperation frameworks such as the ACMECS, the GMS, Master Plan of ASEAN Connectivity, and East-West Economic Corridor. The successful implementation of such projects is a crucial determinant for improving trade relations between the two nations. On the other hand, the two countries can attract the participation of the private sector under the norm of PPP (public-private-partner) and allow them to

collect transport fees and maintain such projects. In addition, the assistance from outside countries should be encouraged and engaged with initiatives of the region.

Furthermore, Vietnam and Thailand should have cooperation in determining which products or product groups that each country can concentrate on production and export. For example, on the one side, Vietnam should negotiate with Thailand to import more original capital goods like machinery from this country. On the other side, Thailand can have the priorities in import of high technology products, especially electronic products from Vietnam. By doing this, Vietnam and Thailand can lower the overlaps of export goods between the two sides.

Apart from this, as stated through special preferences related land and business income taxes Vietnam should attract more Thai businesses investing in supporting industries, or in the processing industries such as animal foods, or ecologically agricultural products since Thailand has a strong comparative advantage over such products. This is feasible as with a high market potential, Thailand's FDI into Vietnam is predicted to grow remarkably in coming years.

In conclusion, along with internal economic reconstruction of Vietnam, especially transforming economic growth model towards the improvement of labour productivity, an effective economic and trade relation with Thailand is expected to significantly improve trade relations and trade structure between the two countries as well as affect positively the economic integration process of ASEAN as a whole.

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APPENDIX

Appendix 1

Thailand's exports to Vietnam by stages of production between 2004 and 2013 (unit: US$ million)

	2004	2006	2008	2009	2010	2011	2012	2013
Primary goods	**52.2**	**191.4**	**189.4**	**244.7**	**211.7**	**261**	**127.6**	**173.1**
Intermediate goods	**1214.7**	**2007.3**	**2848.8**	**2806.3**	**3404.6**	**4029.6**	**3692.4**	**4130.6**
Semi-finished goods	973.8	1589.3	2102.1	2027.1	2500	2873.1	2681.9	2917.1
Parts & components	240.9	418	746.7	779.2	904.6	1156.5	1010.5	1213.5
Final goods	**277.9**	**531.5**	**1017.6**	**1214.9**	**1533**	**1922.5**	**2059.4**	**2289.7**
Capital goods	126	220.7	402.8	377.7	476.2	712.7	586.8	815
Consumption goods	151.9	310.8	614.8	837.2	1056.8	1209.8	1472.6	1474.7

Source: ***Author's measurement based on UN COMTRADE statistics.***

Appendix 2

Thailand's imports from Vietnam by stages of production between 2004 and 2013 (unit: US$ million)

	2004	2006	2008	2009	2010	2011	2012	2013
Primary goods	**67.5**	**263.6**	**306.9**	**439.3**	**128**	**243.5**	**382,6**	**145.8**
Intermediate goods	**274**	**477.9**	**823.1**	**589**	**747.3**	**987.5**	**1233.3**	**1287.2**
Semi-finished goods	62	131.4	353.5	249.1	456.8	732.2	850.9	896.2
Parts & components	212	346.5	469.6	339.9	290.5	255.3	382.4	391
Final goods	**97**	**158.3**	**311.3**	**356.7**	**520.9**	**795.6**	**1369.7**	**1835.2**
Capital goods	37.3	74.5	143.7	175.6	286.3	438.3	867.6	1250.9
Consumption goods	59.7	83.8	167.6	181.1	234.6	357.3	502.1	584.3

Source: ***Author's measurement based on UN COMTRADE statistics.***

Appendix 3

Thailand's exports to Vietnam according to technological level (unit: US$ million)

	2004	**2008**	**2013**
Primary products	224.5	319.1	626.4
Manufactured products	1541.2	4595.5	6534.2
Resource-based manufactures	496.3	1720.1	1933.7
Agro/forest based products	127.4	550	1040.6
Mineral-based products	368.9	1170.1	893.1
Low technology manufactures	279	602.3	923.2
Textile/fashion cluster	119.8	204	360.3
Other low technology	159.2	398.3	562.9
Medium technology manufactures	663.3	2059.8	3209.2
Automotive products	91	308.4	450.7
Process	341.6	868.1	1251.2
Engineering	230.6	883.4	1507.3
High technology manufactures	102.6	213.3	468.1
Electronics and electrical products	68.5	150.7	324.9
Other	34.1	62.6	143.2
Total	1765.7	4914.6	7160.6

Source: ***Author's calculation based on UN COMTRADE statistics.***

Appendix 4

Thailand's imports from Vietnam according to technological level (unit: US$ million)

	2004	**2008**	**2013**
Primary products	90.9	347.3	357.1
Manufactured products	346.7	971.5	2907.8
Resource-based manufactures	25.4	79.2	270.4
Agro/forest based products	14.4	42.2	184.2
Mineral-based products	11	37.1	86.2
Low technology manufactures	43.8	153.2	550.5
Textile/fashion cluster	15	102.2	184.3
Other low technology	28.8	51	366.2
Medium technology manufactures	239.4	267.7	801.8
Automotive products	5.1	42.2	208.1
Process	23	125.3	239.7
Engineering	211.3	100.2	354
High technology manufactures	38.1	471.4	1285.1
Electronics and electrical products	37.9	416.7	1259.6
Other	0.7	54.7	25.3
Total	437.6	1318.8	3264.9

Source: ***Author's calculation based on UN COMTRADE statistics.***

Appendix 5

Trade between Thailand and Vietnam according to industries (2004-2013, value in millions, share in percentage)

	2004		2008		2013	
	Value	**Share**	**Value**	**Share**	**Value**	**Share**
(1) Agriculture, meat and dairy, seafood	63.3	2.74	221	3.45	577.8	5.53
(2)Food, beverages, tobacco, wood, paper	139.8	6.05	503.8	7.87	1045.4	10.00
(3) Extractive industries	528	22.84	1434.2	22.40	888.5	8.50
(4) Chemicals, plastics, rubber	440.3	19.04	1183.5	18.48	1977.4	18.92
(5) Textiles, apparel, leather, footwear	171.6	7.42	427.7	6.68	806.8	7.72
(6) Iron, steel, and other metals	189.6	8.20	577.1	9.01	831.6	7.96
(7) Machinery, electronics, transportation equipment	637.8	27.59	1897.2	29.63	4010.4	38.37
(8) Other industries	38.6	1.67	158.2	2.47	314.9	3.01
Total	2209	100	6402.7	100	10452.8	100

Source: ***Author's measurement based on UN COMTRADE statistics.***

Appendix 6

Overlaps of RCA between Thailand and Vietnam in 2004

Commodity Code	Commodity	RCA of Thailand	RCA of Vietnam	Share in Thailand's export	Share in Vietnam's export
851	FOOTWEAR	1.18	15.36	0.79%	10.29%
848	CLOTHNG,NONTXTL;HEADGEAR	2.8	2.02	0.59%	0.43%
845	OTHR.TEXTILE APPAREL,NES	1.45	3.58	1.36%	3.36%
844	WOMEN,GIRLS CLOTHNG.KNIT	1.11	6.99	0.31%	1.99%
843	MENS,BOYS CLOTHING,KNIT	3.31	8.79	0.51%	1.36%
842	WOMEN,GIRL CLOTHNG,XKNIT	1.04	5.61	0.68%	3.68%
841	MENS,BOYS CLOTHNG,X-KNIT	1.06	9.02	0.58%	4.94%
831	TRUNK,SUIT-CASES,BAG,ETC	1.00	4.34	0.24%	1.03%
821	FURNITURE,CUSHIONS,ETC.	1.25	3.74	1.25%	3.76%
785	CYCLES,MOTORCYCLES ETC.	2.00	3.17	0.66%	1.05%
773	ELECTR DISTRIBT.EQPT NES	1.16	2.44	0.70%	1.48%
771	ELECT POWER MACHNY.PARTS	1.80	1.21	0.84%	0.57%
697	HOUSEHOLD EQUIPMENT,NES	1.43	1.16	0.28%	0.22%
687	TIN	3.90	1.59	0.13%	0.05%
666	POTTERY	3.39	1.21	0.24%	0.08%
651	TEXTILE YARN	1.74	1.59	0.78%	0.71%
635	WOOD MANUFACTURES, NES	1.43	1.48	0.32%	0.33%
621	MATERIALS OF RUBBER	2.36	3.75	0.32%	0.50%
612	MANUFACT.LEATHER ETC.NES	2.34	1.40	0.08%	0.05%
592	STARCHES,INULIN,ETC.	3.57	2.32	0.50%	0.33%
273	STONE, SAND AND GRAVEL	1.37	1.20	0.08%	0.07%
246	WOOD IN CHIPS, PARTICLES	1.76	5.98	0.05%	0.17%
231	NATURAL RUBBER, ETC.	37.52	19.10	3.55%	1.82%
223	OILSEED(OTH.FIX.VEG.OIL)	3.49	3.62	0.05%	0.05%
58	FRUIT,PRESERVED,PREPARED	6.14	1.84	0.62%	0.19%
54	VEGETABLES	1.79	1.21	0.58%	0.40%
42	RICE	28.91	36.91	2.80%	3.59%
37	FISH ETC.PREPD,PRSVD.NES	16.08	5.28	2.34%	0.77%
36	CRUSTACEANS,MOLLUSCS ETC	6.48	29.57	1.34%	6.15%
35	FISH,DRIED,SALTED,SMOKED	1.32	4.67	0.05%	0.18%
34	FISH,FRESH,CHILLED,FROZN	1.33	5.91	0.44%	1.95%

Source: ***Author's calculation based on UN COMTRADE statistics.***

Appendix 7

Overlaps of RCA between Thailand and Vietnam in 2013

Commodity Code	Commodity	RCA of Thailand	RCA of Vietnam	Share in Thailand's export	Share in Vietnam's export
893	ARTICLES,NES,OF PLASTICS	1.14	1.26	1.29%	3.62%
881	PHOTOGRAPH APPAR.ETC.NES	2.97	27.80	0.16%	0.46%
848	CLOTHNG,NONTXTL;HEADGEAR	2.84	1.70	0.68%	1.90%
785	CYCLES,MOTORCYCLES ETC.	3.50	1.83	1.27%	3.57%
752	AUTOMATC.DATA PROC.EQUIP	2.67	1.36	6.95%	19.50%
751	OFFICE MACHINES	2.48	6.24	0.93%	2.60%
724	TEXTILE,LEATHER MACHINES	1.16	1.26	0.26%	0.74%
716	ROTATING ELECTRIC PLANT	1.05	1.46	0.74%	2.07%
693	WIRE PRODUCTS EXCL.ELECT	1.27	2.17	0.15%	0.41%
661	LIME,CEMENT,CONSTR.MATRL	1.70	4.23	0.39%	1.11%
651	TEXTILE YARN	1.34	4.95	0.56%	1.58%
634	VENEERS, PLYWOOD, ETC.	1.55	1.14	0.41%	1.16%
629	ARTICLES OF RUBBER, NES	2.38	1.23	0.58%	1.61%
611	LEATHER	1.65	1.46	0.31%	0.88%
592	STARCHES,INULIN,ETC.	5.39	3.93	1.10%	3.07%
579	PLASTIC WASTE, SCRAP ETC	3.00	2.57	0.15%	0.42%
273	STONE, SAND AND GRAVEL	1.64	1.18	0.12%	0.34%
266	SYNTHETIC FIBRES	5.22	1.74	0.33%	0.92%
265	VEGETABLE TEXTILE FIBRES	1.08	3.63	0.01%	0.02%
246	WOOD IN CHIPS, PARTICLES	3.50	21.81	0.18%	0.51%
231	NATURAL RUBBER, ETC.	24.90	12.78	4.68%	13.13%
62	SUGAR CONFECTIONERY	2.71	1.16	0.24%	0.67%
61	SUGARS,MOLASSES,HONEY	5.78	1.19	1.70%	4.78%
58	FRUIT,PRESERVED,PREPARED	3.59	1.20	0.55%	1.54%
54	VEGETABLES	1.97	1.16	0.90%	2.53%
42	RICE	13.44	15.81	2.51%	7.05%
37	FISH ETC.PREPD,PRSVD.NES	13.34	7.91	2.73%	7.67%
36	CRUSTACEANS,MOLLUSCS ETC	3.34	10.02	0.83%	2.32%
35	FISH,DRIED,SALTED,SMOKED	2.11	1.82	0.09%	0.24%

Source: ***Author's calculation based on UN COMTRADE statistics.***

Appendix 8

Sector classifications according to factor intensity (SITC- 3 digit)

Primary
001 011 012 014 022 023 024 025 034 035 036 037 041 042 043 044 045 046 047 048 054 056 057 058 061 062 071 072 073 074 075 081 091 098 111 112 121 122 211 212 222 223 232 233 244 245 246 247 248 251 261 263 264 265 266 267 268 269 271 273 274 277 278 281 282 286 287 288 289 291 292 322 323 333 334 335 341 351 411 423 424 431 941
Natural-resource intensive
524 611 612 613 633 634 635 661 662 663 667 671 681 682 683 684 685 686 687 688 689
Unskilled-labour-intensive
651 652 653 654 655 656 657 658 659 664 665 666 793 812 821 831 842 843 844 845 846 847 848 851 894 895
Technology intensive
511 512 513 514 515 516 522 523 541 562 572 582 583 584 585 591 592 598 711 712 713 714 716 718 721 722 723 724 725 726 727 728 736 737 741 742 743 744 745 749 751 752 759 764 771 772 773 774 775 776 778 792 871 872 873 874 881 882 883 884 893 951
Human-capital intensive
531 532 533 551 553 554 621 625 628 641 642 672 673 674 675 676 677 678 679 691 692 693 694 695 696 697 699 761 762 763 781 782 783 784 785 786 791 885 892 896 897 898 899
Not classified
911 931 961 971 999

Source: ***HINLOOPEN, J., and C. VAN MARREWIJK (2008)***

Appendix 9

Technological classification of exports (SITC 3-digit, revision 2)

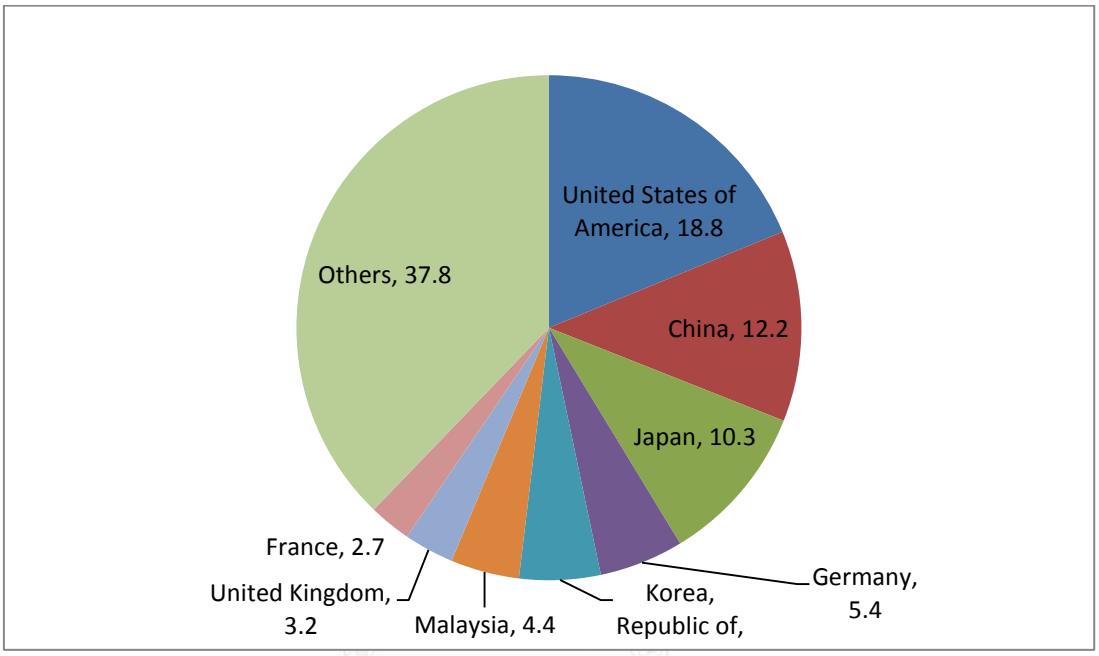
PRIMARY PRODUCTS (PP)	RESOURCE-BASED MANUFACTURES	
001 LIVE ANIMALS FOR FOOD	**RB 1: AGRO-BASED**	**RB2: Mineral-based**
011 MEAT FRESH,CHILLD,FROZEN	012 MEAT	281 IRON ORE,CONCENTRATES
022 MILK AND CREAM	DRIED,SALTED,SMOKED	282 IRON AND STEEL SCRAP
025 EGGS,BIRDS,FRESH,PRSRVD	014 MEAT PREPD,PRSVD,NES ETC	286 URANIUM,THORIUM ORE,CONC
034 FISH,FRESH,CHILLED,FROZN	023 BUTTER	287 BASE METAL ORES,CONC NES
036 SHELL FISH FRESH,FROZEN	024 CHEESE AND CURD	288 NONFERR METAL SCRAP NES
041 WHEAT ETC UNMILLED	035 FISH	289 PREC MTAL ORES,WASTE NES
042 RICE	SALTED,DRIED,SMOKED	323 BRIQUETS,COKE,SEMI-COKE
043 BARLEY UNMILLED	037 FISH ETC PREPD,PRSVD NES	334 PETROLEUM PRODUCTS,REFIN
044 MAIZE UNMILLED	046 WHEAT ETC MEAL OR	335 RESIDUAL PETRLM PROD NES
045 CEREALS NES UNMILLED	FLOUR	411 ANIMAL OILS AND FATS
054 VEG ETC FRSH,SMPLY PRSVD	047 OTHER CEREAL	511 HYDROCARBONS NES,DERIVS
057 FRUIT,NUTS,FRESH,DRIED	MEALS,FLOUR	514 NITROGEN-FNCTN COMPOUNDS
071 COFFEE AND SUBSTITUTES	048 CEREAL ETC PREPARATIONS	515 ORG-INORG COMPOUNDS ETC
072 COCOA	056 VEGTBLES ETC	516 OTHER ORGANIC CHEMICALS
074 TEA AND MATE	PRSVD,PREPD	522 INORG ELEMNTS,OXIDES,ETC
075 SPICES	058 FRUIT	523 OTHR INORG CHEMICALS ETC
081 FEEDING STUFF FOR ANIMLS	PRESERVED,PREPARED	531 SYNT DYE,NAT INDGO,LAKES
091 MARGARINE AND SHORTENING	061 SUGAR AND HONEY	532 DYES NES,TANNING PROD
121 TOBACCO UNMNFCTRD,REFUSE	062 SUGAR CANDY NON-	551 ESSENTL OILS,PERFUME,ETC
211 HIDES,SKINS,EXC FURS,RAW	CHOCLATE	592 STARCH,INULIN,GLUTEN,ETC
212 FURSKINS,RAW	073 CHOCOLATE AND PRODUCTS	661 LIME,CEMENT,BLDG PRODS
222 SEEDS FOR'SOFT'FIXED OIL	098 EDIBLE PRODCTS,PREPS NES	662 CLAY,REFRACTORY BLDG PRD
223 SEEDS FOR OTH FIXED OILS	111 NON-ALCOHL BEVERAGES	663 MINERAL MANUFCTURES NES
232 NATURAL RUBBER,GUMS	NES	664 GLASS
244 CORK,NATURAL,RAW,WASTE	112 ALCOHOLIC BEVERAGES	667 PEARL,PREC-,SEMI-P STONE
245 FUEL WOOD NES, CHARCOAL	122 TOBACCO,MANUFACTURED	688 URANIUM,THORIUM,ALLOYS
246 PULPWOOD,CHIPS,WOODWASTE	233	689 NON-FER BASE METALS NES
261 SILK	RUBBER,SYNTHTIC,RECLAIMD	
263 COTTON	247 OTH WOOD	
268 WOOL(EXC TOPS),ANML HAIR	ROUGH,SQUARED	
271 FERTILIZERS,CRUDE	248 WOOD SHAPED,SLEEPERS	
273 STONE,SAND AND GRAVEL	251 PULP AND WASTE PAPER	
274 SULPHUR,UNRSTD IRN PYRTE	264 JUTE,OTH TEX BAST FIBRES	
277 NATURAL ABRASIVES NES	265 VEG FIBRE,EXCL COTN,JUTE	
278 OTHER CRUDE MINERALS	269 WASTE OF TEXTILE FABRICS	
291 CRUDE ANIMAL MTRIALS NES	423 FIXED VEG OILS, SOFT	
292 CRUDE VEG MATERIALS NES	424 FIXED VEG OIL NONSOFT	
322 COAL,LIGNITE AND PEAT	431 PROCESD ANML VEG	
333 CRUDE PETROLEUM	OIL,ETC	
341 GAS,NATURAL AND MANUFCTD	621 MATERIALS OF RUBBER	
681 SILVER, PLATINUM,ETC	625 RUBBER TYRES, TUBES ETC	
682 COPPER EXC CEMENT COPPER	628 RUBBER ARTICLES NES	
683 NICKEL	633 CORK MANUFACTURES	
684 ALUMINIUM	634 VENEERS, PLYWOOD,ETC	
685 LEAD	635 WOOD MANUFACTURES NES	
686 ZINC	641 PAPER AND PAPERBOARD	
687 TIN		

LOW TECHNOLOGY MANUFACTURES	MEDUIM TECHNOLOGY MANUFACTURES	
LT1: TEXTILE, GARMENT AND FOOTWEAR	**MT 1: AUTOMOTIVE**	**MT 3: ENGINEERING**
611 LEATHER	781 PASS MOTOR VEH EXC BUSES	711 STEAM BOILERS & AUX PLNT
612 LEATHER ETC MANUFACTURES	782 LORRIES,SPCL MTR VEH NES	713 INTRNL COMBUS PSTN ENGIN
613 FUR SKINS TANNED,DRESSED	783 ROAD MOTOR VEHICLES NES	714 ENGINES AND MOTORS NES
651 TEXTILE YARN	784 MOTOR VEH PRTS,ACCES NES	721 AGRIC MACHY,EXC TRACTORS
652 COTTON FABRICS,WOVEN	785 CYCLES,ETC MOTRZD OR NOT	722 TRACTORS NON-ROAD
654 OTH WOVEN TEXTILE FABRIC	**MT 2: PROCESS**	723 CIVIL ENGNEERG EQUIP ETC
655 KNITTED,ETC FABRICS	266 SYNTHETIC FIBRES TO SPIN	724 TEXTILE,LEATHER MACHNRY
656 LACE,RIBBONS,TULLE,ETC	267 OTHER MAN-MADE FIBRES	725 PAPER ETC MILL MACHINERY
657 SPECIAL TXTL FABRC,PRODS	512 ALCOHOLS,PHENOLS ETC	726 PRINTG,BKBINDG MACHY,PTS
658 TEXTILE ARTICLES NES	513 CARBOXYLIC ACIDS ETC	727 FOOD MACHRY NON-DOMESTIC
659 FLOOR COVERINGS,ETC	533 PIGMENTS,PAINTS,ETC	728 OTH MACHY FOR SPCL INDUS
831 TRAVEL GOODS,HANDBAGS	553 PERFUMERY,COSMETICS,ETC	736 METALWORKING MACH-TOOLS
842 MENS OUTERWEAR NOT KNIT	554 SOAP,CLEANSING ETC PREPS	737 METALWORKING MACHNRY NES
843 WOMENS OUTERWEAR NONKNIT	562 FERTILIZERS,MANUFACTURED	741 HEATING,COOLING EQUIPMNT
844 UNDER GARMENTS NOT KNIT	572 EXPLOSIVES, PYROTECH PROD	742 PUMPS FOR LIQUIDS ETC
845 OUTERWEAR KNIT NONELASTC	582 PROD OF CONDENSATION ETC	743 PUMPS NES,CENTRFUGES ETC
846 UNDER GARMENTS KNITTED	583 POLYMERIZATION ETC PRODS	744 MECHANICAL HANDLING EQU
847 TEXTILE CLTHNG ACCES NES	584 CELLULOSE DERIVATIVS ETC	745 NONELEC MACHY,TOOLS NES
848 HEADGEAR,NONTXTL CLOTHNG	585 PLASTIC MATERIAL NES	749 NONELEC MACH PTS,ACC NES
851 FOOTWEAR	591 PESTICIDES,DISINFECTANTS	762 RADIO BROADCAST RECEIVRS
LT2: OTHER PRODUCTS	598 MISCEL CHEM PRODUCTS NES	763 SOUND RECORDRS,PHONOGRPH
642 PAPER,ETC,PRECUT,ARTS OF	653 WOVN MAN-MADE FIB FABRIC	772 SWITCHGEAR ETC,PARTS NES
665 GLASSWARE	671 PIG IRON ETC.	773 ELECTR DISTRIBUTNG EQUIP
666 POTTERY	672 IRON,STEEL PRIMARY FORMS	775 HOUSEHOLD TYPE EQUIP NES
673 IRON,STEEL SHAPES ETC	678 IRON,STL TUBES,PIPES,ETC	793 SHIPS AND BOATS ETC
674 IRN,STL UNIV,PLATE,SHEET	786 TRAILERS,NONMOTR VEH,NES	812 PLUMBG,HEATNG,LGHTNG EQU
675 IRON,STEEL HOOP,STRIP	791 RAILWAY VEHICLES	872 MEDICAL INSTRUMENTS NES
676 RAILWY RAILS ETC IRN,STL	882 PHOTO,CINEMA SUPPLIES	873 METERS AND COUNTERS NES
677 IRN,STL WIRE(EXCL W ROD)		884 OPTICAL GOODS NES
679 IRN,STL CASTINGS UNWORKD		885 WATCHES AND CLOCKS
691 STRUCTURES AND PARTS NES		951 WAR FIREARMS,AMMUNITION
692 METAL TANKS,BOXES,ETC		
693 WIRE PRODUCTS NON ELECTR		
694 STL,COPPR NAILS,NUTS,ETC		
695 TOOLS		
696 CUTLERY		
697 BASE MTL HOUSEHOLD EQUIP		
699 BASE METAL MFRS NES		
821 FURNITURE,PARTS THEREOF		
893 ARTICLES OF PLASTIC NES		
894 TOYS,SPORTING GOODS,ETC		
895 OFFICE SUPPLIES NES		
897 GOLD,SILVER WARE,JEWELRY		
898 MUSICAL INSTRUMENTS,PTS		
899 OTHER MANUFACTURED GOODS		

HIGH TECHNOLOGY MANUFACTURES	
HT 1: ELECTRONIC AND ELECTRICAL	**HT 2: OTHER**
716 ROTATING ELECTRIC PLANT	524 RADIOACTIVE ETC MATERIAL
718 OTH POWER GENERATG MACHY	541 MEDICINAL,PHARM PRODUCTS
751 OFFICE MACHINES	712 STEAM ENGINES,TURBINES
752 AUTOMTIC DATA PROC EQUIP	792 AIRCRAFT ETC
759 OFFICE,ADP MCH PTS,ACCES	871 OPTICAL INSTRUMENTS
761 TELEVISION RECEIVERS	874 MEASURNG,CONTROLNG INSTR
764 TELECOM EQPT,PTS,ACC NES	881 PHOTO APPARAT,EQUIPT NES
771 ELECTRIC POWER MACHY NES	
774 ELECTRO-MEDCL,XRAY EQUIP	
776 TRANSISTORS, VALVES, ETC.	
778 ELECTRICAL MACHINERY NES	

Appendix 10

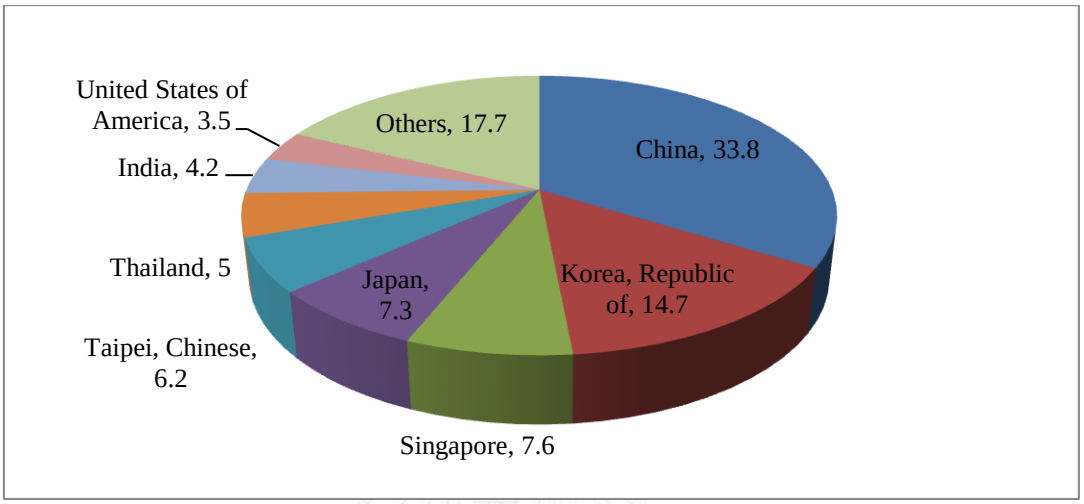
Major importing markets for the products exported by Vietnam in 2013



Source*: **Author's computation based on UN COMTRADE Database.***

Appendix 11

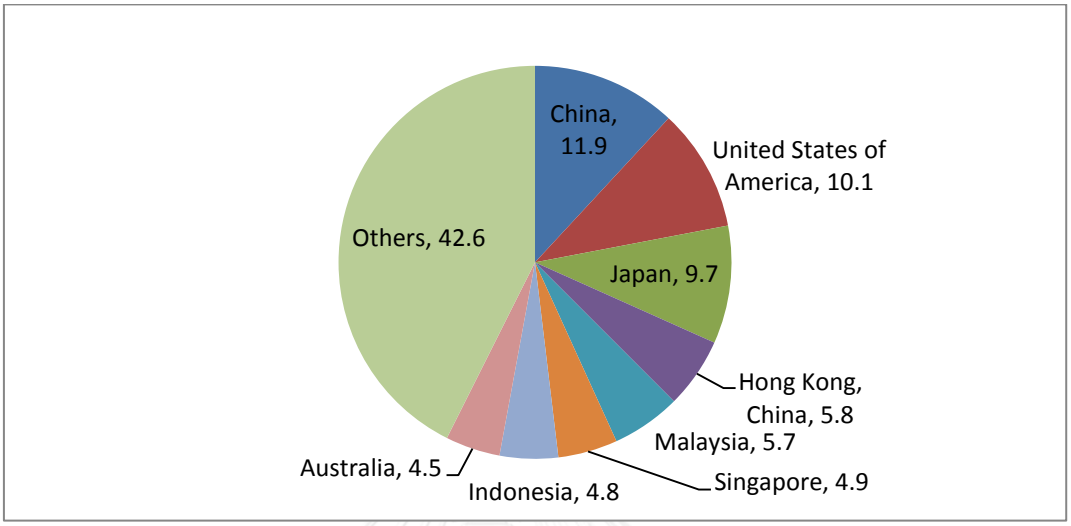
Major supplying markets for the products imported by Vietnam in 2013



Source: ***Author's computation based on UN COMTRADE Database.***

Appendix 12

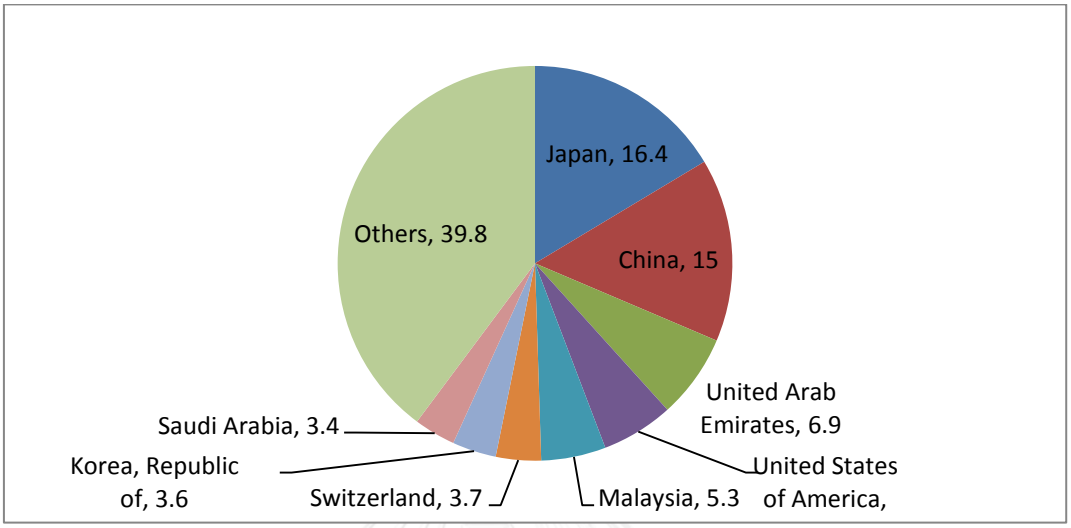
Major importing markets for the products exported by Thailand in 2013



Source: ***Author's computation based on UN COMTRADE Database.***

Appendix 13

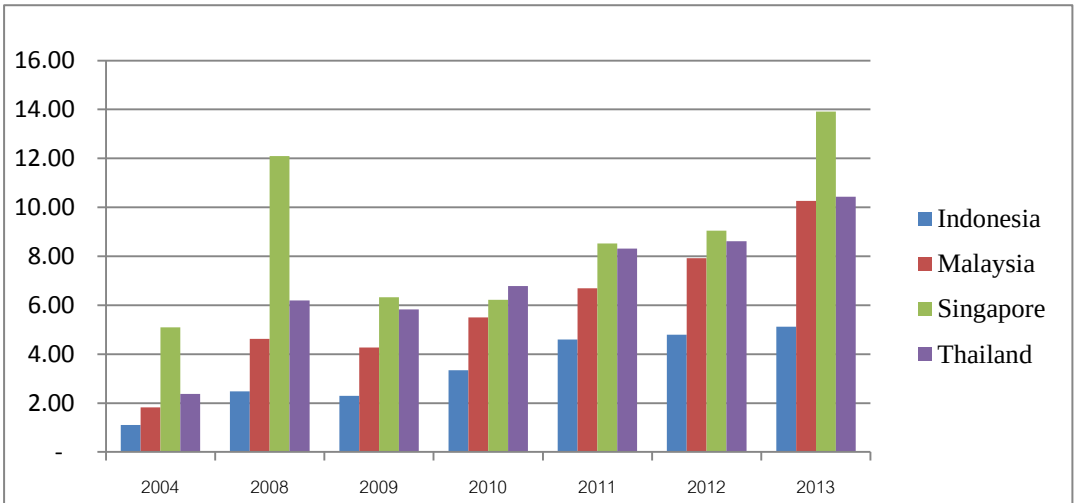
Major supplying markets for the products imported by Thailand in 2013



Source: ***Author's computation based on UN COMTRADE Database.***

Appendix 14

Trade exchange between Vietnam with some selected ASEAN countries (2004-2013), unit: US$ billion



Source: ***Author's calculation based on UN COMTRADE statistics***

VITA

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