



**UNIVERSITAS INDONESIA**

**ANALYSIS OF THE INDONESIAN COMPETITIVENESS ON PEPPER  
PRODUCTS IN THE WORLD**

**THESIS**

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**FACULTY OF ECONOMICS  
MASTER OF PLANNING AND PUBLIC POLICY  
JAKARTA  
JANUARY 2010**



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**THESIS**

**A Thesis submitted in partial fulfillment of the requirements for the degree of Master of  
Economics in Planning and Public Policy  
University of Indonesia**

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**FACULTY OF ECONOMICS  
MASTER OF PLANNING AND PUBLIC POLICY  
ECONOMIC GLOBALIZATION  
JAKARTA  
JANUARY 2010**

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Jakarta, January 2010

Abi Antono

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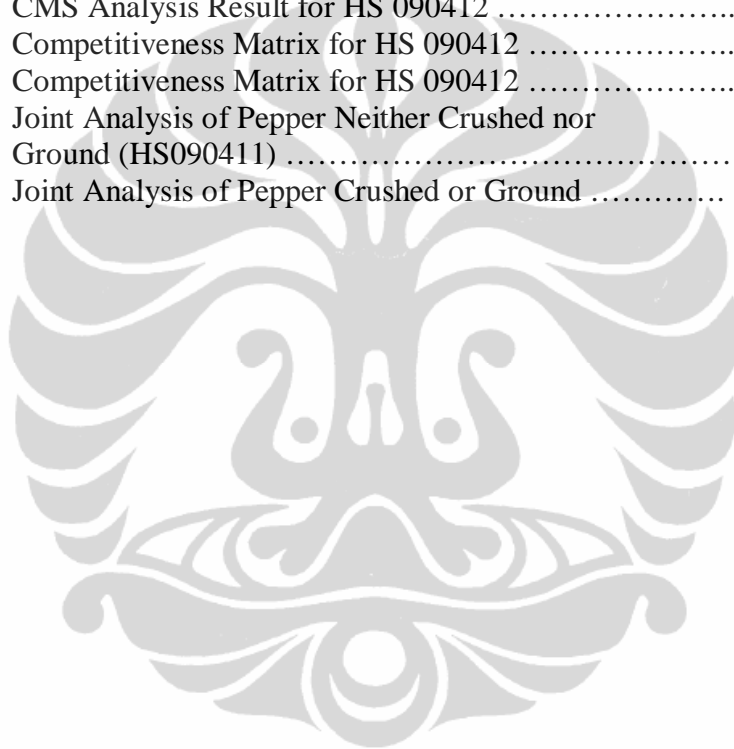
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## ABSTRACT

Name : Abi Antono  
Study Program : Master of Planning and Public Policy  
Title : Analysis of the Indonesian Competitiveness on Pepper Products in the World

Pepper (*Pepper nigrum Linn*) is one of the spice products that has a significant role on the economy such as national foreign exchange earnings, providing job opportunity, raw material of internal country industry and direct consumption in the country. Pepper comes from West India and is called by “King of Spices”.

To examine the competitiveness of Indonesian pepper product in the world market, uses two methods; constant market share analysis (CMS) and competitiveness matrix. CMS Analysis is to measure Indonesia and its main competitors, while Competitiveness Matrix is to examine Indonesian pepper product competitiveness in Indonesia’s destination exporting countries.

CMS analysis shows that Indonesian pepper HS 090411 is not competitive in the global market. Indonesia has negative competitiveness effect (-0.22). Indonesian main competitor for pepper neither crushed nor ground are Vietnam, Brazil, European Union, Germany and China. For pepper crushed or ground CMS analysis shows that Indonesia has positive competitiveness (0.75). India, Vietnam, China, Malaysia, USA, and Singapore are Indonesia’s competitors for pepper crushed or ground.

Competitiveness matrix result shows that the appropriate markets for Indonesia’s pepper neither crushed nor ground are Canada, Germany, Malaysia, and South Africa, which have a positive growth and graded as rising stars. Meanwhile, for Indonesia’s pepper crushed or ground, the appropriate markets are Japan and Korea that have a good remark in all variables of competitiveness.

Keywords:

Indonesian pepper products, competitiveness, constant market share, matrix competitiveness.

## ABSTRAK

Nama : Abi Antono  
Program Studi : Magister Perencanaan dan Kebijakan Publik  
Judul : Analisis Daya Saing Produk Lada Indonesia di Dunia

Lada (*Pepper ningrum linn*) merupakan produk rempah-rempah yang memiliki peran penting dalam perekonomian antara lain sebagai sumber devisa, memberikan lapangan pekerjaan, bahan mentah industri dan konsumsi di dalam negeri. Lada berasal dari India Barat dan dikenal sebagai Rajanya rempah-rempah.

Untuk menganalisa daya saing produk lada Indonesia di pasar dunia, maka dalam penulisan thesis ini di gunakan dua metode, yaitu Constant Market Share Analysis (CMSA) dan Competitiveness Matrix. CMSA digunakan untuk menganalisa produk lada Indonesia dan negara-negara pesaingnya, sedangkan Competitiveness Matrix digunakan untuk melihat daya saing produk lada Indonesia di negara-negara tujuan ekspornya.

Analisa CMS menunjukkan bahwa lada Indonesia untuk HS 090411 tidak kompetitif di pasar dunia. Indonesia memiliki efek daya saing negative yaitu -0,22. Negara pesaing utama Indonesia untuk lada utuh atau yang tidak di tumbuk adalah Vietnam, Brazil, European Union, Jerman dan China. Untuk lada bubuk atau produk lada HS 090412, analisa CMS menunjukkan bahwasannya Indonesia memiliki efek daya saing positif yaitu 0,75. India, Vietnam, China, Malaysia, USA, dan Singapura merupakan negara-negara pesaing Indonesia untuk produk ini.

Competitiveness Matrix menunjukkan bahwa pasar yang sesuai untuk lada utuh Indonesia adalah Kanada, Jerman, Malaysia dan Afrika Selatan. Negara-negara tersebut memiliki pertumbuhan yang positif dan diklasifikasikan sebagai rising stars. Sedangkan pasar yang sesuai untuk lada bubuk adalah Jepang dan Korea yang memiliki nilai baik untuk setiap variable daya saing.

Kata Kunci:

Produk lada Indonesia, daya saing, constant market share, matrix competitiveness.

## CHAPTER I INTRODUCTION

### 1.1. Background

The economy of one country can be seen through its Gross Domestic Product (GDP). GDP is classified into nine main sectors. Moreover, one of GDP sectors that has significant role for Indonesia's economy is agriculture, forestry and fishery sector. The percentage of this sector during period 2004-2008 is around 13-14% from total GDP. The table below describes each GDP's sector.

Table 1.1. Gross Domestic Product (GDP) by Industrial Origin  
(Billion Rupiah)

| <b>Industrial Origin</b>                    | <b>2004</b>          | <b>2005</b>          | <b>2006</b>          | <b>2007</b>            | <b>2008</b>            |
|---|----------------------|----------------------|----------------------|------------------------|------------------------|
| Agriculture, Forestry and Fishery           | 329,124.6<br>(14.3%) | 364,169.3<br>(13.1%) | 433,223.4<br>(13.0%) | 541,592.6<br>(13.7%)   | 713,291.4<br>(14.4%)   |
| Mining and Quarrying                        | 205,252<br>(8.9%)    | 309,014.1<br>(11.1%) | 366,520.8<br>(11.0%) | 441,006.6<br>(11.2%)   | 543,363.8<br>(10.9%)   |
| Manufacturing Industry                      | 644,342.6<br>(28.1%) | 760,361.3<br>(27.4%) | 919,539.3<br>(27.5%) | 1,068,653.9<br>(27.1%) | 1,380,731.5<br>(27.8%) |
| Electricity, Gas and Water Supply           | 23,730.3<br>(1.0%)   | 26,693.8<br>(1.0%)   | 30,354.8<br>(0.9%)   | 34,724.6<br>(0.9%)     | 40,846.7<br>(0.8%)     |
| Construction                                | 151,247.6<br>(6.6%)  | 195,110.6<br>(7.0%)  | 251,132.3<br>(7.5%)  | 305,215.6<br>(7.7%)    | 419,321.6<br>(8.5%)    |
| Trade, Hotel, and Restaurant                | 368,555.9<br>(16.1%) | 431,620.2<br>(15.6%) | 501,542.4<br>(15.0%) | 589,351.8<br>(14.9%)   | 692,118.8<br>(14.0%)   |
| Transport and Communication                 | 142,292<br>(6.2%)    | 180,584.9<br>(6.5%)  | 231,523.5<br>(6.9%)  | 264,264.2<br>(6.7%)    | 312,454.1<br>(6.3%)    |
| Financial, Ownership, and Business Services | 194,410.9<br>(8.5%)  | 230,522.7<br>(8.3%)  | 269,121.4<br>(8.1%)  | 305,213.5<br>(7.7%)    | 368,129.7<br>(7.4%)    |
| Services                                    | 236,870.3<br>(10.3%) | 276,204.2<br>(10.0%) | 336,258.9<br>(10.1%) | 399,298.6<br>(10.1%)   | 483,771.3<br>(9.8%)    |
| <b>GDP</b>                                  | <b>2,295,826.2</b>   | <b>2,774,281.1</b>   | <b>3,339,216.8</b>   | <b>3,949,321.4</b>     | <b>4,954,028.9</b>     |
| GDP without oil & gas                       | 2,083,077.9          | 2,458,234.3          | 2,967,040.3          | 3,532,807.7            | 4,426,384.7            |

Source: Central Bureau of Statistics, processed, 2009

One of agricultural sector is spices. Moreover, Ministry of Trade made the road map for developing export of 10 main commodities, 10 potential commodities and 3 services. Spice is one of Indonesian potential commodities that put in the road map.

Indonesia's trade value of this product tends to increase generally. During period 2003-2007, Indonesia's export is bigger than its import. In 2003, Indonesia exported as much as USD 123,067,053 million and increase became USD 131,472,097 million. The table below illustrates the trade more detail.

Table 1.2. Indonesia Trade Value of Spices Products (2003-2007)  
(USD 000)

| TRADE          | YEAR        |             |             |             |             | TOTAL       |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                | 2003        | 2004        | 2005        | 2006        | 2007        |             |
| <b>IMPORT</b>  | 14,929,017  | 24,104,972  | 159,977.41  | 261,197.53  | 279,027.94  | 264,541,886 |
| <b>EXPORT</b>  | 123,067,053 | 118,859,903 | 110,304,487 | 119,837,753 | 131,472,097 | 603,541,293 |
| <b>BALANCE</b> | 108,138,036 | 94,754,931  | 94,306,746  | 93,718,000  | 103,569,303 | 338,999,407 |

Source : WITS

Today, there are more than one thousand kinds of spices in the world. Each product has its own problem. Pepper (*Pepper nigrum Linn*) is one of the spice products that has a significant role in the economy such as national foreign exchange earnings, providing job opportunity, raw material of internal country industry and direct consumption in the country. Pepper comes from West India and in the world trade is called by "king of spices".

Indonesian farm area of pepper in 2007 was 189,054 ha with the production as 74,131 tons, and absorbed 332,739 head family. The main provinces that produce pepper in Indonesia are Lampung, Bangka Belitung, West Kalimantan, East Kalimantan and South Sulawesi. Although Indonesia become a producer of world's pepper, the productivity of its pepper is still low, only around 500 kg per ha per year. While, the ideal productivity is around 1-1.2 ton per ha per year. In Indonesia, pepper is mostly cultivated by smallholders, conducted traditionally in small scale and characterized by limited access to capital. In

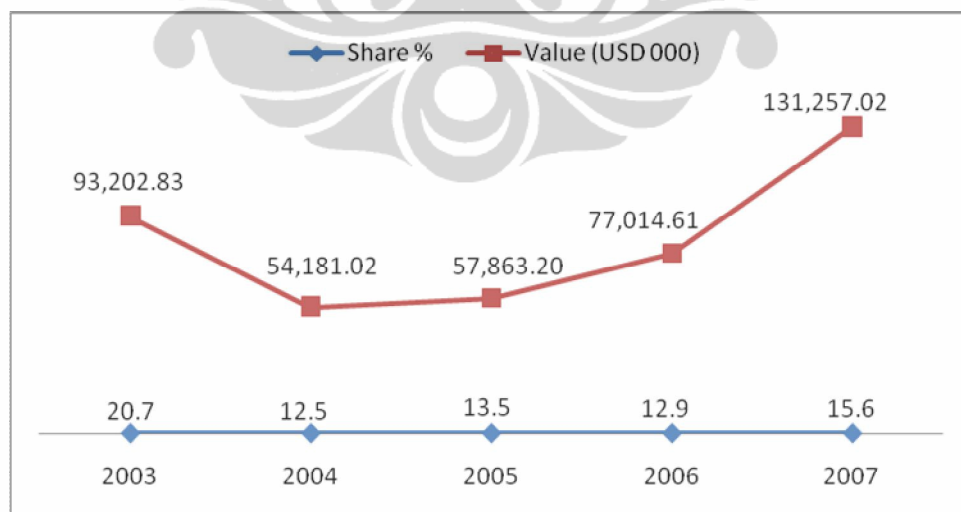


general, pepper is one of crop that can be cultivated in some of the area in Indonesia.

In 2007, pepper contributed as much as US\$ 132,495 million for Indonesian reserve with the volume of export was 38,447 tons. Therefore, Indonesia was the third producer of pepper in 2007 after Vietnam and India. In addition, it became the second exporter of pepper after Vietnam. Moreover, according to International Pepper Community (IPC), in the world market, Indonesian white pepper has been contributing dominantly. It's 80% from the whole global export volume of white pepper.

In general, pepper is divided into four kinds. They are green pepper, white pepper, black pepper and oleoresin. Then, each kind produces as dust and whole, except the green pepper. Currently, the use of pepper has been developed to other products. Black pepper, white pepper, and green pepper in brine are used in cheese products. Black and white pepper are also used in other products such as chips, sweets etc.

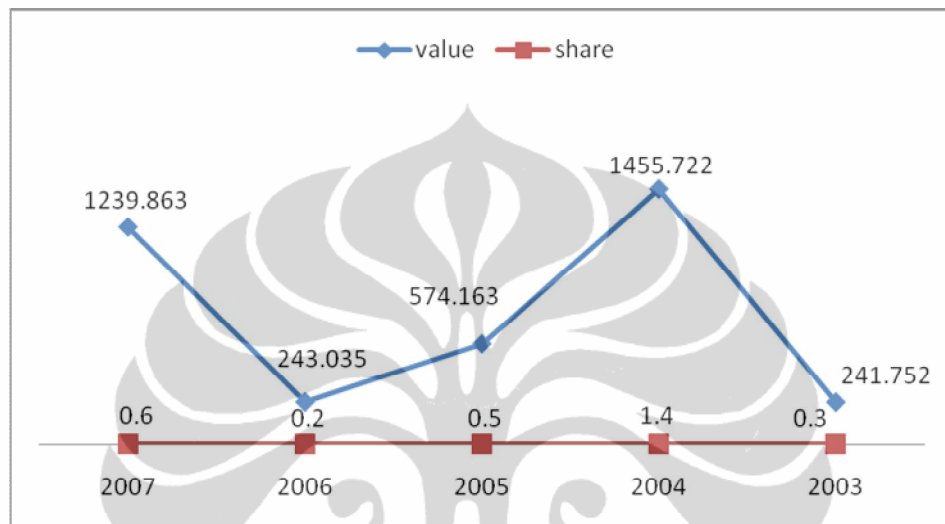
There are two kinds of pepper products in six digit of Harmonized System (HS) code, namely HS 090411; neither crushed nor ground and HS 090412; crushed or ground. Indonesian share for each product is extremely different.



Source: WITS, Processed

Figure 1.1 Indonesian Export Share of Pepper Neither Crushed nor Ground (2003-2007)

Indonesian export share for pepper neither crushed nor ground tends to decrease as it is shown in the figure above. In 2003, Indonesian share for this product as much as 20.7% as equal with USD 93,202.83 million but in 2007, the share decreased to 15.6% or equal with USD 131,257.02 million. Although in term of value it seems to increase but in term of share it appears to decrease.



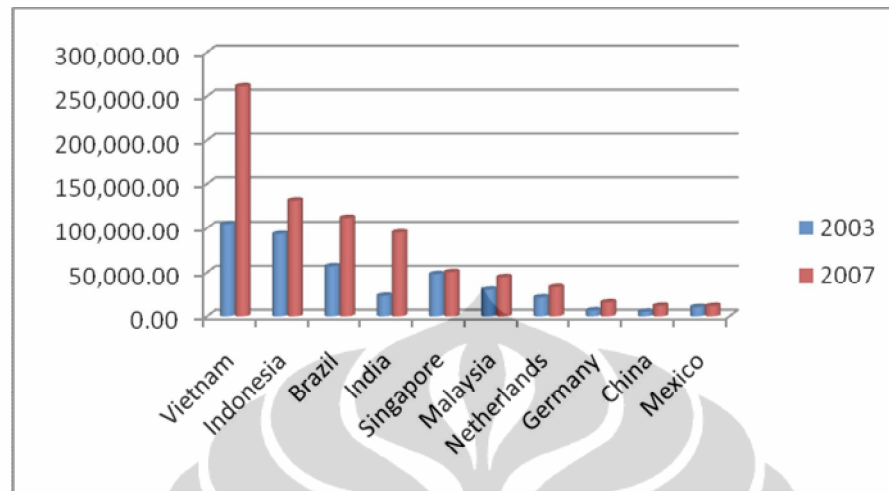
Source: WITS, Processed

Figure 1.2. Indonesian Export Share of Pepper Crushed or Ground (2003-2007)

For pepper HS 090412, crushed or ground, Indonesian export share was fluctuate. In 2003, Indonesian export share was 0.3% and increased in 2004 and 2005 as much as 1.4% and 0.5%. But in 2006 it was declining slightly to 0.2% and in 2007 the share increased to 0.6%.

Meanwhile, the export share of some main exporting countries for pepper HS 090411 during period 2003-2007 appear to increase. Vietnam raised up from 23.2% in 2003 to 31%. India drastically increased from 5.1% in 2003 to 11.3% in 2007, Germany increased from 1.4% in 2003 to 1.9% in 2007. China increased from 1.1% in 2003 to 1.4% in 2007. Brazil increased from 12.6% in 2003 to 13.2% in 2007. Singapore decreased from 10.6% in 2003 to 5.9% in 2007, Malaysia turned 6.6% in 2003 to 5.3% in 2007, Netherlands decreased from 4.6% in 2003 to 3.9% in 2007, Mexico turned from 2.3% in 2003 to 1.4% in 2007.

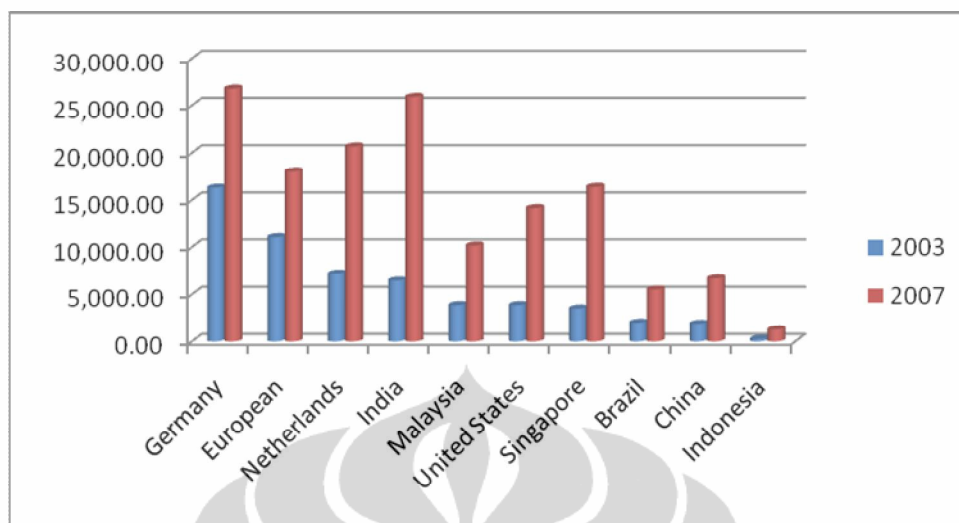
Indonesian share of export for HS 090411 in 2003 was USD 93,202.83 or about 20.7% but in 2007 decreased to 15.5%.



Source: WITS, Processed

Figure 1.3. Main Exporter Countries of Pepper Neither Crushed nor Ground

In 2003, Indonesian value export USD 241,752 or equal 0.3% from world's share. In 2007, the value increased to USD 1,239,863 or equal as 0.62%. However, in the same period, the share of other exporting countries appears different. Germany decreased from 13.37% to 18.87%, India increased from 7.48% to 12.93%, Netherlands increased from 8.34% to 10.31%, European Union decreased from 12.76% to 9%, Singapore increased from 4.03% to 8.18%, USA increased from 4.44% to 7.06%, Malaysia increased from 4.45% to 5.07%, China increased from 2.14% to 3.34%, and Brazil increased from 2.27% to 2.27%.



Source: WITS, Processed

Table 1.4. Main Exporter Countries of Pepper Crushed or Ground

The prospect of pepper is good because of the increasing demand in the global market and also in domestic consumptions. The demand of pepper increases because of the increasing number of world's population, food industries and restaurants. The price is the reason why pepper is potentially to trade.

The expansion of pepper cultivation and production began more intensive after 1960s. The good price of pepper in the global market is the reason for the countries to boost their production. On the other hand, many Asian countries interested in this product and developed it intensively, then became the main exporter such as Vietnam.

In order to establish cooperation in the field of production, marketing, processing and research, the countries of the world leading producer of pepper such as India, Indonesia, Malaysia, Brazil, Thailand and Sri Lanka have agreed to form an organization. The organization then known as International Pepper Community (IPC).

In 1971, IPC was formed under the protection of the United Nations - Economic and Social Commissions for Asia and the Pacific (UN-ESCAP). In general, there are 11 pepper producer countries in the world. Pepper producer is divided in to 2 groups, IPC and non IPC member. IPC member are Brazil, India,

Indonesia, Malaysia, Sri Lanka, and Vietnam, meanwhile non member countries are China, Thailand, Madagascar, Cambodia, and Ecuador.

Competitiveness of commodity has significant role. Some countries efforts to help their farmers are through training and guidance including establishment of appropriate institutional business that can improve their product competitiveness in the global market such as India through the Spice Board and Malaysia through Malaysian Pepper Board.

Based on explanation above, Indonesia as one of pepper exporting countries faces a tight competitive in the global market. Therefore, this pepper is necessary to analyze Indonesia's competitiveness of this product in the destination countries and to see the competitiveness of its main competitor.

### **1.2. Problem Questions**

The problem questions in this research are:

- a. Do Indonesian pepper products have competitiveness in the global market?
- b. Do Indonesian pepper products have competitiveness in its main exporting destination countries?

### **1.3. Research Objective**

The objectives of this research are:

1. To measure the competitiveness of Indonesian pepper products export in the world market and main export destination country
2. To analyze the competitiveness of Indonesia's main competitors of pepper in the world.

### **1.4. Research Coverage**

To analyze the competitiveness of Indonesian pepper, the scope of this research focuses on some important issues, as follow:

1. To analyze the competitiveness of Indonesian pepper uses the data from 2003 – 2007. The research will analyze the pepper using HS 6 digit namely:
  - § Pepper product (HS 090411) : neither crushed nor ground
  - § Pepper product (HS 090412): crushed or ground.

2. The data that used in this research are taken from: WITS (World Integrated Trade Solution), Bureau of Statistics (BPS), Ministry of Trade, and many other data sources including electronic sources.
  3. Many methods have been developed to measure export product competitiveness of one country relatively to the competitor countries. The method uses are constant market share analysis and competitiveness matrix to examine Indonesian pepper product.
  4. Ten main Indonesia's competitors for pepper HS 090411 to be analyzed through CMS analysis are: Singapore, Netherlands, Vietnam, Brazil, EU, India, Malaysia, China, Germany and Mexico. Meanwhile, for pepper HS 090412, there are eleven competitors: India, Vietnam, China, Malaysia, Singapore, USA, Germany, Brazil, European Union, and Netherlands.
- The main Indonesia's export destination countries that to be analyzed through matrix competitiveness (HS 090411) are Australia, Belgium, Canada, Germany, Hong Kong, Malaysia, Singapore, South Africa, United States, and Russia. While for HS 090412 are Canada, France, India, Japan, Korea, Malaysia, Netherlands, and Singapore.

#### **1.4. Structure of the Thesis**

In order to make easy the understanding of this thesis, an early brief is needed to illustrate the content of each chapter. Therefore, structure of the thesis below gives the description the content shortly, as follows:

Chapter 1 is an introduction chapter. It will talk about background of the research which explains the research object, problem questions, research coverage, and structure of thesis.

Chapter 2 is a literature review. This chapter presents some theories which related to the research. The theories used in this research are comparative advantage, Heckscher – Ohlin theory, and Porter diamond of national advantage. The previous empirical study which connected to the topics in this thesis are *Daya Saing Teh Indonesia di Pasar Teh Dunia* by Suprihatini (2005), *Revealed Comparative Advantage (RCA) and Constant Market Share Model (CMS) on Thai Natural Rubber*.by Nongnooch Poramacom, (2002), *International*

*Competitiveness in Services in Some European Countries: Basic Facts and a Preliminary Attempt of Interpretation* by Carlos Diaz de La Guardia, Jose Molero and Patricia Valadez (2004), and *The competitiveness Analysis of Safeguard Measures on Indonesia's products-The Case of the Philippines* by Muhammad Andriansyah (2007).

Chapter 3 is a research methodology. This chapter will explain the method that to be used to analyze the pepper competitiveness. The research uses constant market share analysis and competitiveness matrix.

Chapter 4 consists of product profile and overview of pepper trade performance. This chapter gives the description of product such as pepper profile, pepper distribution channel, common uses of pepper, pepper diseases, Indonesia trade performance of pepper, world production and import.

Chapter 5 is result and analysis. This chapter discusses the competitiveness of pepper products using constant market share analysis and matrix competitiveness.

Chapter 6 is conclusion and recommendation. The conclusion based on the analysis on Chapter 5. Meanwhile, the recommendation can be used as an input for the government to make a policy that related to the product.

## CHAPTER II

### LITERATURE REVIEW

#### 2.1. Concept and Theory

Competitiveness is a concept to compare the ability and the performance of the country or individual in trading (selling or supplying) goods and services in the market. In global competition, competitiveness is important to capture both challenges and limitations of the products.

The concept of competitiveness is useful to analyze countries macroeconomic performance. According to Lawrence R. Klein (1988), there are many various ways to measure the competitiveness of the country such as in term of wage cost, productivity, profit margins, and exchange rates. Therefore, to measure the competitiveness of one country, there are many methodological approaches.

##### 2.1.1. Comparative Advantage

David Ricardo (1823) introduced the basic concept of comparative advantage. A country is willing to trade due to that country gains from trade with other countries (Krugman, 2000). Ricardo emphasizes that both country will gain from trade whenever both countries specialize in sector which they have a comparative advantage compared to their trading partner.

Comparative advantage presents the marginal cost and opportunity cost of a labor in a country to produce a particular good or service at a lower than labor in another country (Salvatore 2007). It indicates productivity of labor given all the other products that could be produced in a particular country. The concept has been acknowledged to be different from Adam Smith's absolute advantage. Absolute advantage refers to the ability of a labor in a country to produce a particular good at a lower absolute marginal cost than its trading partner (Salvatore 2007).



### 2.1.2. The Heckscher-Ohlin

The assumption from the H-O model is which industry in the country that has the larger capital labor ratio. Therefore, when the country produced two goods, pen and pencil, and the pen uses more capital per unit of labor in the production than pencil's production, so the pen production has capital intensive than pencil. This implies that the aggregate preferences are the same. The relative abundance in capital will cause the capital-abundant country to produce the capital-intensive good cheaper than the labor-abundant country and vice versa

The relative endowments of production factors is used in the H-O model to differentiate between countries. Countries advantageous in trade can be shown upon prices, wages and rents. Those advantageous can be different depend on the factor endowment that are used. In short, when country has the capital-abundant will export the capital-intensive good. In contrary, the labor-abundant country will export the labor-intensive good.

### 2.1.3. Porter's Diamond of National Advantage

The diamond model is an economical model introduced by Michael Porter. Porter wrote his book *The Competitive Advantage of Nations*, where he published his theory about particular industries that become competitive in particular locations.

The international trade theories present endowment factors such as land, natural resources, and labor as the comparative advantage of the country. Furthermore, Michael E. Porter elaborated those by new factor endowments such as skilled labor, a strong technology and knowledge base, government support, and culture. Porter describes the points of the diamond into Factor Conditions, Demand Conditions, Related and Supporting Industries, Firm Strategy, Structure, and Rivalry and Government's Role

### 2.1.4. Ansoff Matrix Growth

This concept introduced by H. Igor Ansoff. He is well known as a Professor of Management at many Colleges. Ansoff presents the product and market choices available to an organization. Matrix growth consists of market

penetration, product development, market development and diversification. Market penetration is the concept to enter the product to exciting market. This concept is occurred by gaining competitors customers, improving the product quality, or level of service. Product development can be improve through new product development, utilize new technology, and overall market share. Market development is the growth strategy to find a new market for the exciting product. This strategy can approach through making new geographical market, new product dimensions or packaging, new distribution channel and different pricing policies. Diversification is the growth strategy to find a new market for a new product.

## **2.2. Empirical Studies**

This part will discuss more about the previous studies that can support the analysis and interpretation of the paper. There are four studies that author chooses in this section. Those studies use the same methodological analysis with this thesis. Therefore, it is necessary to be analyzed.

### **2.2.1. Rohayati Suprihatini, (2005)**

The paper analyzed Indonesian tea products in the world. Suprihatini uses Constant Market Share Analysis to examine the competitiveness of Indonesian tea in the global market. She took period during 1997-2001 in her analysis.

The result of the study seems that Indonesia tea export growth was far below the growth of the tea world and even experienced negative growth. The condition was caused by (1) the composition of the product exported less than Indonesia market demand reflected by the commodity composition of Indonesian tea is marked negative (-0032). (2) the export destination countries is less directed for Indonesia Country tea that have high tea import growth, reflected by the distribution of marked negative (-0045) and (3) the competitiveness of Indonesia in the world market is weak enough, reflected by competitive factors of the numbers marked negative (-0211).

Indonesia exported various kinds of tea such as bulk black tea, bulk green tea, black tea and packaging green tea. Market share of Indonesia tea for all types

of tea in the year 2001 reached 3.9%. From the data acquisition share of the export value of all types of tea, Indonesia is the largest tea exporting country ranked sixth in the world after India, China, Kenya, UK and United Arab Emirates.

Competitiveness of the tea exporting countries of the world in the period 1997-2001 with growth exceeding export of world's growth export standards are Japan, India, Vietnam, UK United Arab Emirates, U.S. and Sri Lanka. Indonesian tea export growth was far below the growth of world tea exports, and even experienced negative growth.

### **2.2.2. (Nongnooch Poramacom, 2002)**

The paper tries to estimate Thai Natural Rubber using Revealed Comparative Advantage and Constant Market Share Model. Rubber has a significant role in Thai economy. However, Thailand is the leading exporter country of natural rubber in the world. The author gave title of the paper by *Revealed Comparative Advantage (RCA) and Constant Market Share Model (CMS) on Thai Natural Rubber*.

The author calculates the competitiveness of the product using RCA and CMS analysis during the period 1991-1993 and 1995-1996. RCA used to get the information of advantage to export to other exporter countries. Meanwhile, CMS analysis is used to show the indicators of advantage such as world growth, commodity composition, market distribution, and residue.

The result of the paper showed that comparative advantage of Thailand natural rubber losses from Indonesia in US market. In the other hand, using CMS analysis, during the period 1997-1998 and 1995-1996, Thailand has negative actual export which indicates come from standard growth effect, market effect and competitive effect. It means that Thailand faced a high competitive market of natural rubber in the world, although its share in the world export is big.

### **2.2.3. Carlos Diaz de La Guardia, Jose Molero and Patricia Valadez (2004)**

The paper examines the services sectors in the European countries during the period 1990-1995 and 1995-2000). There are three major service sectors -

Transport and Communications, Travel, and Other Business. The authors wrote the paper under title *International Competitiveness in Services in Some European Countries: Basic Facts and a Preliminary Attempt of Interpretation*.

The authors constructed the study into three sections and added concluding remark. The first section represents the difficulties involved in the measurement of international competitiveness. Section two examines the methodology approach for the descriptive analysis of the competitive position of the European countries, and the third section tests a dependent model to find the factors explaining the competitive position of the three selected service sectors.

Based on the available data, between 1990-95 and 1995-2000, the result of the study showed that, there was no change in competitiveness level to exports of *transport and communications services*. During the period, world import decreased around 6% and in this context, some economies such as Denmark and Ireland raised highly their market shares (80 and 35%, respectively). They were classified as *declining stars*. In the other hand France and Germany dropped their actual market (around 15%) and then classified as *retreats*.

However, between 1990 and 1995, Austria, Finland, Ireland and Spain became the more dynamic industrialized European economies of other business services. Moreover, the market shares growth around 20-30%. In this cases France became the biggest loser, which lost more than 30 percent of the market.

Meanwhile in term of the exports in 2000 of other business services, Austria, Germany and Sweden reached more than one third from their external assets and this services exports had important increases along the decade. These exports also had high proportions (around 20-30%) of the incomes of Belgium-Luxemburg, Denmark, France, Finland, Italy, Netherlands, Norway and United Kingdom, and everyone excepting Norway and UK showed smaller proportions in 2000 than in 1999.

However, the analysis showed that during the period 1990 and 1995 only the exports of *travel services* seemed to be slightly dynamic; they increased their relative weight in the world import structure from 31% to 32%. At the same time, imports of *other business services* and *transport and communication services* fell between 3 and 4%, respectively. On the other hand, in the space 1995-2000 the

exports activities of *transport and communications services* and *travel services* lost dynamism (-5 and -6%, respectively) while *other business services* increased slightly (2%).

The study by sectors described that in 2000, The European developed economies had a little more than a half of the world market of transport and communication services and other business services, and about two fifth parts of travel services. Moreover, in the transport and communications services sector, eight of the twenty countries showed very competitive since they considerably raised their market share in 2000. Austria, Denmark, Greece, Portugal and in a lower degree Spain as well as Hungary and Turkey registered a strong penetration capacity in the international market since their market shares rapidly increased.

#### **2.2.4. Muhammad Andriansyah (2007)**

The paper analyzes the safeguard measure on Indonesia's products – the case of Philippines. The author tried to observe the effect of the safeguard imposed on Indonesia's products of Ceramic Floor and Wall Tiles, Figured Glass, Clear and Tinted Float Glass and Glass Mirrors. Using Export Specialization Index (ESI), Constant Market Share Analysis (CMSA) and Competitiveness Matrices, the paper examines the case during period 1996-2005. Andriansyah titled his paper *the competitiveness Analysis of Safeguard Measures on Indonesia's products-The Case of the Philippines*.

The result of the study showed that ESI of Indonesia's ceramic tile was threatening the Philippines's domestic industry. Therefore, Philippines took the safeguard measures against Ceramic Tiles from Indonesia.

Meanwhile, using CMS analysis, the Philippines market had a negative growth during the period 1997-1999. This condition implied that the market became smaller. In the second period (1999-2001) had a contrast result. The result showed a positive growth for both unglazed ceramic tiles and glazed ceramic tiles.

In the third period of analysis (2003-2005) the total market growth was positive. The analysis described that the demand of the Philippines ceramic tiles from importing countries was rising during the period of safeguard measure.

Therefore, based on the CMS analysis it is understandable that the Philippine has the right to expand the safeguard imposition.

Meanwhile, using the competitiveness matrix, Indonesian ceramic tiles classified as waning in the Philippine market. It means that Indonesian ceramic tiles in Philippines market were saturated.

On the other hand, during the period 2003-2005, Indonesian glass products in Philippine market were increasing. The increasing ESI explained that during this period the demand for such products from the Philippines was positively moving.

Moreover, using CMS analysis, the competitiveness effects of Indonesian glass products in the Philippine market, has changed within the ex ante and the ex-post period of safeguard application to be lowered.

In addition, the competitiveness of Indonesia glass products, using Mandeng competitiveness matrix show the same result as ESI and CMS analysis

Table 2.1. The Empirical Study Result

| No. | Author                       | Title & Methodology   | Result   |
|-----|------------------------------|---|--|
| 1.  | Rohayati Suprihatini, (2005) | <ul style="list-style-type: none"> <li>Ø Daya Saing Export Teh Indonesia di Pasar Teh Dunia</li> <li>Ø CMSA</li> </ul>          | Indonesia tea export growth was far below the growth of the tea world and even experienced negative growth.  |
| 2   | (Nongnooch Poramacom, 2002)  | <ul style="list-style-type: none"> <li>Ø <i>RCA and Model CMS on Thai Natural Rubber</i></li> <li>Ø <i>RCA, CMSA</i></li> </ul> | Thailand natural rubber losses from Indonesia in US market. In the other hand, using CMS analysis, during the period 1997-1998 and 1995-1996, Thailand has negative actual export world. |

|   |  |   |  |
|---|--|---|--|
| 3 | Carlos Diaz de La Guardia, Jose Molero and Patricia Valadez (2004) | <p>∅ <i>International Competitiveness in Services in Some European Countries: Basic Facts and a Preliminary Attempt of Interpretation</i></p> <p>∅ <i>Competitiveness Matrix and Descriptive Analysis</i></p> | <p>the exports of <i>travel services</i> seemed to be slightly dynamic; they increased their relative weight in the world import structure from 31% to 32%. At the same time, imports of <i>other business services</i> and <i>transport and communication services</i> fell between 3 and 4%, respectively. On the other hand, in the space 1995-00 the exports activities of <i>transport and communications services</i> and <i>travel services</i> lost dynamism (-5 and -6%, respectively) while <i>other business services</i> increased it slightly (2%).</p> |
| 4 | Mohammad Andriansyah (2007)  | <p>∅ <i>The competitiveness Analysis of Safeguard Measures on Indonesia's products- The Case of the Philippines</i></p> <p>∅ <i>Matrix Competitiveness, CMSA, ESI</i></p>                                     | <p>The competitiveness effects of Indonesian glass products in the Philippine market, has changed within the ex ante and the ex-post period of safeguard application to be lowered.</p> <p>In addition, the competitiveness of Indonesia glass products, using Mandeng competitiveness matrix shown the same result as ESI and CMS analysis</p>  |

The theories and empirical studies above are used to support the analysis of the thesis. The empirical studies that are chosen by the writer using the constant market share analysis and matrix competitiveness. The same of tool help writer to examine and interpret the result of the analysis appropriately.

## CHAPTER III METHODOLOGY

### 3.1. Constant Market Share Analysis (CMSA)

Many methods have been developing to measure product export competitiveness one country relatively to the competitor countries. Constant Market Share Analysis is a method that has been used for years. According to the Simonis (2009), the constant market share analysis is a decomposition method which was applied for the first time to international trade flows. The background of usage CMSA model is the possibility that the export of a country (exp. Indonesia) during a period of time is being changing to the world as a standard.

Suprihatini (2005) examines that the factors influenced the lower of the export growth are : 1) an exporter country only focuses its export to a product or a group of products that its growth of export demand is not fast, 2) the export destination is to the country that its economic growth is late, 3) the exporter country cannot compete with other countries.

Based on three reasons above, export competitiveness of a country relatively can be written as a common formulation as Tyers et. all (1985) and Suprihatini (2005). Therefore this research uses CMSA model as follows :

#### Growth Standard

$$\frac{E_{(t)..\cdot} - E_{(t-1)..\cdot}}{E_{(t-1)..\cdot}} = g$$

In this analysis, growth standard parameter indicates the common standard of country's growth export products to the world. The export of the competitor countries to Indonesia can be seen through this growth. If the export standard growth parameter is higher, it means that Indonesia's export is improve or in contrary.

#### Product Composition Effects

$$+ \frac{\sum_i (g_i - g) E_{(t-1)i\cdot}}{E_{(t-1)..\cdot}}$$



The parameter of the product composition effects can be positive or negative. The positive parameter indicates that the exporter country export the product to the country which has a higher growth of import the product compare to import growth of the group of this product. For example, if the export growth of Indonesia's pepper is higher than the import growth of the world export / country destination export of the group of pepper it means Indonesia's pepper composition product in the world has a positive effects or in contrary.

### Market Distribution Effects

$$+ \frac{\sum_i \sum_j (g_{ij} - g_i) E_{(t-1)ij}}{E_{(t-1)}}$$

The parameter of the market distribution effects can be positive or negative. The parameter can be positive if the exporter country becomes the attention to distribute its market to the center of the demand growth.

### Competitiveness effects

$$+ \frac{\sum_i \sum_j (E_{(t)ij} - E_{(t-1)ij} - g_{ij} E_{(t-1)ij})}{E_{(t-1)}}$$

The parameter of the competitiveness indicates the increase or decrease (net gain or loss) in the Indonesia's export share relatively to the standard after calculating the change of the product composition and market distribution. The parameter can be positive or negative. If the parameter is positive, it means that Indonesia is the strong among other competitors. In contrary if it is negative that means Indonesia is weak.

Whereas:

$$g = \frac{W(t) - W(t-1)}{W(t-1)}$$

$$g_i = \frac{W(t)_i - W(t-1)_i}{W(t-1)_i}$$

$$g_{ij} = \frac{W(t)_{ij} - W(t-1)_{ij}}{W(t-1)_{ij}}$$

Where as:

$E(t)_{..}$  = Indonesia's total export for all pepper products in year  $t$

$E(t-1)$  = Indonesia's total export for all pepper products in year  $t - 1$

$E(t)_i$  = Indonesia's total export for pepper product  $a_i$  (a kind of pepper)

$E(t)_j$  = Indonesia's total export for all commodity of pepper in year  $t$  to country  $j$

$E(t)_{ij}$  = Indonesia's total export in year  $t$  for a kind of pepper to country  $j$

$W(t)_i$  = Total export standard (world or certain exporter country) in year  $t$  for pepper product  $a_i$  (a kind product of pepper)

$W(t)_j$  = Total export standard (world or certain exporter country) for all pepper commodity in year  $t$  to country  $j$

$W(t)_{ij}$  = World's total export standard in year  $t$  for pepper product  $a_i$  to Country  $j$

$W(t)_{..}$  = Total export standard (world or certain exporter country) for all pepper commodity in year  $t$

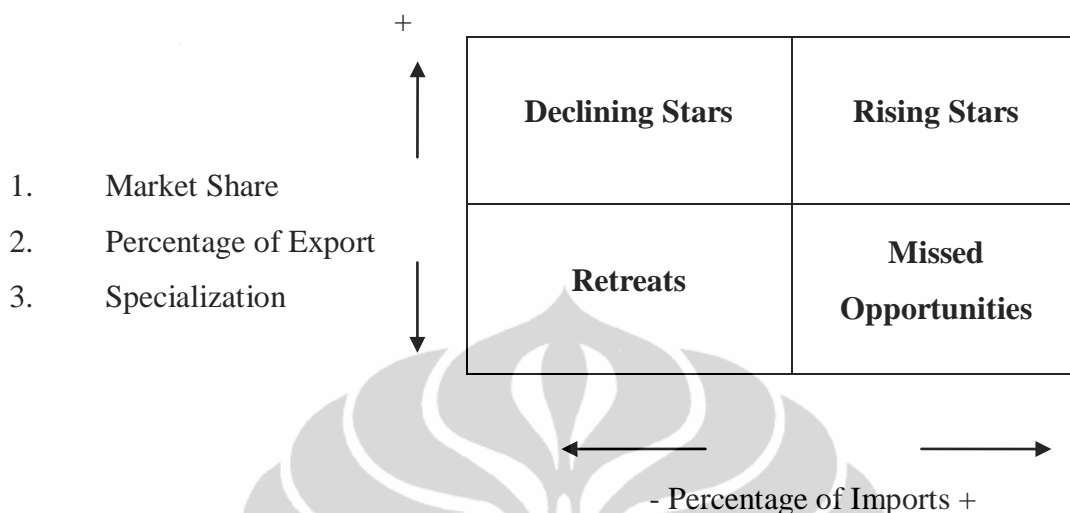
### 3.2. Competitiveness Matrices

A competitiveness matrix is developed by Mandeng to know the position of a particular product to partner country. Mandeng classified the product competitiveness in to four kinds or groups; there are Rising Star, Missed Opportunity, Waning and Retreat. The classifications are based on the country share growth and group share growth.

The Rising Star presents the demand of a product from the world and trade partner country from an exporting country that has a positive growth. The *Missed Opportunity* describes that the condition of the country's product is not well responded or cannot follow the trend demand. The *Waning* illustrates the product of country that enters a saturated market. While, *Retreat* expresses the condition where the demand of a product become weak.

Furthermore, Rahman (2005), differs the competitiveness matrices into three variables they are: 1) change in market share, 2) change in percentage of

export and 3) change in specialization. To see differentiation among three variables, the figures below can give the illustration.



There are four competitiveness variables to examine Indonesian products as Rahman (2005) used as follows:

- 1) Market share which is the value of exports of commodity I from country A (Indonesia) to importing market B (rest of the world) as a percentage of total value of imports of commodity i on importing market B;
- 2) Percentage of exports which is the value of exports of commodity i from country A to importing market B as a percentage of total value of exports of country A to importing market B;
- 3) Specialization which compares the market share of country A for commodity I to the overall market share of country A, wherein if the commodity market share is higher than the overall market share, the country is said to be specialized in commodity i, and if it is lower, the country is said to be not specialized in commodity i;
- 4) Percentage of imports which is the value of imports of commodity i on importing market B expressed as a percentage of total value of imports on importing market B.

## CHAPTER IV

### PRODUCT PROFILE

#### 4.1. Pepper Profile

Pepper is the oldest and most important product of spice products traded in the world. The plants come from the west coast Ghats, Malabar, India. Other plants are also found in Assam Mountains and the northern part of Burma. In the 1100-1500 mid-century pepper trading has a very important position. At that time, pepper was used as a medium of exchange and a gift for purposes than the other spices products.

Because of the high value in that mid-century, pepper is often used as a means of offering and the payment of taxes or tribute. At that time a lot of trade and distribution were held by the Arabs. Arab nation bought pepper from Malabar and Java. Furthermore, pepper union has stood in the cave in 1180 and Marcopolo has reported a pepper plant in the year 1280. Pepper trade between the Java with China recorded in 1200. Based on those facts and long history of pepper that's why; the pepper got the nickname as the king of spices.

Pepper is known as a king of spices because this product is the most tradable. The products developed from pepper is divided into four groups, they are: black pepper, white pepper, green pepper and oil oleoresin of pepper. Black pepper is the whole dried fruit of the plant while white pepper is the dried seed after removing the pericarp of the berries. White pepper is neither too hot nor too cold, and is supposed to be the best of all peppers. In general, black pepper and white pepper are used for the purposes of the kitchen, cooking spices, perfumes and medicines.

Pepper product has four kinds namely: green pepper, white pepper, black pepper and oleoresin. Then, each kind produces as dust and whole, except the green pepper. Indonesia has a good black pepper that known in international market as Lampung black pepper and for white pepper is Muntok white pepper.

Currently, pepper can be processed into sauce, dehydrated green pepper, dried green pepper frozen, pepper bean curd, pepper cookies, mayonnaise pepper,

oil pepper, pepper oleoresin, perfume pepper, sweet pepper, tea pepper, yoghurt peppers and stuffed green peppers.

Usually, pepper is recognized by its port of export or the region where it is grown. For the example, in global market there are two kinds Indonesian pepper that are famous namely Lampung black pepper and Muntok white pepper. Meanwhile, Malabar is known as variety of pepper from India, Serawak pepper from Malaysia, and Brazilian pepper comes from state of Para in Brazil.

#### **4.1.1. Common Uses of Pepper**

The use of pepper has developed into many kinds following the invasions and expansion in many sectors such as food industries, medicines and others. There are at least three common uses of pepper in the world namely, as a food condiment, as a preservative, and as a medicinal uses.

As a Food Condiment: The use of pepper as a seasoning/condiment, on its own or in spice blends, is on the increase with the growing popularity of snacks, ethnic foods, ready-to-cook meals as well as healthy low-sugar-and-salt foods especially in the developed countries. Black pepper tastes strongest when freshly ground although pre-ground pepper is often used in seasonings for convenience. White pepper is less aromatic than black pepper but has special applications.

As a Preservative: The value of pepper as a natural preservative for meat and other perishable foods has been known for centuries. Studies have shown that this is due to the anti-oxidant and anti-microbial properties present in pepper.

As a Medicinal: Pepper is an important ingredient in Ayurvedic, Chinese and Unami and other traditional medicines. The three main therapeutic uses of pepper are as a stomachic, digestive and tonic.

#### **4.1.2 Pepper Diseases**

Pepper crop damage is caused by several kinds of fungi, bacteria, viruses and physiology diseases. Damage from diseases are:

1. Roots Decay (Busuk Leher Akar)

This disease is caused by phytophthora palmifera butler fungi, piperis variety.

The symptoms for this disease are when stem bark scratch, layer lower this bark has brown colour or dark brown, leaf colour, normally in brown with grey in the center. Finally leaf become yellow, frail, terminate of leaf dark and fall. Therefore, infection does faster, and in 10 days, all of crops that attacking will death.

2. 'Busuk Tunggul' diseases

The causation is *Rosilinea bunodes* fungi. It symptoms are leaf yellow and fall, then whole of crop drying.

3. Root decay diseases

Causation of this disease is *Ganoderma ludicium* fungi. It symptoms are root decay, upper of crop become yellow and frail.

4. Yellow disease

In Bangka Island, this disease is called as 'sakit bujang' that raise big loss. Causation of this disease is 'cacing keci' that damage to hair root. Crop that was attacked will be known one year after. After all of leafs become yellow, although it's surrounding is still green, the crop had infection exactly.

5. Physiological Diseases that is early death.

Pest: Any several of pest attacking to pepper crop include 'pepper kumbang', 'pepper big kumbang', and etc. This pest is controlled by insecticide and crop nursing intensively. In this IPP Model Feasibility, analysis is based on pesticide using per ha per year as followed: BIO pesticide 25 liter, Insecticide 2,5 liter, Fungicide 2,5 liter, Namaticide 25 liter

#### 4.2. Indonesian Pepper Trade Performance

Indonesia has been exporting the pepper since the last century. In the period of the Dutch occupation, pepper gave more than 2/3 from the VOC's total gain and before world's war II, Indonesia could fulfill almost 80% world pepper's demand. Indonesian pepper began turn down since the Japan occupation, because of diseases and bad treatment.

The most pepper products which to be traded in the world are white and black pepper. Main province that produces white pepper is Bangka Belitung and

known as Muntok white pepper. While Lampung is known as main province that produces black pepper and is famous as Lampung black pepper.

The farm area of Indonesian pepper mostly 99.9 % is the farmer's land. The characteristics of the land are not too large, spread, low capital, and a small infrastructure. The main problems of Indonesian pepper are low productivity and low quality, the high loss which caused by diseases, inefficiency, no any diversification of product, and low technology. Besides, the pepper product must compete with the other agricultural products such as cocoa, coffee and cpo.

Table 4.1. Indonesian Cultivation of Pepper

|              | Province           | 2001           |                  | 2005           |                  |
|--------------|--------------------|----------------|------------------|----------------|------------------|
|              |                    | Areal (Ha)     | Production (Ton) | Areal (Ha)     | Production (Ton) |
| 1.           | Lampung            | 55,675         | 21,143           | 64,989         | 25,681           |
| 2.           | Bangka Belitung    | 64,572         | 34,165           | 61,413         | 34,471           |
| 3.           | Sulawesi Selatan   | 17,983         | 3,770            | 20,922         | 6,575            |
| 4.           | Kalimantan Timur   | 10,789         | 5,874            | 14,030         | 7,717            |
| 5.           | Kalimantan Barat   | 6,669          | 2,212            | 9,980          | 4,950            |
| 6.           | Sulawesi Tenggara  | 6,009          | 749              | 12,315         | 2,267            |
| 7.           | Kalimantan Tengah  | 5,388          | 6,196            | 8,014          | 6,043            |
| 8.           | Bengkulu           | 5,465          | 951              | 3,209          | 406              |
| 9.           | Sumatera Selatan   | 5,020          | 5,280            | 6,118          | 7,379            |
| 10.          | Jawa Barat         | 1,078          | 131              | 2,250          | 827              |
| 11.          | Jawa Timur         | 1,087          | 191              | 1,113          | 387              |
| 12.          | Jawa Tengah        | 1,063          | 400              | 1,493          | 531              |
| 13.          | Kalimantan Selatan | 1,292          | 234              | 1,119          | 518              |
| 14.          | Others             | 3,932          | 782              | 4,765          | 1,389            |
| <b>Total</b> |                    | <b>186,022</b> | <b>82,078</b>    | <b>211,730</b> | <b>99,141</b>    |

Source : Ditjen Perkebunan, Deptan

During the period 2001 – 2005 Indonesian pepper cultivation areas has been increased drastically; from 186,022 ha became 211,730 ha. In this period

total production of pepper also increased from 82,078 tons in 2001 to 99,141 tons in 2005. Both Bangka Belitung and Lampung province have largest areas, in 2005 Bangka has 61,413 ha and Lampung has 64,989 ha.

Generally in the five years of period all producing provinces have been increased, both in area and production. The other provinces that produce pepper are Sulawesi Selatan, Sulawesi Tenggara, Kalimantan Tengah, Bengkulu, Sumatera Selatan, Jawa Barat, Jawa Timur, Jawa Tengah, Kalimantan.

Table 4.2. Indonesian export of pepper (1998-2008)

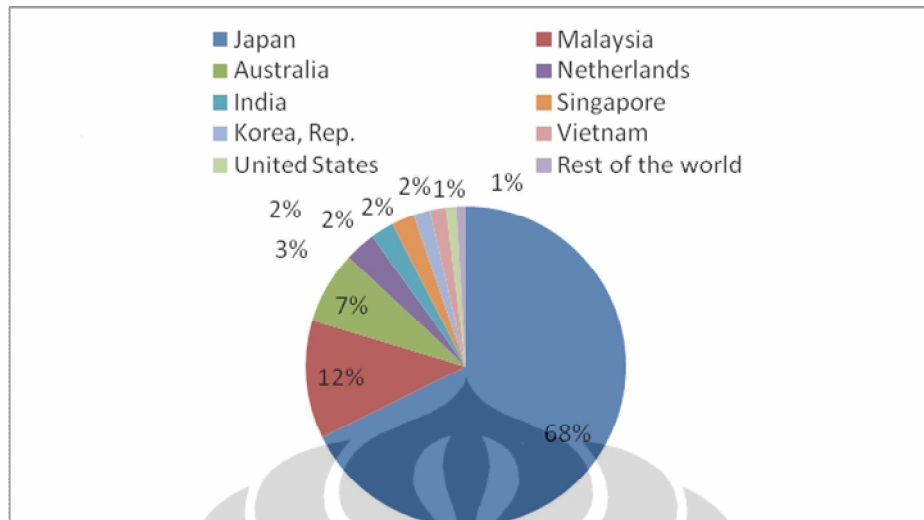
| Year | Indonesia<br>(Value in USD 000) | World<br>(Value in USD 000) | Share<br>(%) |
|------|---------------------------------|-----------------------------|--------------|
| 1998 | 213,426,336                     | 833,700,285                 | 25.6         |
| 1999 | 228,217,966                     | 921,536,661                 | 24.7         |
| 2000 | 220,722,743                     | 919,431,845                 | 24           |
| 2001 | 100,383,720                     | 492,341,681                 | 20.3         |
| 2002 | 93,202,827                      | 471,507,474                 | 19.7         |
| 2003 | 93,202,827                      | 446,127,632                 | 20.8         |
| 2004 | 54,181,016                      | 431,245,716                 | 12.5         |
| 2005 | 57,863,199                      | 425,955,923                 | 13.4         |
| 2006 | 77,014,609                      | 594,289,293                 | 12.9         |
| 2007 | 131,257,020                     | 841,317,580                 | 15.6         |
| 2008 | 183,364,870                     | 673,839,774                 | 27.2         |

Source : UN-Comtrade (processed)

Indonesia as the one of biggest producing of pepper has been contributing intensively to fulfill world's demand of pepper since last time. In the ten years period (1998-2008) Indonesian value for pepper was fluctuate.

However, Indonesian share to the world is relatively big, around 12-27% in ten years. In 2008, pepper gave USD 183,364,870 for Indonesian reserve and contributed 27.2% from the world's value which was USD 673,839,774. Meanwhile, in 2004, Indonesia only put in 12.5% from world's value. In this year Indonesia's value only 54,181,016 compared to the world's value that raised USD 431,245,716. 2004 became the worst of Indonesian value during ten years. Domestic consumption more or less can influence Indonesian export of pepper. If the domestic consumption is high, the value of export will turn down or contrary.

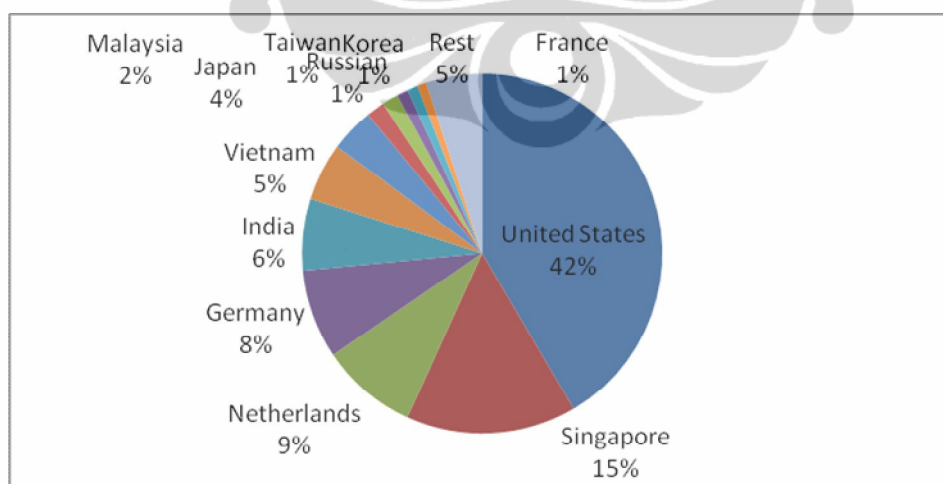




Source : WITS, processed

Figure 4.1. Indonesian Export of Pepper Crushed or Ground (2007)

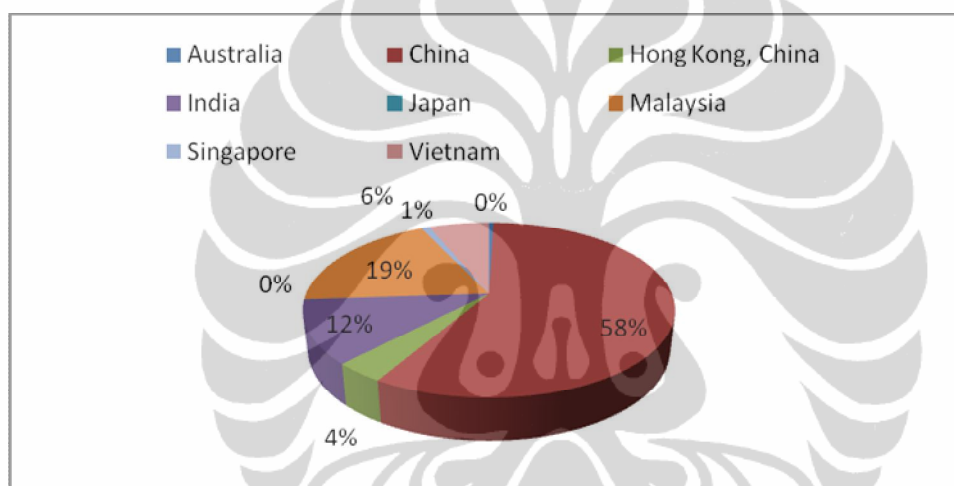
The figure above illustrates Indonesian Export of pepper (HS 090412) to several destination countries. Japan (68%) is the biggest importing country from Indonesia for this product followed by Malaysia (12%), Australia (7%), Netherland (3%) and the other countries are Korea, Singapore, India, USA and Vietnam.



Source : WITS, processed

Figure 4.2. Indonesian Export of Pepper Neither Crushed nor Ground

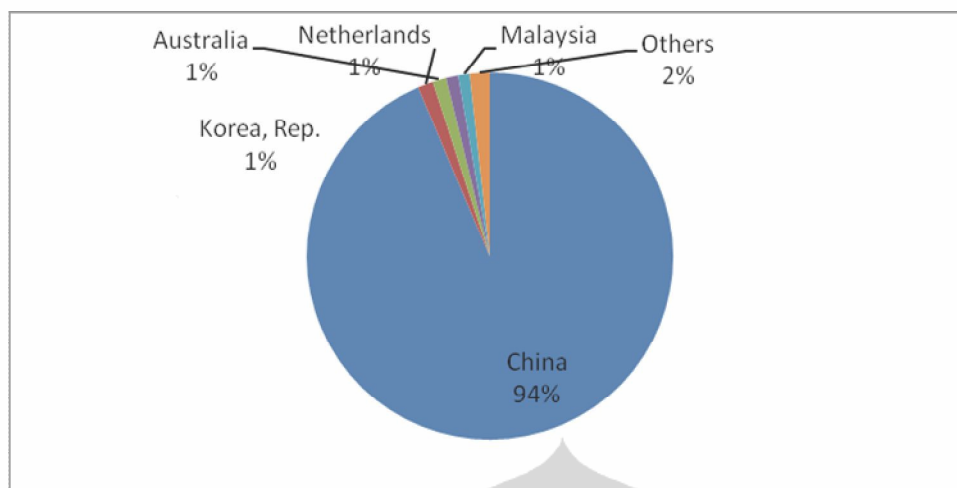
Figure 4.2 describes Indonesian export of pepper neither crushed nor ground to destination countries in 2007. United States became the biggest Indonesian export destination country for pepper HS 090411 with as much as USD 54,484 million dollars (42%). The second biggest was Singapore as much as USD 20,095 million dollars (15%), followed by Netherland USD 11,403 million dollars (9%) and other Germany (8%), India (6%), Vietnam (5%), Japan (4%), Malaysia (2%). Then, Indonesia exported to Taiwan, Korea and French 1%. At this time Indonesia exported the pepper to the world as much as 131,257 USD million dollars.



Source : WITS, processed

Figure 4.3. Indonesian Import of Pepper Neither Crushed nor Ground

For pepper neither crushed nor ground, Indonesia imported in 2007 as much as USD 314,788 million. China became Indonesia's first importing countries as much as 58%, followed by Malaysia as much as USD 102,541 million or 19% then India (12%), Vietnam (6%), and the others were Japan, China, Australia, Hong Kong and Singapore.



Source : WITS, processed

Figure 4.4. Indonesian Import of Pepper Crushed or Ground (2007)

Figure 4.4 above shows that China became biggest Indonesia importing country for pepper crushed or ground in 2007 as much as USD 168,813 million followed by Netherlands USD 2,45 million, Australia USD 2,18 million, Korea Rep. USD 1,92 million, Malaysia USD 1,82 million, and the other countries as much as USD 3,193 million.

### 4.3. World Pepper Trade and Production

In this part, the writer will focus on world trade performance in term of production and import. Supposed through this section we can know Indonesia pepper position in the global market.

#### 4.3.1. World Pepper Production

In 2007, Vietnam became the first of producing pepper that can supply 90,300 MT or equal as US\$ 416,769 million. Then in the second was Brazil that produced 77,770 MT. Indonesia is in the third position which its production is 74,131 MT or equal to US\$ 342,143 million, then, India, China, Sri Lanka, Malaysia, Thailand, Mexico and Madagascar.

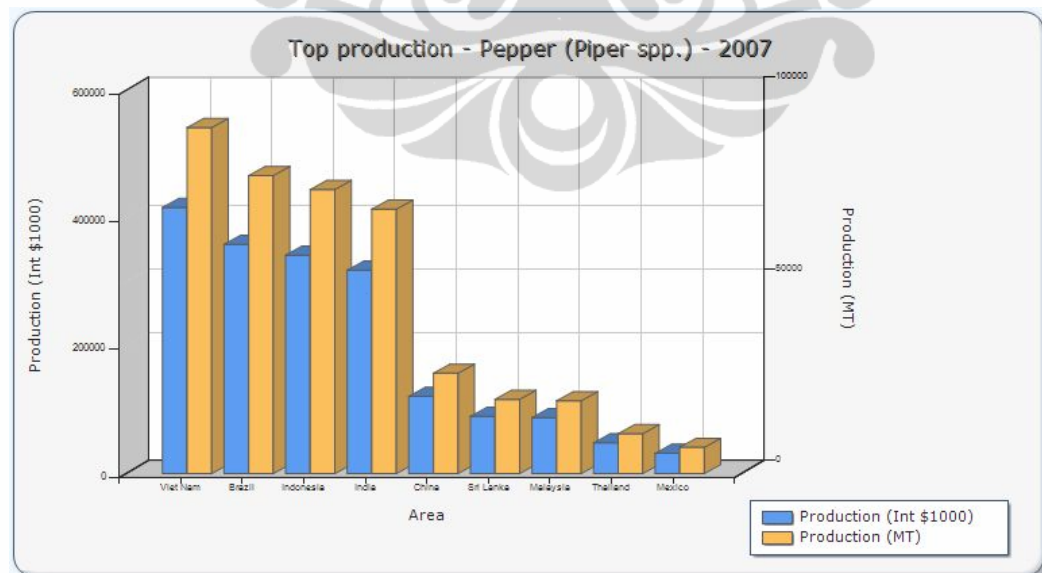
Vietnam main production areas for the pepper are in the Central Highlands and the South East, which together account for more than 84% of the total area. While, the main producing area for planting pepper in Brazil is the state of Para,

the others area are Espirito Santo, Bahia and Maranhao States. The varieties of pepper grown in Brazil include Singapore (Kuching), Bragantina (Panniyur-1), Guajarina (Arkulanmunda), Iacara-1, Kottanadan-1, Apra. (IPC : 2009)

India, pepper cultivation is largely in the Southern States of Kerala, Karnataka and Tamil Nadu. Kerala is accounting for almost 70% of the total production. The varieties of pepper developed and grown in India are Karimunda, Kottanadan, Panniyur -1, Panniyur-3, Panniyur-4, Panniyur-5, PLD-2, Subhakara.

Meanwhile, in Indonesia, the main pepper producing areas are Lampung province for black pepper and Bangka Belitung province for white pepper. The total production from these two provinces account for 70-80% of the total pepper production in Indonesia; the other 20-30% comes from West Kalimantan, East Kalimantan, South Sulawesi and West Java. There are many varieties that grown in Indonesia such as Bulok Belantung, Jambi, Kerinci, Lampung Daun Lebar (LDL), Bangka (Muntok), Lampung Daun Kecil, Petaling.

In Malaysia, the State of Sarawak is the main producing of pepper which accounts for more than 95% of the total Malaysian production. Other smaller producing states are Johor and Sabah.

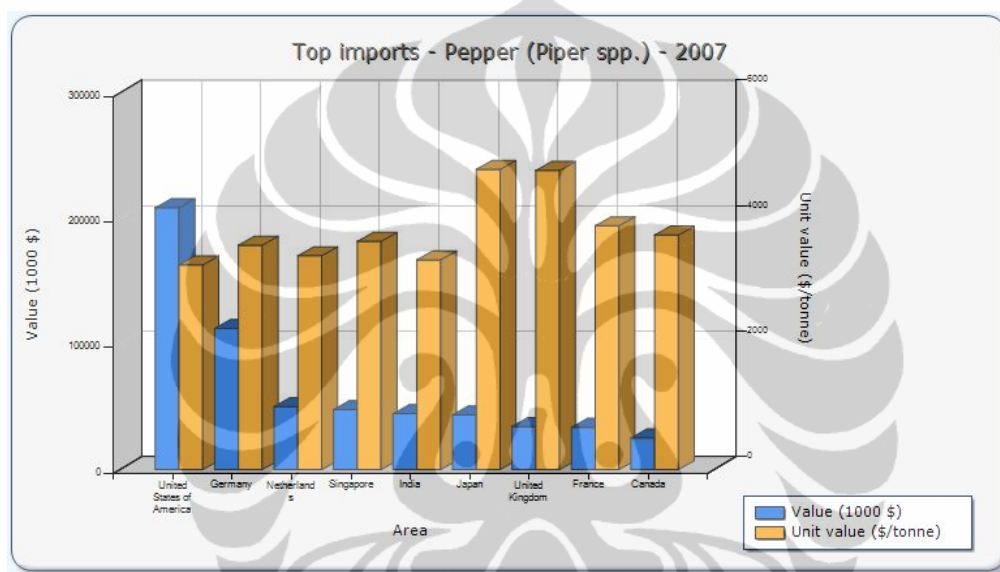


Source : FAO data

Figure 4.5. The Top Production of Pepper (2007)

### 4.3.2. World Pepper Import

The ten importing countries of pepper in 2007 are US, Germany, Netherlands, Singapore, India, Japan, UK, France, Canada and Belgium. US imported from the world as much as 63,941 ton or as equal as US\$ 208,480 million. In the second was Germany that imported 31,460 ton of pepper. In the third was Netherlands which imported 14,745 ton, then Singapore, India, Japan, United Kingdom, France, Canada and Belgium in number ten.



Source : FAO data

Figure 4.6. The Top Importer of The Pepper in the World

In order to establish cooperation in the field of production, marketing, processing and research, the countries of the world leading producer of pepper such as India, Indonesia, Malaysia, Brazil, Thailand and Sri Lanka have agreed to form an organization. The organization then known as International Pepper Community (IPC).

IPC was founded in 1971 under the protection of the United Nations - Economic and Social Commissions for Asia and the Pacific (UN-ESCAP), which at first temporarily IPC Secretariat based in Bangkok and moved to Indonesia with Jakarta as the IPC Secretariat Headquarters since 1977.

International Pepper Community organizations previously consisted of 5 (five) major producing countries: Brazil, India, Malaysia, Indonesia, and Sri

Lanka. On January 25, 2005 IPC Secretariat had received notification from the United Nations Office of Legal Affairs that on January 10, 2005 Vietnam signed the Instrument of Accession - Agreement Establishing the International Pepper Community. Thus, in the near future Vietnam will officially become a full giving IPC. With the entry of Vietnam as a member, IPC will strengthen the position of national interest in supporting the pepper-producing countries.

In general, there are 11 pepper producer countries in the world. Pepper producer is divided into 2 groups, IPC and non IPC member. IPC member are Brazil, India, Indonesia, Malaysia, Sri Lanka, and Vietnam, meanwhile non member countries are China, Thailand, Madagascar, Cambodia, and Ecuador.

In 2000 before Vietnam became member of IPC, contribution of IPC member to the demand of world is  $\pm 77,45\%$ . After Vietnam joining IPC in 2005, contribution of IPC became  $\pm 96.82\%$ . IPC member less and more give the contribution to the price of pepper in the global market.

Price is one of important factor that causes pepper become a potential commodity to be traded. World's pricing of pepper tends to rise, in term of rupiah or U.S. dollar. Although, in a couple of years tend to decrease but it was not too high than its increase. Based on FAO data, Indonesia's price of pepper is better than the average world's price. It is because of a good quality of Indonesian pepper which known in the world's market (A1 Super).

After the destruction of Indonesian pepper plants during the 2nd world war and the occupation of Japan, India again enjoyed the glory of pepper plants. The expansion and development of large - scale made a sharp decline in prices in the 1960s, decades after reaching the highest peak price after the 2nd World War in 1953, US\$ 2.16 per pound (lbs).

In US dollar and in rupiah denomination, pepper price had continuously increased during 1993 - 1997 period. In 1993, average pepper export price reached to US\$ 1.43 per kg and then it increased again to US\$ 3.64 in 1997, or had increased 154.9% during for years period. Indonesian pepper export price itself is higher than those average world pepper export price ( $>16.5\%$ ). In 1997 Indonesian pepper export price was reaching US\$ 4.89 per kg.

In 2008, the price of black pepper reaches USD 3,715 per ton and for white pepper USD 5,215 per ton. In domestic market black pepper sold with price Rp 40,000 and for white peppers Rp. 50,000. However, base on exchange steadily between rupiah and dollar, which then predicted as new ideally exchange steady, pepper price will stable in range Rp. 40,000 per kg.

In Indonesia, there are some organizations that boost Indonesian pepper product. The organizations that have concern to development of pepper are Indonesian pepper exporter association (Asosiasi eksportir lada (AELI) which is an organization for the pepper's exporter in national level, Indonesian pepper's farmer associations (Asosiasi Petani Lada Indonesia) (APLI), forming in many levels such as district and province, and Indonesia spice community that was built in 2000, organization which its member are the player and every person who has interest in spice including pepper.

#### **4.4. Distribution Channel of the Pepper Products**

As the export commodity, pepper has its main supply scheme. In general, market network of dried pepper begin with farmer until to exporter involves with some part. Longer of this market chain is caused farmer accepts profit margin less than that they should have accept. Farmer area that too far (generally in Central Kalimantan) caused information access about price become too late.

Pepper export trading that generally free, in fact has the intricate price forming, this is not only base on fundamental aspect (global supply), but also its non-global aspect (like market centimen). Market centimen are product and attitude of whole market actor, started from pepper farmers, broker, exporters, dealers, speculators, and gliders/food industries (end user) itself. Therefore, risk factor will be faced by exporters in decision making of their sales policy.

To trade the pepper products there are some steps:

1. The local farmer sells the pepper to the collecting buyer. Most of them come to the farmer's place to get this product.
2. The collecting buyer sells the pepper to the big buyer (the district buyer/*pedagang tingkat Kabupaten*). Usually, the transaction occurred in the district in a big volume.
3. The district buyer sells the pepper to the exporter.

4. The exporter sells the pepper to the importer with the FOB (Free On Board) price.

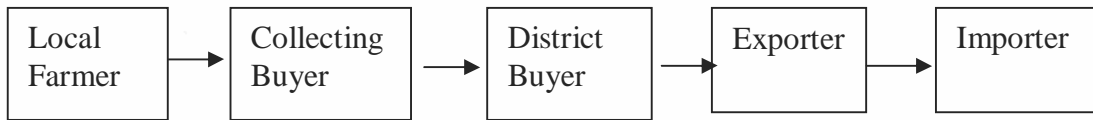
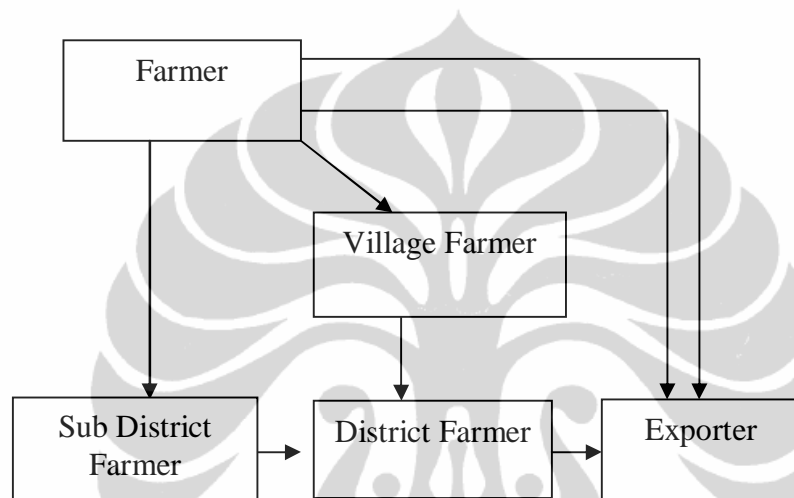


Figure 4.7. Common Pepper Distribution Channel



Source : Ludi Mauludi and Yuhono in Monograf Lada

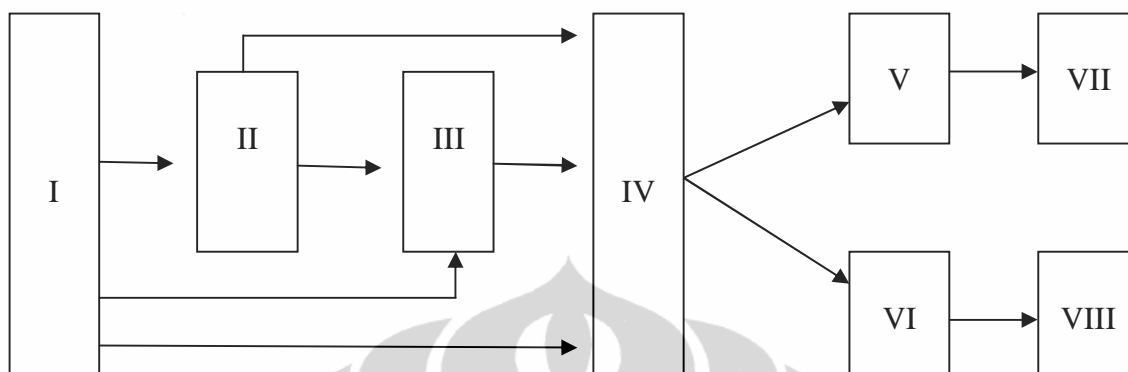
Figure 4.8. Black Pepper Distribution Channel

In the picture above there are three black pepper trading systems that were distributed from the farmers to exporters and the final consumer in the country. The three kinds of the trading system are:

- 1) Trading system that usually occurred from the farmers to the village seller (collector I), and then to the district 2 seller (*Pedagang di tingkat Kecamatan*) (collector II), then to the district 1 seller (*pedagang di tingkat Kabupaten*) or the big buyer and finally to the exporters. Commonly, in this distribution channel, the amount of black pepper sold is not so big (< 10 kg).
- 2) Sometimes, if the farmers sell the pepper in a large number, the distribution channel is directly to the district 2 sellers, then to the seller district 1 and to the exporters.



- 3) When the farmers have more than 100 kg of pepper, they sell it directly to the district 1 seller then district 1 seller which is finally sold to exporters.



Source : Monograf Lada

Figure 4.9. White Pepper Distribution Channel

Notes :

- I. = Producer Farmer
- II. = Collecting Trader in the Village Level (PP I)
- III. = Collecting Trader in the Sub District Level / *Kecamatan* (PP II)
- IV. = Collecting Trader in the District Level / *Kabupaten* (PB/PAP)
- V. = Exporter
- VI. = Wholesaler (shop)
- VII. = Abroad Consumer
- VIII. = Domestic Consumer

In general, the distribution channel of the white pepper is almost same with the black pepper. The different is in the distribution channel of white pepper. There are inter-island traders who distribute the white pepper to the domestic consumers. Commonly, inter island traders are the big seller in the district 1.

In the distribution channel of white pepper there are district 1 collector seller, district 2 collector seller and retailers. The district 2 seller is the seller who has a small business in the spices sector and other product. They buy the pepper from the small farmers in the village. The district 1 sellers are they who have a big business relatively in the agricultural sector. They buy from the farmer who has the pepper more than 100 kg or buy it from the district 2 seller. They are also known as the inter-land traders. Meanwhile, retailer is the seller who sells the pepper to the end user directly.

#### 4.5. Pepper Standardization

The standardization of pepper must be equal with the national quality standard. The pepper that wants to enter international market should have a good quality. It must have the international standard such as ISO 9000, ISO 14000, HACCP and SPS in order to be able to compete with the other producer.

Determination of standardized quality results have been adjusted by the national quality standard (SNI). With the increased role and development of quality assurance or standardization of quality in the marketing of plantation production in the international community, the application of standardization of the quality of people's is needed, especially the more required to be able to enter the global market.

However, it is important to give the support and training to the farmer started from the on farm training and continue to post-harvest handling such as processing, sorting / grading, packing up and the marketing directed at the company's partnership with partners or other parties. The other ways is through the partnership between the farmer and the private sectors.

To support quality improvement efforts, BSN has published, 4 (four) types of Indonesian National Standard for pepper, among others:

- 1) White Pepper Quality Standard(SNI 01-0004-1995)
- 2) Serani Quality Standard (SNI 01-0005-1995)
- 3) Quality Standard White Pepper Powder (SNI 01-3717-1995)
- 4) Standard Quality Black Pepper Powder (SNI 01-3716-1995)

Expected with the implementation of quality assurance system standard, a minimum quality standard of the pepper can be achieved. Thus Indonesian pepper could increase its production, both quality and quantity, so the contribution of the agricultural sector to foreign exchange earnings can be increased.

The International Pepper Community has also made the standard of white and black pepper for international trade. This standard becomes the international standard because IPC is a big organization of pepper that its member contribute more than 90% from world's demand of pepper.

Table 4.3. International Pepper Community Grades of Whole Pepper, Black and White

|                        | QUALITY PARAMETER                                  | BLACK PEPPER   |                 | WHITE PEPPER   |                 |
|------------------------|--|--|-----------------|--|-----------------|
|                        |  | IPC BPT-1  | IPC BPT-2       | IPC WPT-1  | IPC WPT-2       |
| <b>MACRO</b>           |  |  |                 |  |                 |
| 1.                     | Bulk Density (g/l, minimum)                        | 550  | 500             | 600  | 600             |
| 2.                     | Moisture (% vol/wt, maximum)                       | 12   | 12              | 12   | 12              |
| 3.                     | Light Berries/Corns (% by wt, maximum)             | 2  | 10              | 1  | 2               |
| 4.                     | Extraneous Matter (% by wt, maximum)               | 1  | 2               | 1  | 2               |
| 5.                     | Black Berries/Corns (% by wt, maximum)             | Not applicable   | Not applicable  | 1  | 2               |
| 6.                     | Mouldy Berries/Corns (% by wt, maximum)            | Nil  | Nil             | Nil  | Nil             |
| 7.                     | Insect Defiled Berries/Corns (% by wt, maximum)    | 1  | 2               | 1  | 2               |
| 8.                     | Whole Insects, Dead (by count, maximum)            | Not more than 2 numbers in each sub sample and not more than 5 numbers in total sub-samples. |                 | Not more than 2 numbers in each sub sample and not more than 5 numbers in total sub-samples. |                 |
| 9.                     | Mammalian or/and Other Excreta (by count, maximum) | Shall be free of any visible mammalian or/and other excreta.                                 |                 | Shall be free of any visible mammalian or/and other excreta.                                 |                 |
| <b>MICROBIOLOGICAL</b> |  |  |                 |  |                 |
| 1.                     | Aerobic Plate Count (cfu/g, maximum)               | $5 \times 10^4$  | $5 \times 10^4$ | $5 \times 10^4$  | $5 \times 10^4$ |
| 2.                     | Mould & Yeast (cfu/g, maximum)                     | $1 \times 10^3$  | $1 \times 10^3$ | $1 \times 10^3$  | $1 \times 10^3$ |
| 3.                     | Escherichia coli (MPN/g)                           | < 3  | < 3             | < 3  | < 3             |
| 4.                     | Salmonella (detection / 25g)                       | Negative   | Negative        | Negative   | Negative        |

Source : IPC Web-site

The table describes the grade of the pepper that acceptable in the international market based on IPC standardization:

1. IPC BPT-1 and IPC WPT-1 are grades for pepper, which has been processed (i.e. has gone through further cleaning processes including sieving, cycloning, destoning, washing and mechanical drying), and has subsequently undergone an internationally accepted treatment process to reduce its microbiological contamination.
2. IPC BP-2 and IPC WP-2 are grades for pepper, which has been partially processed (i.e. has gone through basic cleaning processes like sieving and winnowing), and has subsequently undergone an internationally accepted treatment process to reduce its microbiological contamination.
3. The treatment process shall be undertaken by qualified/trained personnel, and in compliance with internationally accepted standard operation procedures and regulations regarding the process.
4. The treated pepper shall be packaged in suitable, clean and sterile packaging materials, clearly labeled to indicate, inter alia, the treatment process as required by standard regulations, appropriately handled and stored in a clean & well-ventilated store, to protect and to maintain the integrity of the product for the entire period of its intended shelf-life.
5. Cfu = Colony-forming unit.
6. MPN = Most Probable Number.

#### **4.6. The Government Policy on the Pepper Product**

There are some government policies for the pepper products. In 1985, Directorate General of International Trade, Ministry of Industry and Trade made the regulation for the exported pepper products. The regulations are:

1) The trading of both black and white pepper for the West European's market is conducted by BV. UNIPRO, meanwhile for USA and Canada's markets are conducted by CTTC.

2) As the sole marketing agency of pepper for USA and Canada, the exporters charged the following sales commissions:

- |                              |        |
|------------------------------|--------|
| a. For CTTC                  | 1.375% |
| b. For the New York's Broker | 1.500% |

|                                |        |
|--------------------------------|--------|
| c. Claim reserves and decrease | 1.000% |
| d. For the Jakarta Secretariat | 0.125% |
| e. Weight Cost                 | 0.500% |

3) Export quota consists of quota basis and additional quota, where the quota basis is for the traditional market such as USA, Canada, and West Europe, meanwhile, additional quota is for the traditional market and nontraditional market.

4) Implementation of export and export notification (PEB) is given after the exporter get pepper export approval letter (SPEL) that attached by the confirmation of sales contract (L/C) from BV. UNIPRO in Amsterdam or CTTC in New York.

In addition, to meet the quality requirements of international standards of pepper, director general of foreign trade issued the regulation No. 56/DAGLU/KP/X/85 and trade standards (SP) No. 12A in 1975 for white pepper and trading standards revisions and (SP) No. 12 B in 1985 for black pepper conducted in March 1987.

Besides Commerce special rules for commodity pepper, here are some government policies to support the marketing of pepper, among others:

1) Presidential Instruction No. 1985 about 4 years of deregulation policies and trade policy aims to push high-cost economy, exports of Commerce simplify, to accelerate the flow of goods and documents, and to simplify administrative procedures.

2) The government policy on 6 May 1986, known as CLT - 86 aims to encourage private parties to be more involved in improving non-oil exports.

3) Policy on 24 December 1987 (This package-87) contains the simplification of export permits for goods and the elimination of some export tariff.

Now, pepper is one of agricultural products that is free to trade. Therefore, it is opened to anybody that have licenses to pepper trading and free to sell to purchaser at any price and has been terminated since November 1989.

Since 2005, Directorate General of Farm, Ministry of Agriculture formed The Directorate *Budidaya Tanaman Rempah dan Penyegar*. In addition, since 2006, Ministry of Agriculture under The Agriculture research and Development

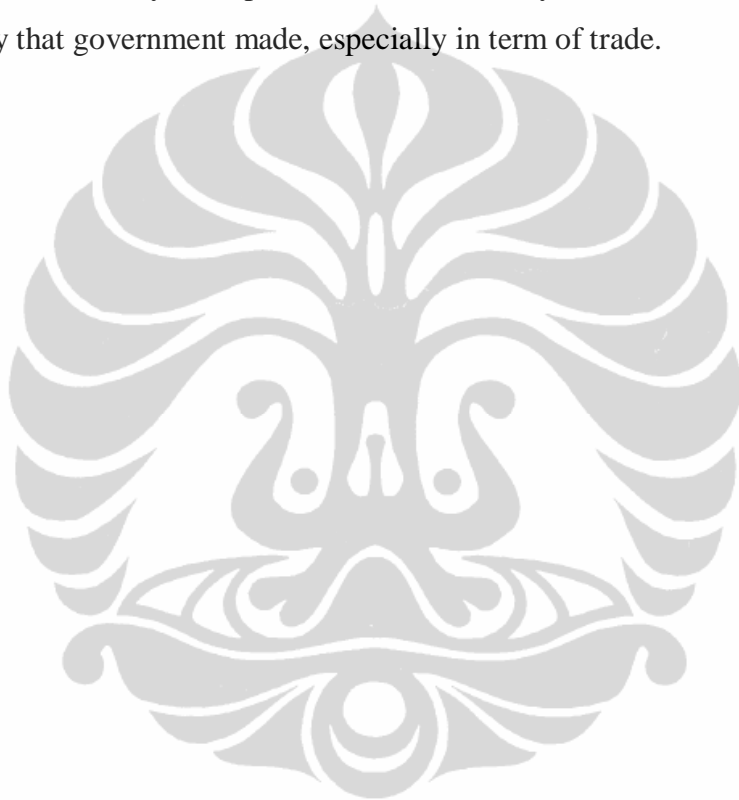
(*Badan Litbang pertanian*) built *Balai Penelitian Tanaman Rempah dan Aneka Tanaman Industri* (Balittri) in order to give more attention to pepper research. The government policy to impose Indonesian pepper could be divided in to four kinds, they are:

1. The policy to improve value added through pepper product diversification  
This policy can be implemented through some programs such as:
  - a) To make mediation between buyer and seller in order to meet what buyer need? (what kind of pepper they need?).
  - b) To develop the activity of pepper product research
  - c) To implement good manufacturing practices
  - d) To help the farmer getting a credit or infestation
2. The policy of institution  
This policy can help the farmer through the strengthening of networking between Indonesian Farmer Pepper Association with the Local Government or Centre Government and Indonesian Pepper Exporter Association.
3. The marketing policy  
This policy can be implemented through the promotion of Indonesian pepper abroad (through the International forum and exhibition) and give more attention to quality of taste and aroma in the promotion. Beside that the policy also expected to develop the marketing network domestically and internationally.
4. The policy to improve the productivity and quality  
This policy includes the good infestation environment, the acceleration of the application of good agriculture practices, the availability of the good seed of pepper, and low rate credit of bank for the farmer.

The pepper profile gives us the description of current Indonesian pepper performance. Pepper plays significant role in the economy during last time. Today, pepper can be processed into many kinds of product, not only for flavoring the food but also into many other processed products.. Indonesian pepper faces some problems. On farm side, the problem of pepper mostly about the diseases

that can reduce the production. Meanwhile, in trade side, Indonesia has to face high competitive with other producer countries.

Market distribution, good standardization and concise policy can affect this product in the global market. Otherwise, Indonesian pepper still use old market distribution channel. However, Indonesia's product is acceptable in the market but standardization has to improve because many pepper cultivation are conducted traditionally. Currently, pepper becomes the free trade commodity that everyone can sell or buy this product whenever they want. There is no any specific policy that government made, especially in term of trade.



## CHAPTER 5

### RESULT AND ANALYSIS

#### 5.1. Constant Market Share Analysis

Constant market share analysis is one tool to analyze product competitiveness. There are three variables in CMSA to see the competitiveness effect of a product namely growth standard, product composition effect and market distribution effect.

Growth standard parameter indicates the common standard of country's growth export products to the world. The export of the competitor countries to Indonesia can be seen through this growth. If the export standard growth parameter is higher, it means that Indonesia's export is improve or in contrary.

The product composition effects is needed to see the market respond for the product. It can be positive or negative. The positive explain that the exporter country export the product to the country which has a higher growth of import compare to import growth of the group of this product. For example, if the export growth of Indonesian pepper is higher than the import growth of the world export / country destination export of the group of pepper means Indonesian pepper composition product in the world has a positive effects or in contrary. The main factor that influences product composition effect are product development and diversification.

The market distribution is a variable to see the accuracy and proper market destination. It can be positive or negative. The parameter can be positive if the exporter country becomes the attention to distribute its market to the center of the demand growth or contrary.

##### 4.1.1. Constant Market Share Analysis for Pepper HS 090411

The competitiveness indicates the increase or decrease (net gain or loss) in the export share relatively to the standard growth after calculating the change of the product composition and market distribution. The parameter can be positive or negative. If the parameter is positive, it means that the product is strong among other competitors. In contrary, if it is negative that means the product is weak.



Table 5.1. CMS Analysis Result for HS 090411

| Exporter Countries | Standard Growth | Product Composition | Market Distribution | Competitiveness |
|--------------------|-----------------|---------------------|---------------------|-----------------|
| India              | 0.30            | -0.02               | 0.04                | 0.69            |
| European Union     | 0.26            | -0.02               | 0.07                | 0.69            |
| China              | 0.72            | -0.06               | -0.24               | 0.58            |
| Germany            | 0.67            | -0.05               | -0.11               | 0.49            |
| Vietnam            | 0.51            | -0.04               | 0.18                | 0.35            |
| Brazil             | 0.97            | -0.08               | 0.10                | 0.003           |
| Malaysia           | 1.89            | -0.15               | -0.57               | -0.18           |
| Indonesia          | 2.31            | -0.18               | -0.91               | -0.22           |
| Netherlands        | 1.72            | -0.13               | 0.27                | -0.85           |
| Mexico             | 8.49            | -0.66               | -0.05               | -6.79           |
| Singapore          | 18.97           | -1.47               | 3.16                | -19.67          |

During the period of investigation, product Composition from main exporter countries in average is negative. It means that most countries are not appropriate in choosing their product or the diversification of the product is not correct and does not appropriate for the market. Market does not respond to the product that offered by the exporting countries positively.

Market distribution describes the accurate country destination to export. The result showed that Singapore, Netherlands, Vietnam, Brazil, EU and India had positive impact. Meanwhile, Indonesia, Malaysia, China, Germany and Mexico had negative impact. Indonesia has the problem in choosing market for the product. In the other word, the export country destination for pepper neither crushed nor ground is not an appropriate market.

The result of CMS analysis showed that competitiveness effect of Vietnam (0.35), Brazil (0.003), India (0.69), European Union (0.69), and China (0.58) for the product is positive. This condition reflects that the pepper neither crushed nor ground from those countries can compete with the other exporting countries in the world. Meanwhile, Indonesia (-0.22), Singapore (-19.67), Malaysia (-0.18), Netherlands (-0.85) and Mexico (-6.79) have negative effects. It means those countries faced a high competitive condition for the product in the world's market. Indonesia as one of the main exporter country has negative

competitiveness. Although the standard growth is positive but its product composition and market distribution are negative. On the other word, Indonesia losses from the other exporter countries that have the positive effect.

The competitiveness of the product depends on the three indicators namely standard growth, composition effect, and market distribution. CMS analysis of pepper neither crushed nor ground for main exporter countries showed as follows:

- 1) Vietnam competitiveness is positive (0.35%). It means that Vietnam's pepper can compete with the pepper from the other exporting countries although its composition product has negative impact (-0.04%). It means that for this product Vietnam has a problem in composing or diversification the product. Meanwhile, the standard growth (0.51%) and market distribution (0.18%) have positive impact. Therefore, Vietnam's pepper acceptable in its market and Vietnam can penetrate its products properly. In 2003, Vietnam exported to the world as much as USD 104,569.30 million and in 2007 up to USD 261,200.15 million. Vietnam trade partner were Germany, United Arab Emirates, United States, Pakistan, Egypt, Arab Rep., India, Netherlands, Russian Federation, Singapore, Poland, Ukraine.
- 2) Indonesia competitiveness of this product has negative impact (-0.22). Meanwhile, in composition, Indonesia also has negative impact namely -0.18. It means that the exported product is not appropriate with market destination. The composition of the product might be concentrated in neither ten HS digit such as white pepper, neither crushed nor ground (HS 0904111000), black pepper neither crushed nor ground (HS 0904112000) or neither crushed nor ground (HS 0904119000). Based on the Ministry of Agriculture's data, in 2007, Indonesia exported white pepper neither crushed nor ground as much as USD 67,139 million equal as 15,544 tons. For black pepper neither crushed nor ground, Indonesia exported as much as USD 59,148 millions or equal as 20,881 tons. Meanwhile, for neither crushed nor ground its value reached USD 4,969 millions or equal as 1,577 tons.

On the other hand, Indonesia's market distribution has negative impact namely -0.91. It explained that the market is not suitable with the product. For this product Indonesia has a problem in market penetration. Therefore, it is

necessary to expand the market and find a new exciting market. The other problem is the product diversification and product development. It could be maintain through good product standardization. Indonesia main destination market for the product were Singapore, United States, Netherlands and Germany, the other countries such as Japan, Hong Kong, China and Australia imported from Indonesia a few amounts of product. For white pepper, main Indonesia's markets were United States, Vietnam and India. The others bought the product only a little quantity such as Pakistan, Ukraine and France. Meanwhile, although Indonesia's standard growth was positive (2.31) but it still below the world growth. Indonesian product faces a high competitive in the world market. Based on WITS data, in 2003, Indonesia exported to the world as much as USD 93,202.83 million and in 2007 increased to USD 131,257.02 million. Indonesia main partner were United States, Singapore, Netherlands, Germany, India, Vietnam, Japan, Malaysia, Taiwan, Russian Federation.

- 3) Brazil competitiveness is positive (0.003). Although its product composition is negative (-0.08) but its both standard growth and market distribution have positive impact. The positive competitiveness indicates that the product is excited in the market. The product can fulfill the standard that market asks beside the pricing factor. In 2003, Brazil's value export was USD 56,815.14 million and up to USD 111,692.01 million in 2007. Main importing countries for Brazil's product were United States, Germany, Spain, Netherlands, Argentina, France, Mexico, Egypt, Arab Rep.
- 4) Malaysia competitiveness of this product is negative namely (-0.18). It explained a negative impact in its product composition (-0.15) and market distribution (-0.57). Malaysia cannot attract its market appropriately. It might be caused of the low product standard, uncompetitive market, less advertising and promotion or the product was concentrated in ten HS digit such as black and white pepper not in six HS digit. In 2003, Malaysia exported this product as much as USD 29,769.43 million and in 2007 up to USD 44,580.58 million. Malaysia main trade partner were Japan, Singapore, Korea, Rep., Taiwan, Spain, Vietnam, China, Germany, United States, Hong Kong.

- 5) India has positive impact in its competitiveness (0.69). Its standard growth (0.30) and market distribution (0.04) are positive, meanwhile product composition ((-0.02) is negative. The positive competitiveness illustrates that the product penetrates a good market. India sells the product to exciting market. Therefore, the product could be accepted. The others aspect that support the product are competitive pricing and good standard of product. In 2003, India exported the product as much as USD 23,035.97 million, and in 2007 up to USD 94,989.14 million. India main importing countries were United States, Germany, Italy Canada, Singapore, Sweden, United Arab Emirates, Poland.
- 6) Singapore has negative competitiveness (-19.67), although its standard growth (18.97) is higher and its market distribution (3.16) is also positive but product composition has negative impact (-1.47). It clear that Singapore is not the real producer of the pepper. This country only re-exports the pepper from other exporting countries such as Indonesia. Therefore, Singapore cannot maintain the quality of the product by its self. In 2003, Singapore exported the product as much as USD 47,987.89 million, and in 2007 up to USD 50,370.19 million. Singapore main trade partner were United Arab Emirates, Indonesia, Turkey, Germany, Saudi Arabia, Japan, Korea, Rep., United States, Vietnam.
- 7) Netherlands has negative competitiveness (-0.85). Market distribution (0.27) and standard growth (1.72) are positive but its product composition (-0.13) is negative. Negative impact of competitiveness could be caused of low quality of product. The other could be explained through the low product diversification and product development. In 2003, Netherlands exported the product as much as USD 21,160.43 million, and in 2007 up to USD 32,789.93 million. Netherlands main trade partner were Germany, France, Poland, Austria, Belgium, United Kingdom, Hungary, Spain.
- 8) European Union has positive competitiveness (0.69) on this product. It explained that market distribution (0.07) and standard growth (0.26) have a positive impact. Meanwhile, its product composition (-0.02) has negative impact. Although, EU's product can be accepted in their market but EU still has a problem in their product composition (product development and

diversification). In 2003, European Union exported the product as much as USD 4,016.15 million, and in 2007 up to USD 18,755.69 million. European Union main trade partner were United States, Russian Federation, Switzerland, Norway, Ukraine, Costa Rica, Canada, Australia.

- 9) Mexico has negative impact in competitiveness (-6.79), market distribution (-0.05) and product composition (-0.66) but its standard growth (8.49) has positive impact. This country has the problem in market penetration and product development. That's why the product can not attract the market. In 2003, Mexico exported the product as much as USD 10,409.91 million, and in 2007 up to USD 11,564.22 million. Mexico main trade partner were Netherlands, Russian Federation, Israel, Germany, United States, Egypt, Arab Rep., Poland.
- 10) Germany has positive competitiveness (0.49). Market distribution (-0.11) and product composition (-0.05) have negative impact, meanwhile standard growth (0.67) has positive impact. Germany's product can reach its market. In 2003, Germany exported the product as much as USD 6,546.00 million, and in 2007 up to USD 15,689.00 million. Germany main trade partner were Poland, Austria, France, Netherlands, Switzerland, Norway, Denmark, United Kingdom.
- 11) China has positive competitiveness (0.58). Meanwhile, market distribution (-0.24) and product composition (-0.06) have negative impact but standard growth (0.72) has positive impact. China can attract its product in the market because of the growth appears positive although still has a problem in market penetration and product development. In 2003, China exported the product as much as USD 5,093.37 million, and in 2007 up to USD 11,799.11 million. China main trade partner were Indonesia, Malaysia, Netherlands, United States, Germany, France, Singapore, Taiwan, United Arab Emirates, Vietnam.

CMS analysis above concluded that Indonesia has negative effect of competitiveness (-0.22). Meanwhile, Indonesia's main competitors are Vietnam, Brazil, India, European Union, Germany and China. The threat countries for Indonesian product are Malaysia, Singapore, Netherland and Mexico.

### 5.1.1 Constant Market Share Analysis for Pepper HS 090412

There are 12 countries including Indonesia in this section that to be analyzed. CMS analysis result for HS 090412 showed that among investigated countries, Indonesia competitiveness effect is positive. The other countries that had a positive effect were Vietnam, India, China, Malaysia, USA, and Singapore. At the same time, Germany, Brazil, UK, European Union, and Netherlands had a negative effect. The positive effect implies that the product from the exporting countries can compete with others. On the contrary, a negative effect explained that the country has a lower competitiveness.

Table 5.2. Constant Market Share Analysis Result for HS 090412

| Exporter Countries | Standard Growth | Product Composition | Market Distribution | Competitiveness |
|--------------------|-----------------|---------------------|---------------------|-----------------|
| Vietnam            | 0.05            | 0.02                | 0.08                | 0.86            |
| Indonesia          | 0.23            | 0.09                | -0.07               | 0.75            |
| China              | 0.36            | 0.14                | -0.20               | 0.70            |
| India              | 0.31            | 0.13                | -0.12               | 0.68            |
| Singapore          | 0.25            | 0.10                | 0.13                | 0.51            |
| Malaysia           | 0.57            | 0.23                | 0.09                | 0.10            |
| USA                | 0.35            | 0.14                | 0.41                | 0.09            |
| Netherlands        | 0.50            | 0.20                | 0.39                | -0.09           |
| Germany            | 1.46            | 0.59                | -0.69               | -0.36           |
| European Union     | 1.48            | 0.60                | -0.71               | -0.36           |
| Brazil             | 0.52            | 0.21                | 0.65                | -0.38           |
| United Kingdom     | 1.96            | 0.79                | -0.21               | -1.54           |

During the period of investigated, some economies such as European Union, Germany, UK, China and Indonesia have negative impact in market distribution. It means that Indonesia has a problem in market distribution or in expanding the importing countries for the product. Meanwhile, Vietnam, Brazil, Malaysia, Singapore and Netherlands have a positive impact. They exported the product to the right market.

The composition product explains that the country that has positive impact can sell the product appropriately. All of selected countries showed that they can fulfill the market needed. In addition, the analysis also showed that all of the

selected countries had a positive impact in the standard growth. UK, EU and Germany are the leading countries followed by Malaysia, Brazil, Netherlands, China, USA, India, Singapore, Indonesia and Vietnam.

#### CMSA Result for Pepper Crushed or Ground

- 1) Indonesia has positive competitiveness (0.75) for this product. The positive competitiveness describes that the product is acceptable although Indonesia has a problem in market penetration which has negative impact (-0.07). It expresses that destination country for selling this product is not suitable. Based on Ministry of Agriculture's data, Indonesia main destination country for white pepper crushed or ground (HS 0904121000) were Korea, Australia, United States and Netherlands, and for black pepper crushed or ground, Indonesia main partner were Japan, Singapore, India and Vietnam. Meanwhile, Indonesian product composition has positive impact (0.02). It means that Indonesia sells the appropriate product in term of white pepper, black pepper and others. In 2003, Indonesia exported to the world as much as USD 241.752 million and in 2007 increased to USD 1,239.86 million. Indonesia main partner were Japan, Malaysia, Australia, Netherlands, India, Singapore, Korea, Rep., Vietnam, United States, Pakistan, Canada, France, and United Kingdom.
- 2) India competitiveness appears positive (0.68) and its product composition also seems positive impact (0.13). The condition illustrates that India's product is acceptable and well responded. But for market distribution, India has negative impact (-0.12). It means India has a problem in choosing a good market for the product. In 2003, India exported to the world as much as USD 6,454.21 million and in 2007 increased to USD 25,895.47 million. India main trading partner were United States, United Kingdom, Australia, Belgium, Canada, Germany, Philippines, Korea, Rep., Brazil.
- 3) Germany must face a high competitive for the product because its competitiveness was negative (-0.36). Furthermore, Germany has also a problem in market distribution (-0.69). However, it still has positive impact (0.59). In 2003, Germany exported to the world as much as USD 16,285.00

million and in 2007 increased to USD 26,773.00 million. Germany main partner were France, United States, United Kingdom, Austria, Brazil, Spain, Netherlands, Denmark.

- 4) Vietnam has good performance for this product, its all components of competitiveness appears positive impact such as competitiveness effect (0.86), Market distribution (0.08), and product competition (0.02). It means that Vietnam's product is acceptable and very competitive. Vietnam can penetrate and expand this product appropriately. In 2003, Vietnam exported to the world as much as USD 495,642 million and in 2007 increased to USD 10,269,171 million. Vietnam main partner were UK, Australia, USA, Belgium, Canada, Germany, Sweden.
- 5) China has positive competitiveness (0.70). The effect can be explained that China's product accepted by the market. Meanwhile, China did not distribute the product to the right market which explained by negative impact for market distribution (-0.20). On the other hand, China sells the appropriate product; it appears in its composition product that has positive impact (0.14). In 2003, China exported to the world as much as USD 1,848.35 million and in 2007 increased to USD 6,697.54 million. China main partner were Netherlands, Indonesia, Hong Kong, United States, Vietnam, Singapore, Malaysia.
- 6) Brazil has negative competitiveness (-0.38). It means that the growth negatively affected Brazil competitiveness during period of investigation. In 2003, Brazil exported to the world as much as USD 1,957.89 million and in 2007 increased to USD 5,505.80 million. Brazil main partner were Germany, United States, Angola, Colombia, Argentina, Uruguay.
- 7) United Kingdom has negative competitiveness (-1.54). Its growth affected negatively. UK has also a problem in market distribution that tends to negative (-0.21). But its product composition has positive impact (0.79). In 2003, United Kingdom exported to the world as much as USD 3,519.10 million and in 2007 increased to USD 5,205.52 million. United Kingdom main partner were Ireland, Germany, Sweden, France, Finland, Italy, Denmark, Netherlands, Spain.



- 8) Malaysia has a good condition for the product. It's all competitiveness indicators seem have positive impact namely competitiveness effect (0.10), market distribution (0.09), and product composition (0.23). This country can reach its market because of a good penetration and appropriate composition. In 2003, Malaysia exported to the world as much as USD 3,835.61 million and in 2007 increased to USD 10,148.52 million. Malaysia main partner were Japan, Singapore, Hong Kong, France, Korea, Rep., Philippines, Australia.
- 9) USA has positive impact for all components of competitiveness such as competitiveness effect (0.09), market distribution (0.41), product composition (0.14) and its standard growth (0.35). It means that USA's product enters the exciting market and has a good composition. In addition, its growth is positive. In 2003, USA exported to the world as much as USD 3,835.021 million and in 2007 increased to USD 14,135.065 million. USA main partner are Canada, Mexico, Sweden, UK, Japan, Jamaica, Dominica, Chile.
- 10) Singapore has a good performance with competitiveness effect (0.51), market distribution (0.13), and product composition (0.10) all appear to be positive. It means that Singapore can compete with other exporting countries. This country can expand and penetrate the market properly. In 2003, Singapore exported to the world as much as USD 3,476.47 million and in 2007 increased to USD 16,377.27 million. Singapore main partner were United States, Japan, Germany, United Arab Emirates, China, Belgium, France.
- 11) European Union has negative effect of competitiveness namely -0.36. EU cannot compete with the other exporting countries. It might be caused of its own problem in market penetration and product development. In 2003, European Union exported to the world as much as USD 11,010.02 million and in 2007 increased to USD 18,020.85 million. European Union main partner were United States, Russian Federation, Brazil, Switzerland, Norway, Ukraine, Canada, Croatia.
- 12) Netherlands has negative effect of competitiveness (-0.09). This condition describes the problem such as market penetration and product development. In 2003, Netherlands exported to the world as much as USD 7,192.22 million

and in 2007 increased to USD 20,641.80 million. Netherlands main partner were United Kingdom, Germany, Belgium, France, Denmark, Switzerland.

From the analysis above, it can be concluded that Indonesia has positive competitiveness (0.75) for this product. Indonesia's competitors were India, Vietnam, China, Malaysia, Singapore, and USA. However, Indonesia's threat for this product is Germany, Brazil, and European Union, Netherlands.

The available data shows that most of producer countries (mostly from developing country) including Indonesia become the exporting countries for pepper product HS 090411, but for HS 090412 they are exporting only a little compared to others (mostly developed country). It means that most developing country sell they raw material. On the contrary, developed country import from them raw material and they export the product that has a more value added. In Indonesia case, although famous as a big producer country of pepper (Black and White pepper) the product does not have enough competitiveness particularly for HS 090411.

Indonesian competitiveness for this product became negative; it means that Indonesia cannot compete with the other, especially Vietnam. However, Indonesian competitiveness for the product HS 090412, is positive, but its share is too small.

## **5.2. Matrix Competitiveness**

The matrices competitiveness illustrates the competitiveness a good or some goods in particular destination country through the indicators such as percentage of import, market share, percentage of export, and specialization. From the indicators, the product can be classified as rising stars, declining stars, missed opportunity or retreats.

### **5.2.1 Matrix Competitiveness for Pepper HS 090411**

There are ten investigated countries to be examined in this section. The result could be classified into four variables namely as rising stars, declining stars, missed opportunity or retreats.

The classification indicates the growing or increasing of the products in each variable. The growing has positive sign and its means that product has a good competitiveness and appropriately distributed in destination country. Meanwhile the declining has negative sign and the product cannot compete relatively and it's distributed in destination country is not so properly.

Table 5.3. Competitiveness Matrix for HS 090411

| Export Country Destinations | Status               |                      |                      |                 |
|-----------------------------|----------------------|----------------------|----------------------|-----------------|
|                             | Percentage of Import | Market Share         | Percentage of Export | Specialization  |
| Australia                   | Declining            | Rising Stars         | Declining Stars      | Declining Stars |
| Belgium                     | Growing              | Missed opportunities | Rising Stars         | Rising Stars    |
| Canada                      | Growing              | Rising Stars         | Rising Stars         | Rising Stars    |
| Germany                     | Growing              | Rising Stars         | Rising Stars         | Rising Stars    |
| Hong Kong, China            | Declining            | Declining Stars      | Declining Stars      | Declining Stars |
| Malaysia                    | Growing              | Rising Stars         | Rising Stars         | Rising Stars    |
| Russian Federation          | Declining            | Retreats             | Retreats             | Declining Stars |
| Singapore                   | Declining            | Declining Stars      | Retreats             | Declining Stars |
| South Africa                | Growing              | Rising Stars         | Rising Stars         | Rising Stars    |
| United States               | Growing              | Missed opportunities | Rising Stars         | Rising Stars    |

Indonesian competitiveness of pepper neither crushed nor ground (HS 090411) in export destination country can be seen at table above.

In market share side, the result showed that from ten selected countries there are five countries classified as *rising star* namely Australia, Canada, Germany and South Africa. The Rising Star describes that the demand of the pepper (HS 090411) from Indonesia and the world has a positive growth in those countries. Belgium and United States are classified as *missed opportunist*. It means that Indonesian pepper is not well responded or cannot follow the trend demand in those countries. Singapore is classified as *declining stars*. It illustrates that those countries are the saturated market for Indonesian pepper. Russia is classified as retreats. *Retreat* expresses the condition where the demand of Indonesian product becomes weak in those countries.

Market share implies the Indonesian share of the pepper product in the world demand. During period of investigation, Indonesian market share to the destination countries seemed in different value.

In percentage of export, Indonesian product has positive growth in six countries such as Belgium, Canada, Germany, Malaysia, South Africa, and United States. They are classified as *rising stars*. Australia and Hong Kong are categorized as declining stars. Indonesian product is saturated in those countries. On the other hand, Indonesian product is weak or classified as retreat in Russia and Singapore.

In specialization term, the countries that classified as *rising stars* are Belgium, Germany, Canada, Malaysia, South Africa, and United States. Indonesian product has positive growth in those countries. Meanwhile, Australia, Hong Kong, Russia, Singapore are classified as *declining stars*. It describes that Indonesian product is saturated in those markets.

Meanwhile, percentage of import showed that there are seven countries that have positive growth. They are Belgium, Canada, Germany, Malaysia, South Africa, and United States. Meanwhile, Australia, Hong Kong, Russia, and Singapore are declining or have negative growth.

Based on the data and analysis, Indonesia's best market for pepper neither crushed nor ground are Canada, Germany, Malaysia and South Africa, while second best market is United States. However, Indonesia's market is weak in Australia, Hong Kong, India, Russia, and Singapore.

### **5.2.1. Matrix Competitiveness for Pepper HS 090412**

In this section there are eight countries to be analyzed. Most of them are Indonesian main export destination countries. The chosen countries are based on data availability to make the analysis properly.

Table 5.4. Competitiveness Matrix for HS 090412

| Export Country Destinations | Status               |                      |                      |                      |
|-----------------------------|----------------------|----------------------|----------------------|----------------------|
|                             | Percentage of Import | Market Share         | Percentage of Export | Specialization       |
| Canada                      | Growing              | Raising Stars        | Missed Opportunities | Raising Stars        |
| France                      | Declining            | Retreats             | Declining Stars      | Retreats             |
| India                       | Declining            | Missed Opportunities | Retreats             | Missed Opportunities |
| Japan                       | Growing              | Raising Stars        | Raising Stars        | Raising Stars        |
| Korea, Rep.                 | Growing              | Raising Stars        | Raising Stars        | Raising Stars        |
| Malaysia                    | Growing              | Raising Stars        | Missed Opportunities | Raising Stars        |
| Netherlands                 | Growing              | Raising Stars        | Missed Opportunities | Raising Stars        |
| Singapore                   | Growing              | Raising Stars        | Missed Opportunities | Raising Stars        |

In market share, the matrix competitiveness analysis showed that market share for Indonesian pepper product HS 090412 in France (-0.00030) market had negative impact. The others Indonesian destination countries had a positive impact such as Canada (0.0002), Japan (0.05266), Korea (0.01111), Malaysia (0.02378), Netherlands (0.00459) and Singapore (0.00232). It explained that Indonesian product grow positively during the period of investigation. Canada, Japan, Korea, Malaysia, Netherlands, and Singapore are categorized as rising stars. It means that Indonesian product has positive growth in those markets. Meanwhile, India is classified as missed opportunity. Indonesian product in those countries cannot follow the world demand and not well- interested.

Meanwhile, percentage of export from the selected investigation countries Japan and Korea are classified as rising stars. Indonesian product showed positive growth in the markets. Moreover, Canada, Netherlands, Malaysia, and Singapore are graded as missed opportunity that means Indonesian pepper is not well responded in those market. France is classified as declining, while India as retreat or became weak.

In specialization side, the countries that classified as rising stars are Canada, Japan, Korea, Malaysia, Netherlands, and Singapore. India categorized as missed opportunity, while France as retreats or Indonesian product became weak.

However, percentage of import showed that Canada, Japan, Korea, Malaysia, Netherlands and Singapore have positive growth and classified as growing market. France and India both are declining in growth and not so good for Indonesian pepper.

Based on the data, Indonesian pepper crushed or ground in the destination countries is attractive in Japan and Korea, while the second best market are Malaysia, Netherland and Singapore but Indonesia's market is weak in India and France.

### 5.3. Analysis of CMSA and Matrix Competitiveness

Joint analysis is needed to confirm the result of two tools. Constant market share analysis is divided into three variables to examine the competitiveness effect of the product, namely growth standard, composition effect and market distribution effect. Therefore, competitiveness effect as the result of CMS analysis cannot stand independently. Meanwhile, matrix competitiveness is divided into four variables such as percentage of import, percentage of export, market share and specialization. Each variable classifies into rising star, miss opportunity, declining stars and retreats. Two classifications indicate the positive impact where others are negative impact.

Table 5.5. Joint Analysis of Neither Pepper Crushed nor Ground (HS 090411)

| No | Export Destination Country | Matrix Competitiveness | CMSA Classification | CMSA Index |
|----|----------------------------|------------------------|---------------------|------------|
| 1  | Australia                  | Rising Stars           | Competitive         | 447.2883   |
| 2  | Belgium                    | Missed opportunities   | Competitive         | 798.8301   |
| 3  | Canada                     | Rising Stars           | Competitive         | 289.0601   |
| 4  | Germany                    | Rising Stars           | Competitive         | 1285.873   |
| 5  | Hong Kong, China           | Declining Stars        | Competitive         | 533.4207   |
| 6  | Malaysia                   | Rising Stars           | Competitive         | 1421.511   |
| 7  | Singapore                  | Declining Stars        | Uncompetitive       | -10843.1   |
| 8  | South Africa               | Rising Stars           | Competitive         | 4.510329   |
| 9  | United States              | Missed opportunities   | Uncompetitive       | -3843.06   |
| 10 | Russia                     | Retreats               | Uncompetitive       | -4634.87   |

The analysis of two tools can be seen through competitiveness effect in CMSA and market share in matrix competitiveness. Based on the result of two tools, it shows that for pepper HS 090411; neither crushed nor ground has the same result. From ten investigated Indonesian export destination countries is only United States that has different result. Although this product has positive market share in the US but the competitiveness effect of this product is still negative. It means that the product concentrated in the other HS digit or not concentrated appropriately. It could be focused on HS ten digit namely black or white pepper. But in general, the result appears the same.

The result shows that Australia, Belgium, Canada, Germany, Malaysia, South Africa and United States are becoming Indonesian potential market for this product that classified as rising stars or missed opportunities in matrix competitiveness and have competitive effects based on CMS analysis. On the other hand, Hong Kong, Singapore, and Russia classified as declining stars, retreats or this product is uncompetitive in those countries.

According to Ansoff growth matrix, the competitive product can be caused by good market penetration. The good penetration can be achieved by a combination of competitive pricing strategies, advertising, and sales promotion. In contrast, the uncompetitive product indicates that the product needs to improve in marketing penetration. The table below shows the result of pepper HS 090412 for each methodological analysis.

Table 5.6. Joint Analysis of Pepper Crushed nor Ground (HS 090412)

| No | Export Destination Country | Matrix Competitiveness | CMSA Classification | CMS Analysis |
|----|----------------------------|------------------------|---------------------|--------------|
| 1  | Canada                     | Raising Stars          | Competitive         | 0.222        |
| 2  | France                     | Retreats               | Uncompetitive       | -4.18037     |
| 3  | India                      | Missed Opportunities   | Competitive         | 29.06        |
| 4  | Japan                      | Raising Stars          | Competitive         | 838.987      |
| 5  | Korea, Rep.                | Raising Stars          | Competitive         | 20.55        |
| 6  | Malaysia                   | Raising Stars          | Competitive         | 140.0457     |
| 7  | Netherlands                | Raising Stars          | Competitive         | 38.85        |
| 8  | Singapore                  | Raising Stars          | Competitive         | 28.481       |

The analysis result for pepper crushed or ground (HS 090412) appears to be same. Both CMSA and matrix competitiveness have the same result. Seven of eight Indonesia export destination countries show positive competitiveness, they are Canada, India, Japan, Korea, Malaysia, Netherlands and Singapore. It means that Indonesia's product is acceptable and the market penetration is appropriate.





## CHAPTER VI

### CONCLUSION AND RECOMMENDATION

#### 6.1. Conclusion

The analysis of Indonesian pepper products concluded as follow:

- § CMS analysis shows that Indonesian pepper HS 090411 is not competitive in the global market. Indonesia has negative competitiveness effect (-0.22). On the other hand, Indonesia has also negative impact on market distribution (-0.91) and product composition (-0.18).
- § Indonesian main competitor for pepper neither crushed nor ground are Vietnam, Brazil, European Union, Germany and China. Those countries seem have positive competitiveness.
- § For pepper crushed or ground CMS analysis shows that Indonesia has positive competitiveness (0.75) but has a problem in market distribution (-0.07).
- § India, Vietnam, China, Malaysia, USA, and Singapore are Indonesian competitors for pepper crushed or ground.
- § Competitiveness matrix result shows that the best market for Indonesian Pepper Neither Crushed nor Ground are: Canada, Germany, Malaysia, and South Africa; those countries have a positive growth and graded as rising stars. United States that its market share classified as missed opportunity can be Indonesia's potential market because the other variables categorize as rising stars.
- § Meanwhile, based on competitiveness matrix analysis the best market for Indonesian Pepper Crushed or Ground are Japan and Korea that have a good remark in all variables of competitiveness. Malaysia, Netherland and Singapore are also good market for the product although their percentage of export variables classified as missed opportunity.
- § Joint analysis between matrix competitiveness and CMS analysis shows that appropriate market for pepper HS 090411 are Australia, Belgium, Canada, Germany, Hong Kong, Malaysia, and South Africa.

§ Joint analysis between matrix competitiveness and CMS analysis shows that appropriate market for pepper HS 090412 are Canada, Korea, Malaysia, Netherland, Singapore, and India

## 6.2. Recommendation

Based on analysis result the writer recommends:

- § Indonesia government should support the pepper commodity through the attention and efforts which can encourage Indonesian pepper competitiveness in the global market such as product development and diversification to reach a better quality product that has the international standard. At the same time, market penetration is needed to expand the market and find a new exciting market. This problem can be solved by marketing and promotion assistance.
- § Further study is supposed to give more analysis about the determinant variables that influence Indonesian pepper product competitiveness in the global market. It is important to help government making the appropriate policy.

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## Annex 1. Ten Biggest world's pepper importer (2007)

| No. | Country                  | Quantity (tones) | Value (1000 \$) | Unit value (\$/tones) |
|-----|--------------------------|------------------|-----------------|-----------------------|
| 1   | United States of America | 63941            | 208480          | 3261                  |
| 2   | Germany                  | 31460            | 112480          | 3575                  |
| 3   | Netherlands              | 14745            | 50223           | 3406                  |
| 4   | Singapore                | 13154            | 47822           | 3636                  |
| 5   | India                    | 13301            | 44436           | 3341                  |
| 6   | Japan                    | 9108             | 43548           | 4781                  |
| 7   | United Kingdom           | 7201             | 34307           | 4764                  |
| 8   | France                   | 8656             | 33613           | 3883                  |
| 9   | Canada                   | 6734             | 25160           | 3736                  |
| 10  | Belgium                  | 4583             | 21468           | 4684                  |

Source : FAO Data

## Annex 2. The Ten Biggest Country Producer of Pepper (2007)

| No. | Country    | Production (USD) 1000) | Production (MT) |
|-----|------------|------------------------|-----------------|
| 1   | Viet Nam   | 416769                 | 90300           |
| 2   | Brazil     | 358938                 | 77770           |
| 3   | Indonesia  | 342143                 | 74131           |
| 4   | India      | 318461                 | 69000           |
| 5   | China      | 120923                 | 26200           |
| 6   | Sri Lanka  | 89492                  | 19390           |
| 7   | Malaysia   | 87692                  | 19000           |
| 8   | Thailand   | 48087                  | 10419           |
| 9   | Mexico     | 31633                  | 6854            |
| 10  | Madagascar | 24000                  | 5200            |

Source : FAO Data

## Annex 3. Matrix Competitiveness for Pepper HS 090411 (Market Share)

| No. | Country            | 2003     | 2004     | 2005     | 2006     | 2007     |
|-----|--------------------|----------|----------|----------|----------|----------|
| 1   | Australia          | 0.082934 | 0.12841  | 0.243042 | 0.216435 | 0.164    |
| 2   | Belgium            | 0.015491 | 0.073981 | 0.092834 | 0.055327 | 0.083117 |
| 3   | Canada             | 0.047452 | 0.021393 | 0.012396 | 0.017171 | 0.06799  |
| 4   | Germany            | 0.082068 | 0.080689 | 0.077979 | 0.096154 | 0.101437 |
| 5   | Hong Kong, China   | 0.05894  | 0.267648 | 0.18174  | 0.15491  | 0.234638 |
| 6   | Malaysia           | 0.038368 | 0.003971 | 0.01167  | 0.061351 | 0.254758 |
| 7   | Russian Federation | 0.649915 | 0.418728 | 0.372109 | 0.135329 | 0.29497  |
| 8   | Singapore          | 0.801706 | 0.585368 | 0.995328 | 0.643875 | 0.564368 |
| 9   | South Africa       | 0.054571 | 0.008301 | 0.033761 | 0.029293 | 0.047007 |
| 10  | United States      | 0.255545 | 0.177482 | 0.173606 | 0.217787 | 0.282785 |

## Annex 4. Matrix Competitiveness for Pepper HS 090411 (Percentage of Export)

| No. | Country            | 2003    | 2004    | 2005    | 2006    | 2007    |
|-----|--------------------|---------|---------|---------|---------|---------|
| 1   | Australia          | 0.00020 | 0.00034 | 0.00049 | 0.00031 | 0.00027 |
| 2   | Belgium            | 0.00010 | 0.00050 | 0.00058 | 0.00040 | 0.00071 |
| 3   | Canada             | 0.00095 | 0.00031 | 0.00019 | 0.00029 | 0.00157 |
| 4   | Germany            | 0.00287 | 0.00237 | 0.00172 | 0.00264 | 0.00451 |
| 5   | Hong Kong, China   | 0.00008 | 0.00021 | 0.00013 | 0.00012 | 0.00036 |
| 6   | Malaysia           | 0.00007 | 0.00001 | 0.00002 | 0.00020 | 0.00042 |
| 7   | Russian Federation | 0.01521 | 0.00648 | 0.00539 | 0.00218 | 0.00395 |
| 8   | Singapore          | 0.00753 | 0.00303 | 0.00278 | 0.00249 | 0.00191 |
| 9   | South Africa       | 0.00054 | 0.00008 | 0.00028 | 0.00029 | 0.00057 |
| 10  | United States      | 0.00368 | 0.00197 | 0.00181 | 0.00249 | 0.00468 |

## Annex 5. Competitiveness Matrix Pepper HS 090411 (Specialization)

| No. | Country            | 2003     | 2004     | 2005     | 2006     | 2007     |
|-----|--------------------|----------|----------|----------|----------|----------|
| 1   | Australia          | 4.619772 | 8.273705 | 14.72443 | 11.6545  | 8.346505 |
| 2   | Belgium            | 3.453215 | 19.7911  | 25.13252 | 14.90204 | 22.6701  |
| 3   | Canada             | 31.9781  | 14.26692 | 8.788257 | 11.49112 | 49.04487 |
| 4   | Germany            | 32.07707 | 32.36266 | 31.6262  | 39.44848 | 42.02552 |
| 5   | Hong Kong, China   | 12.42555 | 57.85118 | 40.70509 | 35.44627 | 60.93298 |
| 6   | Malaysia           | 1.534768 | 0.142819 | 0.402462 | 2.064922 | 7.810861 |
| 7   | Russian Federation | 689.8816 | 432.2799 | 300.8909 | 125.5044 | 304.6847 |
| 8   | Singapore          | 19.66371 | 15.3457  | 24.06091 | 15.93112 | 13.00566 |
| 9   | South Africa       | 11.47039 | 1.996836 | 8.27934  | 7.04353  | 8.550041 |
| 10  | United States      | 49.82386 | 33.2965  | 32.59822 | 40.27919 | 52.40214 |

## Annex 6. Competitiveness Matrix Pepper HS 090411 (Percentage of Import)

| No. | Country            | 2003    | 2004    | 2005    | 2006    | 2007    |
|-----|--------------------|---------|---------|---------|---------|---------|
| 1   | Australia          | 0.00004 | 0.00004 | 0.00003 | 0.00003 | 0.00003 |
| 2   | Belgium            | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00003 |
| 3   | Canada             | 0.00003 | 0.00002 | 0.00002 | 0.00002 | 0.00003 |
| 4   | Germany            | 0.00009 | 0.00007 | 0.00005 | 0.00007 | 0.00011 |
| 5   | Hong Kong, China   | 0.00001 | 0.00000 | 0.00000 | 0.00000 | 0.00001 |
| 6   | Malaysia           | 0.00004 | 0.00005 | 0.00006 | 0.00010 | 0.00005 |
| 7   | Russian Federation | 0.00002 | 0.00001 | 0.00002 | 0.00002 | 0.00001 |
| 8   | Singapore          | 0.00038 | 0.00020 | 0.00012 | 0.00016 | 0.00015 |
| 9   | South Africa       | 0.00005 | 0.00004 | 0.00003 | 0.00004 | 0.00007 |
| 10  | United States      | 0.00007 | 0.00006 | 0.00006 | 0.00006 | 0.00009 |

## Annex 7. Matrix Competitiveness for Pepper HS 090412 (Percentage of Import)

| No. | Country     | 2003      | 2004      | 2005      | 2006      | 2007      |
|-----|-------------|-----------|-----------|-----------|-----------|-----------|
| 1   | Canada      | 0.0000247 | 0.0000199 | 0.0000191 | 0.0000202 | 0.0000313 |
| 2   | France      | 0.0000181 | 0.0000165 | 0.0000141 | 0.0000097 | 0.0000130 |
| 3   | India       | 0.0000013 | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000001 |
| 4   | Japan       | 0.0000188 | 0.0000153 | 0.0000148 | 0.0000132 | 0.0000251 |
| 5   | Korea, Rep. | 0.0000058 | 0.0000045 | 0.0000046 | 0.0000054 | 0.0000060 |
| 6   | Malaysia    | 0.0000054 | 0.0000085 | 0.0000117 | 0.0000119 | 0.0000320 |
| 7   | Netherlands | 0.0000156 | 0.0000143 | 0.0000095 | 0.0000092 | 0.0000166 |
| 8   | Singapore   | 0.0000097 | 0.0000069 | 0.0000051 | 0.0000060 | 0.0000507 |

## Annex 8. Matrix Competitiveness for Pepper HS 090412 (Percentage of Export)

| No. | Country     | 2003    | 2004    | 2005    | 2006    | 2007    |
|-----|-------------|---------|---------|---------|---------|---------|
| 1   | Canada      | 0.00000 | 0.00004 | 0.00000 | 0.00002 | 0.00000 |
| 2   | France      | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 3   | India       | 0.00000 | 0.00001 | 0.00002 | 0.00000 | 0.00001 |
| 4   | Japan       | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 |
| 5   | Korea, Rep. | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 6   | Malaysia    | 0.00000 | 0.00002 | 0.00001 | 0.00000 | 0.00003 |
| 7   | Netherlands | 0.00000 | 0.00001 | 0.00000 | 0.00001 | 0.00001 |
| 8   | Singapore   | 0.00000 | 0.00011 | 0.00000 | 0.00000 | 0.00000 |



## Annex 9. Matrix Competitiveness for Pepper HS 090412 (Market Share)

| No. | Country     | 2003    | 2004     | 2005     | 2006    | 2007    |
|-----|-------------|---------|----------|----------|---------|---------|
| 1   | Canada      | 0.00000 | 0.00325  | 0.00000  | 0.00144 | 0.00002 |
| 2   | France      | 0.00032 | 0.00000  | 0.00026  | 0.00035 | 0.00002 |
| 3   | India       | 0.00000 | 67.42971 | 15.57588 | 0.00000 | 2.28531 |
| 4   | Japan       | 0.00000 | 0.00000  | 0.00780  | 0.00818 | 0.05266 |
| 5   | Korea, Rep. | 0.00000 | 0.00000  | 0.01922  | 0.02411 | 0.01111 |
| 6   | Malaysia    | 0.00590 | 0.06369  | 0.02245  | 0.01159 | 0.02968 |
| 7   | Netherlands | 0.00000 | 0.00483  | 0.00000  | 0.00906 | 0.00459 |
| 8   | Singapore   | 0.00000 | 0.63270  | 0.02572  | 0.00519 | 0.00232 |

## Annex 10. Matrix Competitiveness for Pepper HS 090412 (Specialization)

| No. | Country     | 2003        | 2004        | 2005        | 2006        | 2007        |
|-----|-------------|-------------|-------------|-------------|-------------|-------------|
| 1   | Canada      | 0           | 2.164850568 | 0           | 0.96339562  | 0.012887472 |
| 2   | France      | 0.179560199 | 0           | 0.195643724 | 0.261330384 | 0.011810584 |
| 3   | India       | 0           | 2972.045936 | 731.5522135 | 0           | 100.7974151 |
| 4   | Japan       | 0           | 0           | 0.225277262 | 0.218784564 | 1.414411668 |
| 5   | Korea, Rep. | 0           | 0           | 0.658077802 | 0.904010459 | 0.455226115 |
| 6   | Malaysia    | 0.23590583  | 2.290404398 | 0.774292312 | 0.390234874 | 0.910034515 |
| 7   | Netherlands | 0           | 0.86695611  | 0           | 1.586161863 | 0.849133263 |
| 8   | Singapore   | 0           | 16.58665704 | 0.621840347 | 0.128509523 | 0.053500917 |