



**UNIVERSITAS INDONESIA**

**THE COMPETITIVENESS OF INDONESIAN COCOA AND  
COCOA PRODUCTS IN THE US, SINGAPORE AND CHINA**

**TESIS**

**DWI HANAS NUR HARTONO  
0606152541**

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

## ENDORSEMENT

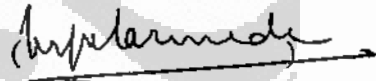
This thesis is proposed by

Name : Dwi Hanas Nur Hartono  
Student Registered Number : 0806469041  
Study Program : Master of Planning and Public Policy  
Thesis Title : The Competitiveness of Indonesian Cocoa and  
Cocoa Products in The US, Singapore and China.

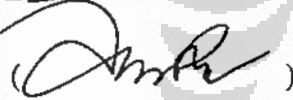
It has been defended to boards of examiners and submitted in partial fulfillment of the requirement for the degree of Master of Economics in Master of Planning and Public Policy, Faculty of Economics, University of Indonesia.

### BOARDS OF EXAMINERS

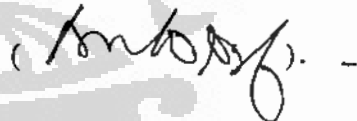
Supervisor : Prof. Dr. Lepi T. Tarmidi



Examiner : Arindra A. Zainal, Ph.D.



Examiner : Arianto A. Patunru, Ph. D.



Settled at : Jakarta

Date : Januari 2010

## STATEMENT OF AUTHORSHIP

*"I certify that the attached material is my original work. I declare that no other person's work has been used without acknowledgment".*

*Except where I have clearly stated that I have used some of this material elsewhere, it has not been presented by me for examination in any other course or unit at his or any other institution.*

*I understand that the work submitted may be reproduced and/or communicated by the University or third party authorized by the University for the purpose of detecting plagiarism.*

Name : Dwi Hanas Nur Hartono

Student Registered Number : 0806469041

Signature :



Date : December 2009

**PAGE OF ASSERTION AGREEMENT ON THESIS PUBLICATION FOR  
ACADEMIC INTEREST**

---

As civitas academia of University of Indonesia, I who signed on below:

Name : Dwi Hanas Nur Hartono  
Student Registered Number : 0806469041  
Study Program : Master of Planning and Public Policy  
Department : Economics  
Faculty : Economics  
Kind of Opus : Thesis

For development in science, I agree to give to University of Indonesia a **Non exclusive Royalty – Free Right** on my thesis entitled :

**“The Competitiveness of Indonesian Cocoa and Cocoa Products in the US, Singapore and China”.**

along with the availability of sets equipment (if needed). By a Non exclusive Royalty – Free Right, University of Indonesia has right to save, format, manage in the form of database, maintain and publicize my thesis without asking the permission from me as long as mentioning my name as writer / creator and as the owner of the copyright.

Thus this statement I made truly.

Made in : Jakarta

Date : December 2009



( Dwi Hanas Nur Hartono )

## ACKNOWLEDGEMENT

I would like to thank to the only Almighty Allah, because of His blessing, I could complete this research which is entitled of "The Competitiveness of Indonesian Cocoa and Cocoa Products in the US, Singapore and China". This research is partial fulfillment of the requirements for the degree of Master of Economics on the Study Program of Master of Planning and Public Policy, Faculty of Economics, University of Indonesia. I do realize that, without any assistance and supervision from all side, it is difficult for me to completing this research. Thus, with the completion of this research, I would like to thank to :

1. Prof. Dr. Lepi T. Tarmidi who provide time to give a learning, guidance, and suggestion during the process of writing the research.
2. Dr. Arindra A. Zainal as the Head of Study Program and all of lecturers of Master of Planning and Public Policy, Faculty of Economics, University of Indonesia, who share knowledge and provide enlighten either during the process of studying or the completing of study.
3. Dr. Andi Fahmi as the secretary of Study Program and all of lecturers of Master of Planning and Public Policy, Faculty of Economics, University of Indonesia, who support and provide enlighten either during the process of studying and also in the completing of study.
4. United States Assistance for Indonesia Development (USAID) through Indonesia Trade Assistance Project (ITAP) who provide the scholarship to study on the Program of Master of Planning and Public Policy, Faculty of Economics, University of Indonesia.
5. All of ITAP-USAID staff, who have very helpful in supporting all of our needs during the class.

6. Head of Center of Training and Education, Ministry of Trade of Indonesia, who give an opportunity and supports to study on the Program of Master of Planning and Public Policy in University of Indonesia.
7. Directorate of export of Agriculture and Forestry Product, Ministry of Trade of Indonesia who give a permit to study on the Program of Master of Planning and Public Policy in University of Indonesia
8. All administration staff of the Study Program of Master of Planning and Public Policy at Faculty of Economics, University of Indonesia, who provide the technical assistance during the process of studying and finishing of the study.
9. My Parents and family for praying and supporting the writer during the process of study.
10. All my friends of the Study Program of Master of Planning and Public Policy Batch III for the cooperation during the process of studying at Faculty of Economic, University of Indonesia.
11. All of people which could not be mentioned one by one for the supporting and cooperation.

Finally, I hope that Almighty Allah will give His blessing to all of them for their goodness to assist the writer during the process of studying and finishing the study. Furthermore, I expect that this thesis will be useful for the development of Indonesian export and the economy of Indonesia.

Jakarta, December 2009

Dwi Hanas Nur H.

## TABLE OF CONTENTS

<b>PAGE OF TITLE</b> .....	i
<b>PAGE OF ENDORSEMENT</b> .....	iii
<b>STATEMENT OF AUTHORSHIP</b> .....	iv
<b>PAGE OF ASSERTATION</b> .....	v
<b>ACKNOWLEDGEMENT</b> .....	vi
<b>TABLE OF CONTENTS</b> .....	viii
<b>LIST OF TABLE</b> .....	ix
<b>LIST OF FIGURE</b> .....	xi
<b>LIST OF ANNEX</b> .....	xii
<b>ABSTRACT OF THESIS</b> .....	xiii
<b>I. INTRODUCTION</b> .....	1
1.1 Background .....	1
1.2 Research Objective .....	3
1.3 Scope of Research .....	3
1.4 Research Methodology .....	3
1.4.1 Source of Data .....	3
1.4.2 Analysis Method .....	3
<b>II. TRADE COMPETITIVENESS AND ITS MEASUREMENT...</b>	5
2.1 Competitiveness Theory and Studies.....	5
2.1.1 Competitiveness Theory .....	5
2.1.2 Previous Studies .....	9
2.2 Competitiveness Model .....	10
2.2.1 Constant Market Share Analysis .....	10
2.2.2 Trade Specialization Index .....	16
<b>III. THE COCOA MARKET</b> .....	19
3.1 Cocoa Product in The World .....	19
3.2 Cocoa Product in Indonesia .....	21
3.2.1 Indonesia Cocoa Production .....	21
3.2.2 Domestic Cocoa Industry .....	25
3.2.3 Indonesia Cocoa Export .....	29
<b>IV. RESULT AND ANALYSIS</b> .....	36
<b>V. CONCLUSION</b> .....	55
<b>REFERENCES</b> .....	57
<b>ANNEXES</b> .....	59

## LIST OF TABLE

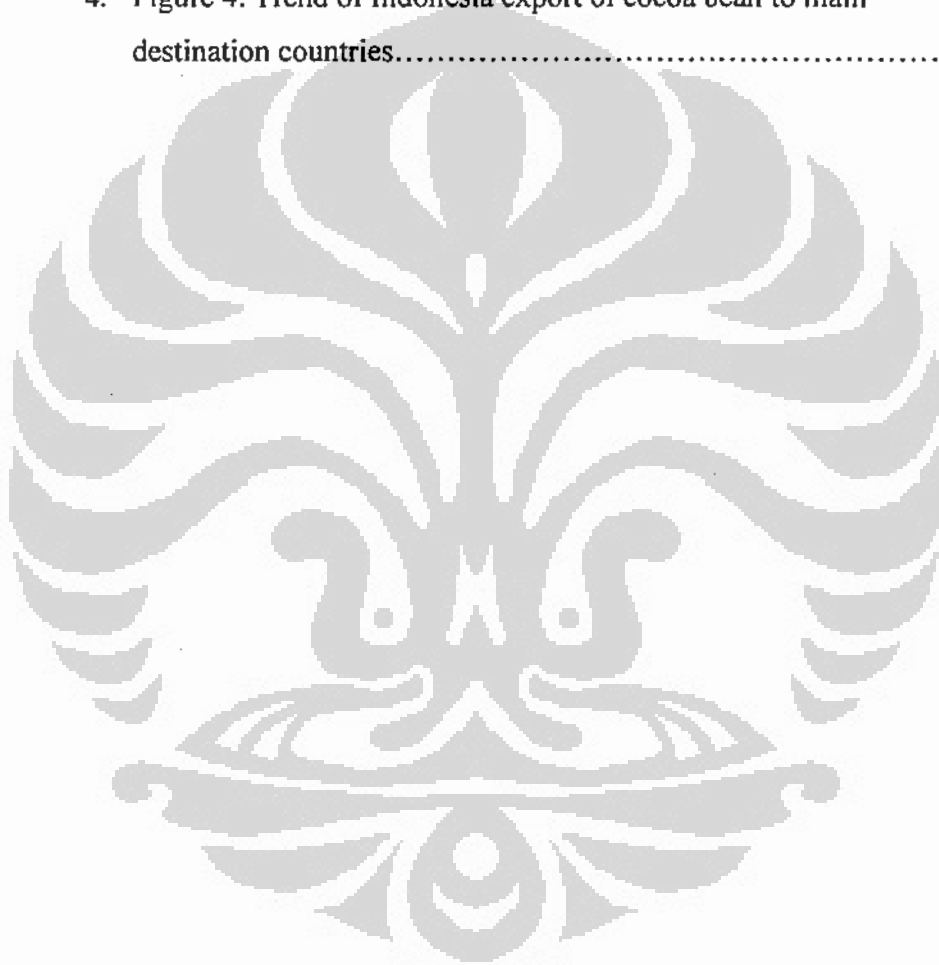
1. Table 3.1.1 World Cocoa Production, 2006/07 – 2008/09 .....	19
2. Table 3.1.2 World Cocoa Consumption, 2006/07 – 2008/09 .....	20
3. Table 3.1.3 The Indonesia's cocoa area and production, 2000-2008..	22
4. Table 3.1.4 The Indonesia's cocoa area and production by province in 2004 .....	23
5. Table 3.1.5 Quality of cocoa beans on the basis of seed size.....	25
6. Table 3.1.6 Exports of cocoa products, 2004-2008.....	26
7. Table 3.1.7 Imports of cocoa products, 2004-2008.....	27
8. Table 3.1.8 Indonesia export of cocoa and cocoa product, 2004-2008.....	30
9. Table 3.1.9 Indonesia export of cocoa bean based on destination countries.....	32
10. Table 5.1 The growths of the share value of exports from some exporting countries of cocoa products, 2005-2008.....	36
11. Table 5.2 Share exports of cocoa exporter's countries in the world market, 2004-2008.....	37
12. Table 5.3 Share exports of Indonesian cocoa and cocoa products, 2004-2008.....	38
13. Table 5.4 Standard growth of export of cocoa exporter's countries in the world market, 2005-2008.....	40
14. Table 5.5 Commodity composition effect of Indonesia's cocoa, 2005-2008.....	41
15. Table 5.6 Market distribution effect of Indonesia's cocoa in the US market, 2005-2008.....	42
16. Table 5.7 Competitiveness effect of Indonesia's cocoa in the US market, 2005-2008.....	43
17. Table 5.8 Market distribution effect of Indonesia's cocoa in Singapore market, 2005-2008.....	44
18. Table 5.9 Competitiveness effect of Indonesia's cocoa in	



Singapore market, 2005-2008.....	45
19. Table 5.10 Market distribution effect of Indonesia's cocoa in China market, 2005-2008.....	46
20. Table 5.11 Competitiveness effect of Indonesia's cocoa in China market, 2005-2008.....	46
21. Table 5.12 Market distribution in US market, 2005 - 2008.....	47
22. Table 5.13 Competitiveness in US market, 2005 - 2008.....	48
23. Table 5.14 Share export of exporters countries in US market, 2005 - 2008.....	49
24. Table 5.15 Market distribution in Singapore market, 2005 - 2008....	50
25. Table 5.16 Competitiveness in Singapore market, 2005 - 2008.....	50
26. Table 5.17 Share export of exporters countries in Singapore market, 2005 - 2008.....	51
27. Table 5.18 Market distribution in China market, 2005 - 2008.....	52
28. Table 5.19 Competitiveness in China market, 2005 - 2008.....	52
29. Table 5.20 Share export of exporters countries in China market, 2005 - 2008.....	53
30. Table 5.21 Trade specialization index of Indonesia's cocoa and cocoa products, 2004-2008.....	54

## LIST OF FIGURE

1. Figure 1. Porter Diamond Model.....	8
2. Figure 2. The effect of decomposition of two stages to export change (Chen and Duan, 1990).....	12
3. Figure 3. Trend of Indonesia export of cocoa and cocoa product, 2004-2008.....	32
4. Figure 4. Trend of Indonesia export of cocoa bean to main destination countries.....	33



## LIST OF ANNEX

1. Annex 1. Total export of cocoa in main exporter countries, 2004-2008.....	59
2. Annex 2. Trend export of cocoa in main exporter countries, 2004-2008.....	59
3. Annex 3. Share export of cocoa in main exporter countries, 2004-2008.....	60
4. Annex 4. Export of cocoa in main exporter countries by Harmonize System (HS), 2004-2008.....	60
5. Annex 5. Share export of cocoa in main exporter countries by HS, 2004-2008.....	61
6. Annex 6. Export growth of the main cocoa exporter countries, 2004-2008.....	61
7. Annex 7. Value of export of each exporters countries to US market, 2004-2008.....	62
8. Annex 8. Share export of each exporters countries to US market, 2004-2008.....	62
9. Annex 9. Value of export of each exporters countries to China market, 2004-2008.....	63
10. Annex 10. Share export of each exporters countries to China market, 2004-2008.....	63
11. Annex 11. Value of each exporters countries to Singapore market, 2004-2008.....	64
12. Annex 12. Share export of each exporters countries to Singapore market, 2004-2008.....	64
13. Annex 13 Export volume of Indonesian Cocoa and Cocoa Product, 2004 – 2008 .....	65
14. Annex 14 Figure of Trend Export of Indonesian Cocoa and Cocoa Products, 2004-2008 .....	66
15. Annex 15 International price of cocoa, 2004 – 2008,.....	67

## ABSTRACT

Name : Dwi Hanas Nur Hartono  
Study Program : Master of Planning and Public Policy  
Title : The Competitiveness of Indonesian Cocoa and Cocoa Products in the US, Singapore and China

Indonesia cocoa and cocoa products give a big share in the contribution of export revenue beside crude palm oil (CPO) and rubber product. Cocoa is still export in primary products. Indonesia has big opportunities to develop the cocoa domestic industry to become middle product and finished product of cocoa. In the recent year, the developed countries prefer import the processed product than primary product. Indonesian should develop the cocoa and cocoa products to increase export. Therefore, Indonesia have to increase the competitiveness of the product in international market, especially in the main destination of Indonesian cocoa and cocoa products export.

Statistics data shows export of Indonesian cocoa and cocoa product increase in the period 2004 -2008. The growth of Indonesia market share is also positive and greater than the growth of total share of the world. The US, Singapore and China is the main destination countries for Indonesia cocoa and cocoa products. Malaysia is also the greatest importing countries but Malaysia is the competitor of Indonesia cocoa and cocoa products in the international market. To measure the competitiveness in this research use constant market share analysis (CMSA) and Trade specialization Index (TSI). From the research, Indonesian cocoa and cocoa products have competitiveness in the main destination countries. However, Indonesia should develop the cocoa products to increase value added in the domestic cocoa industry and export more middle and finished product, to increase Indonesian export value.

**Keywords:**

Indonesian cocoa and cocoa products, competitiveness, constant market share.

## ABSTRAK

Nama : Dwi Hanas Nur Hartono  
Program Studi : Magister Perencanaan dan Kebijakan Publik  
Judul : Daya saing ekspor kakao dan produk kakao Indonesia di AS, Singapura dan China

Kakao dan produk kakao Indonesia mampu memberikan kontribusi share yang besar pada pendapatan ekspor selain minyak kelapa sawit (CPO) dan karet. Kakao masih diekspor dalam bentuk barang primer. Disamping itu, Indonesia juga mempunyai kesempatan yang besar untuk mengembangkan industri kakao dalam negeri menjadi produk kakao setengah jadi maupun produk kakao jadi (coklat). Pada saat ini, negara-negara maju lebih menyukai impor produk kakao jadi (coklat) daripada barang mentahnya. Indonesia dapat mengembangkan kakao dan produk kakao untuk meningkatkan eksponya. Oleh karena itu, Indonesia harus meningkatkan daya saing dari produk kakao di pasar internasional, khususnya ke negara-negara tujuan utama ekspor kakao dan produk kakao Indonesia melalui produk turunannya. Data statistik menunjukkan ekspor kakao dan produk kakao Indonesia meningkat pada periode 2004 – 2008. Pertumbuhan pangsa pasar Indonesia juga positif dan bahkan lebih besar dari pertumbuhan pangsa pasar dunia. AS, Singapura dan China adalah negara-negara tujuan utama untuk kakao dan produk kakao Indonesia. Malaysia juga merupakan negara terbesar pengimpor kakao dan produk kakao Indonesia di pasar internasional tetapi Malaysia adalah pesaing utama pengeksport kakao dan produk kakao Indonesia di pasar internasional.

Untuk mengukur daya saing dalam penelitian ini menggunakan *constant market share analysis (CMSA)* dan *trade specialization index (TSI)*. Dari penelitian ini kakao dan produk kakao Indonesia mempunyai daya saing di pasar negara tujuan utama ekspor. Namun demikian Indonesia dapat mengembangkan produk kakao untuk meningkatkan nilai tambah pada industri kakao dalam negeri dan mengeksport produk setengah jadi dan produk jadi untuk meningkatkan nilai ekspor Indonesia.

Kata Kunci: kakao dan produk kakao Indonesia, daya saing, constant market share.

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Production of world cocoa has been produced in Africa (Ivory Coast and Ghana), Asia Oceania (Indonesia, Malaysia) and Latin America (Brazil, Ecuador). The greatest production share is Ivory Coast, secondly Ghana and than thirdly Indonesia (450 tons per year). Indonesia has about 1.32 million hectare of production area for cocoa and almost of them cultivate by smallholders (92.34 %). Indonesian cocoa export gives a big share in the contribution of export revenue beside crude palm oil (CPO) and rubber product. In 2006, Indonesian cocoa takes 13.6 % of market share in the world market. Market share of world cocoa is dominated by cocoa whole (2.12 million tons at 2001) and the derivative product such as cocoa butter, cocoa powder and cocoa paste (528 thousand tons, 594 thousand tons, 341 thousand tons at 2001) not too much (International Cocoa Organization, 2003). Indonesian cocoa exports product is still dominated by main destination countries such as the USA, Malaysia, Singapore and China. The export is influenced by the competitiveness of the Indonesian cocoa product.

During 2003-2008, the volume and value of Indonesian cocoa exports increased by 30 % and 52 %. Indonesian cocoa exports in 2003 reach 265 thousand tons with a value of approximately US \$ 410 thousand, and in 2008 increase to be 380 thousand tons and US \$ 854.6 thousand.

Indonesian cocoa problem is about the quality of the cocoa bean. There is bulk cocoa in the plantation of cocoa. It makes the cocoa does not have special taste and aroma so that the quality of the cocoa becomes low. Another problem, almost of the producers is smallholders which have low skill. As the result, the productivity of the cocoa product is still low. The

cocoa product export to abroad in unfermented grade. It means the cocoa product has low price.

A main constraint experienced in the development of Indonesian cocoa-processing industry is a policy of developed countries that protect the domestic cocoa processing industry. US government applied tariff escalation as the policy instrument. US establish level higher tariffs on imported of processing products. In the case of cocoa, the import tariff for cocoa butter and cocoa powder is higher than import tariffs cocoa beans. As the result, Indonesian cocoa exports are dominated by cocoa beans (more than 90%). The policy is also causing the cocoa industry in Indonesia is very slow growing. Trade policy in the domestic country is also constrained by the imposing of VAT (value added tax) for the cocoa processing industry. This condition became one of the causes of less investor to invest capital in the cocoa processing industry in Indonesia. Many investors who invest embed in cocoa processing industry in Malaysia, but they purchase their raw materials from Indonesia. The other problem is the quality of cocoa beans produced by the farmers remains low because there is no incentive for farmers to produce higher quality through the fermentation process. During this time, farmers do not prepare the fermentation because several factors, including fermentation takes longer, that is about 9-10 days for fermentation process, while the farmers need the money immediately after harvest to meet the needs of the household. Another problem, the fermentation cost is not covered by adequate price.

Consequently, we need to analyze the competitiveness of cocoa and cocoa products' export to main destination country and the trade specialization index. Therefore, we should identify the competitiveness of Indonesia's cocoa in the main destination countries such as the United State, Singapore and China. Beside that Indonesia should know the competitor to develop the export performance of Indonesian cocoa.

Universitas Indonesia

## **1.2 Research Objective**

The objective of this research is:

To measure the competitiveness of Indonesian cocoa and cocoa products export in the main destination countries such as The USA, China and Singapore.

## **1.3 Scope of The Research**

The study covers Indonesia's trade (export) activity in cocoa products. The countries being analyzed are the USA, China and Singapore as the main destination countries. Those countries are chosen by considerations of the countries are the main destination countries for Indonesia export of cocoa products and have growing import performance. The analysis also includes the competitor in the main destination countries. The cocoa products used in this study are based on four digits Harmonize Systems such as HS 1801, 1802, 1803, 1804, 1805 and 1806. The period of the research is yearly data from 2004 – 2008.

## **1.4 Research Methodology**

### **1.4.1 Source of Data**

The data which used in this study is time series data. The data consist of export and import of cocoa products. Source of the data which are used: WITS (World Integrated Trade Solution), Bureau of Statistics (BPS), Ministry of Trade, and other sources including electronic sources.

### **1.4.2 Analysis Method**

The analysis of the research is using quantitative method. To measure the competitiveness of Indonesian cocoa products compared with competitor countries, then performed a calculation Constant Market Share Analysis (CMSA). CMSA calculation results can measure the extent to which

Universitas Indonesia



Indonesian export of cocoa products can play a role in the world market or to compete with products from other countries. CMSA can also describe the competitiveness of the commodity of the country through its market share (positive or negative). So this analysis is very useful to assess trend of competitiveness in the international market. According Leamer and Stern (1970), Juswanto and Mulyanti (2003), there are three reason of a country's exports may succeed (fail) to grow as rapidly as the world average, such as (1) export may concentrate in commodities in which the demand is growing relatively fast (slowly); (2) export may be going to relatively growing (stagnant) regions; (3) the country in question may have been able (unable) to compete effectively with other sources of supply. In the addition, CMSA also has capabilities to measure (1) standard growth, (2) commodity composition effect, (3) market distribution effect, and (4) competition effect (Suprihatini, 2005). Those are statistic indicator to measure the competitiveness of export commodity.

## CHAPTER II

### TRADE COMPETITIVENESS AND ITS MEASUREMENT

#### 2.1 Competitiveness Theory and Studies

##### 2.1.1 Competitiveness Theory

Heckscher-Ohlin stated that the level of competitiveness of a country on the international trade is determined by two factors, there are the comparative advantage factors and the competitive advantage factors. Furthermore, the comparative advantage factors are considered as natural factors and the competitive advantage factors are considered as factors that can be acquired or developed / created. In addition to the two factors, the level of competitiveness of a country is also influenced by what is called the Sustainable Competitive Advantage (SCA) or the benefits of sustainable competitiveness. This is especially in the framework of the global competition for such a long time to be in such a tight / hard or Hyper Competitive. If a State solely on the comparative benefits of the state will not be able to compete because it is basically a commodity also has its own comparative advantages other countries. The competitive advantages can encourage a particular commodity from countries in the world market.

Hyper Competitive Analysis (the super-tight) are from D'Aveni (Hamdy, 2001:60), and the analysis shows that ultimately each country will be forced to think or find a strategy is appropriate, so that the country / company can still survive on condition that global competition is tough. According to Hamdy, strategy appropriate Sustainable Competitive Advantage is a strategy that the effort of planning and operational activities are integrated, which link the external and internal environment for the achievement of short-term goals and long-term, with the success in maintain / improve the sustainable real income and effective efficient.

Heckscher-Ohlin also based on some assumptions such as (1) there are two nations, two commodities and two factors of production, labor and capital, (2) both

nations use the same technologies in production, (3) one commodity is labor intensive and other commodity is capital intensive, (4) both commodities are produced under constant return to scale, (5) there is incomplete specialization in production, (6) tastes are equal, (7) there is perfect competition in both commodities and factor market, (8) there is perfect factor mobility within each nation but no in international factor mobility, (9) there is no transportation cost, tariffs, or other obstruction in the international trade flow, (10) all resources are fully employed, and (11) international trade between the two nation is balanced.

In their book, Krugman & Obstfeld (1994), consider that the basic concept of competitiveness in international trade occurs because of two main reasons. First, countries have to trade because they have differences with each other. Each country can gain by doing something better in the production. Second, countries in the world trade activities with the aim to gain economic of scale, so that the state has a higher productivity of a particular commodity or product. Each State will be more focus on commodities / products that are considered so that the most economical produced on a large scale because these products are considered more efficient than when the country is producing all types of products needed. However, that often happens is each country using combination of the concept of both reasons.

According to Esterhuizen, D (2006, p.57), in the Heckscher-Ohlin model, there are some weaknesses. The Heckscher-Ohlin model is still limited in two domestic resources (capital and labor) and two traded goods. The H-O model assumes that technology is identical, but that production methods are different between countries. Different production methods indicate different combination of capital and labor. That is different countries may chose different production methods depending upon factor prices in those countries. Therefore, patterns of production and trade are explained by different factor endowments or factor prices.

As stated by Esterhuizen, D, 2006, p.66 that the preceding theory is no longer relevant. It is mainly to identify the most important variable. In today's global economy, we have to consider other important variables that have significant effect in

the trade or competitiveness formula. The essential development that develops the issue is Michael Porter's (1990, 1998) with his "diamond model".

Porter's diamond model theory revealed four broad attributes of a nation that shape the environment in which local firms compete that promote or impede the creation of competitive advantage. Those attributes are:

1. Factor condition

The nation's position in factor of production, such as skilled labor or infrastructure, necessary to compete in a given industry.

2. Demand condition

The nature of home demand for the industry's product or service.

3. Related and supporting industries

The presence or absence in the nation of supplier industries and related industries that is internationally competitive.

4. Firm strategy, structure and rivalry

The conditions in the nation governing how companies are created, organized, and managed, and the nature of domestic rivalry.

The determinant, individually and as a system, create the context in which a nation's firms are born and compete: the availability of resources and skills necessary for competitive advantage in an industry; the information that shapes what opportunities are perceived and the direction in which resources and skills are deployed; the goals of the owners, managers and employees that are involved in or carry out competition; and most importantly, the pressures on firms to invest and innovate (Porter, ME, 1990, p.71).

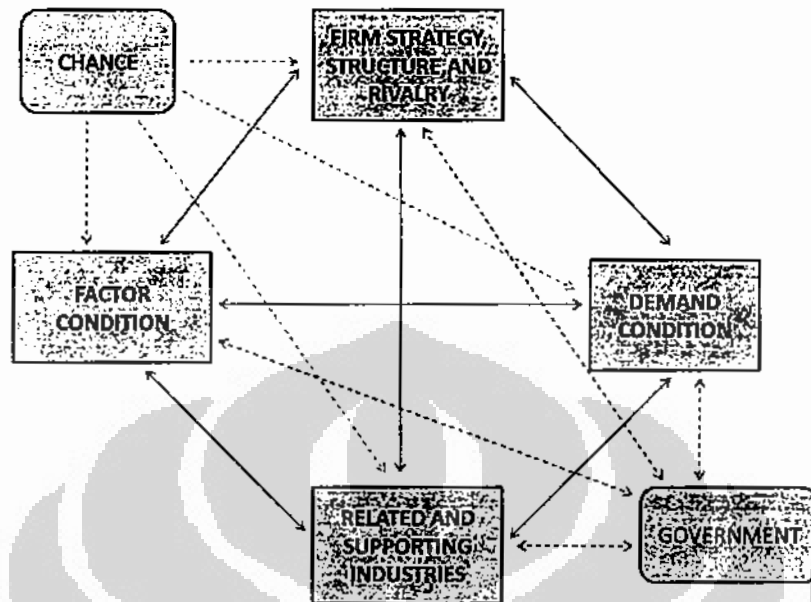


Figure 1.

## Porter Diamond Model.

According to the diagram "diamond" porter, a State can determine its position as a commodity exporter country and choose to import other commodities based on the competitive advantages that are owned by the State. On the other country better import and export commodities so that there will be a particular international trade that will provide benefits for each country who are involved in trafficking.

According to M. Porter (1990), nation's competitiveness depends on the capacity of its industry to innovate and upgrade. It does not grow from natural endowments for instant its labor pool, its interest rates or its currencies value as classical economist think. Firm gain advantage against world's best competitors because of pressure and challenge. Porter said that countries benefit from having strong domestic rivals, aggressive home based suppliers and demanding local customers.

Porter criticized about the traditional doctrine which is at best incomplete and at worse incorrect. Companies that have achieved international leadership, employ

strategies that differ from each others in every respect. Whereas, every successful firm going to employ its own special strategy, the basic mode of operation, which is the character and trajectory of all successful companies, is fundamentally the same (Esterhuizen, 2006, p67-68).

Porter state that companies achieve competitive advantage through innovation. They innovate in deepest sense, including new technologies, new methods. They find a new basis for competing or find better means for competing in old ways. Innovation can be manifested in new product design, a new production process, a new marketing strategy or a new training method (Esterhuizen, 2006, p 68).

### **2.1.2 Previous Studies**

There are some researches regarding to analyze the competitiveness export products using Constant Market Share Analysis (CMSA) which conducted by some researchers:

#### **2.1.2.1 Lu (1996)**

Lu has been concerned in the export performance of goods Australian trade using Constant Market Share (CMS) analysis tool. Lu got three important points in his research, such as first, the growth of Australian exports to East Asian largely influenced by the effects of international trade. This can also see from the growth at the same time that the total imports East Asian and Australia imports since 1980. Second, the positive effect of market distribution is very small. This indicates that Australia could concentrate on the level of limited in countries that import growth is relatively fast. Third, the commodity composition effect is not satisfactory during the period testing. This gives the impression that Australia produces increasing commodity under the average demand. Last, negative value to indicate the effect of decreasing competitiveness of Australia exports to countries East Asian. Lu also stated that export competitiveness is important. Competitiveness is influenced by many factors, one factor domestic usually be the most decisive factor. This will assist

in development of appropriate policies to increase Australia's competitiveness in the East Asian markets are rapidly changes.

#### 2.1.2.2 Juswanto and Mulyanti (2003)

Their research use constant market share analysis to show the product composition and market concentration of Indonesia manufactured exports product. In the research they make some conclusion such as: the market for Indonesia manufactured exports are concentrated in Japan, US, NIEs, and ASEAN countries.

Those market still absorb more than 50 percent of Indonesia manufactured export in the declining world market in recent year, the commodity composition is concentrate in SITC 6 and 8 which have relatively slow growing world demand, and for SITC 7 that have relatively fast growing world demand, is relatively small in Indonesia.

#### 2.1.2.3 Suprihatini (2005)

In her research, Suprihatini has been analyzed the competitive position of Indonesia's tea export product by constant market share analysis in the world market. The analysis result give information that Indonesia's tea export growth was lower than world tea export growth due to: product composition problem, distribution aspect problem, and low competitiveness of Indonesia tea.

From the result, Suprihatini was concluded that Indonesia tea export growth is negative. It is caused by the composition of tea product is not appropriate with the market demand. The destination countries are still in traditional market, and the competitiveness of Indonesia's tea is still low in the world market.

## 2.2 Competitiveness Models

### 2.2.1 Constant Market Share Analysis (CMSA)

According to Leamer and Stern (1970), constant market share analysis (CMSA) is a method to measure a country's export growth. Basically, the

characteristic feature in this analysis was developed from the assumption that a country's exports may succeed or fail to grow as rapidly as the world average for three reasons: (1) exports may concentrate in commodities in which the demand is growing relatively fast or slowly; (2) exports may be going to relatively growing or stagnant regions; (3) the country in question may have been able or unable to compete effectively with other sources of supply (Juswanto and Mulyanti (2003). Beside that, there is another assumption of the method is that a country's export share in the world market should remain unchanged over time. The differences between the export growth, implied by this constant-share norm, and the actual export growth are assumed to be caused by competitiveness, commodity-composition and market-distribution effects (Tyers et all (1985), Suprihatini (2005).

The basic assumption of CMS analysis is the constant market share of exporter country (for example Indonesia) in world market or to particular country in certain of period. The growth of export is different which was declared by the different of constant market share export and actual market export, because of the commodity composition effect, market distribution effect, and competitiveness effect. The changing of market share is one of the indicators of competitiveness to measure the change countries competitiveness to world market or particular country, although the reason of all changing of market share is not the changing of competitiveness (Hadi and Mardiyanto,2004, p.51).

According to Suprihatini (2005, p.4) Chen and Duan (1990) has done for the advance application about CMS analysis which using two stages of decomposition. The effect of decomposition of two stages to export change of a country can show in the figure 4. The effect of decomposition can explain into three parts, such as (1) structural effect which consist of growth effect, market effect, commodity effect and interaction effect; (2) competition effect which consist of pure competitive effect and special competitive effect; and (3) second order effect which consist pure of second order effect and dynamic structure residual.



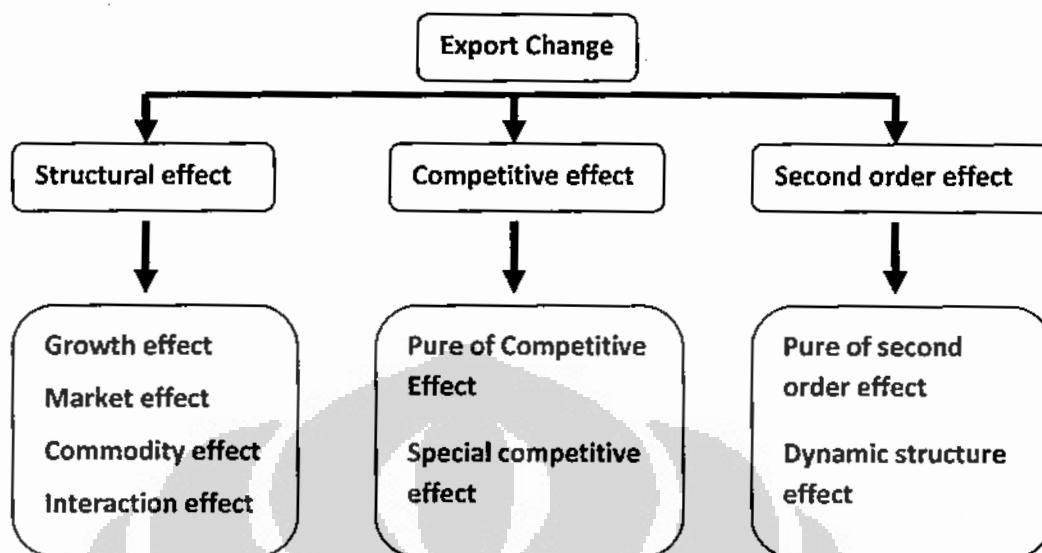


Figure 2.

The effect of decomposition of two stages to export change (Chen and Duan, 1990)

Generally in any model, this CMS analysis model also has weaknesses. Some weaknesses have been stated by Mohammad and Habibah (1993). The equation that used as the basis for describing the growth of exports is the identity equation. Therefore, the reasons of the change in export competitiveness can not be evaluated by just using CMS analysis. Another weakness is CMS analysis which ignores competitiveness change within two point of time. However, this analysis is very useful to study the trend of competitiveness of products that produced by a country.

The CMS analysis prepares a set of statistic indicator to know the availability of the country manage the export contribution to all import market in certain of period. There are four parameters in CMS analysis model such as:

(a) Standard growth

Standard growth implies the general standard of export growth of all countries in the world market. The growth rate can indicate the export performance of certain country (for instant Indonesia) compare to other countries. If export performance of Indonesia is higher than standard growth of export, Indonesia export is better than others countries.

## (b) Commodity composition effect

Commodity composition effect can be positive or negative. If the value is positive, the subject country has exported particular product to the country which has the higher growth of demand compared to others countries, and in vise versa.

## (c) Market distribution effect

Market distribution effect also can be positive or negative. Positive value shows the subject country distributes its product to the center of growing demand.

## (d) Competitiveness effect

Competitiveness effect indicates the net increase or decrease on the share relatively to the standard considering the changes in the product composition and market distribution. If the value of the parameter is positive, it means Indonesia is the strong competitor compared to the others countries. In the other hand, if the parameter is negative, it show Indonesia is weak.

According to Juswanto and Mulyanti (2003), the following section will explain the CMS method developed by Leamer and Stern. Following notations are used:

$V_i$  : Value of A's exports of commodity i in period 1

$V_i'$  : value of A's exports of commodity i in period 2

$V_{.j}$  : value of A's exports to country j in period 1

$V'_{.j}$  : value of A's export to country j in period 2

$V_{ij}$  : value of A's export of commodity i to country j in period 1

$r$  : percentage increase in total world exports from period 1 to period 2

$r_i$  : percentage increase in world export of commodity i from period 1 to period 2

$r_{ij}$  : percentage increase in world export of commodity  $i$  to country  $j$  from period 1 to period 2

The value of country A's exports in period 1 is:

$$V \sum_j r_{ij} = V_i \cdot \sum_i V_{ij} = V_j \dots \dots \dots (4.1)$$

and we can also define A exports in period 1:

$$\sum_i \sum_j V_{ij} = \sum_i V_i = V \cdot \sum_j = V \dots \dots \dots (4.2)$$

At the first level of analysis, we may view exports only as a single good to a single market. At this level the method argues that if country A maintains its export share in world market then exports would increase by  $rV_{..}$ , and therefore the following identity may be written:

$$V'_{..} - V_{..} \equiv rV_{..} + (V'_{..} - V_{..} - rV_{..}) \dots \dots \dots (4.3)$$

Identity 4.3, the first level of analysis, means that the export growth from period 1 to period 2 ( $V'_{..} - V_{..}$ ) is divided into part associated with general increase in world exports ( $rV_{..}$ ) and an unexplained residual, the competitiveness effects ( $V'_{..} - V_{..} - rV_{..}$ ).

In the next step of analysis, two-level analysis, the method expands the arguments that exports are in fact a quite diverse set of commodities and markets for a particular commodity class. For  $i$  commodity it may be written an identity analogous to identity 4.3:

$$V'_i - V_i \equiv r_i V_i + (V'_i - V_i - r_i V_i) \dots \dots \dots (4.4)$$

And be aggregated to

$$\begin{aligned} V'_{..} - V_{..} &\equiv \sum_i r_i V_i + \sum_i (V'_i - V_i - r_i V_i) \\ &\equiv \sum_i (r - r + r_i) V_i + \sum_i (V'_i - V_i - r_i V_i) \\ &\equiv \sum_i (r V_i) + \sum_i (r_i - r) V_i + \sum_i (V'_i - V_i - r_i V_i) \\ &\equiv (rV_{..}) + \sum_i (r_i - r) V_i + \sum_i (V'_i - V_i - r_i V_i) \dots \dots \dots (4.5) \end{aligned}$$

(1)            (2)            (3)

Identity 4.5 represents two-level analysis in which the growth of country A's export is broken into part attributed to (1) the general rise in world exports, (2) the commodity composition of country A in period 1, and (3) unexplained residual, the competitiveness effects indicating the differences between actual export increase and the hypothetical increase if A had maintained its share of export of each commodity group.

From identity 4.5, the commodity-composition effect is defined as:

$$\sum_i (r_i - r) V_i \dots\dots\dots(4.6)$$

Equation 3.6 means that if world export of commodity  $i$  increased by more than total world export, then  $(r_i - r)$  will be positive. This positive number will receive a heavy weight when added to other term  $V_i$ . The result is that 4.5 would be positive if A had concentrated on export of commodities in which the market were growing relatively fast and would be negative if A had concentrated on export of commodities in which the market of that commodity were growing relatively slower than total world export growth.

Finally, in the three-level analysis, the method will observe that exports are differentiated by destination and commodity type. The appropriate norm of this case is constant market share of export of particular commodity class  $i$  to a particular region  $j$ .

The identity analogue to 4.3 and 4.4 is:

$$V'_{ij} - V_{ij} \equiv r_{ij} V_{ij} + (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \dots\dots\dots(4.7)$$

And it can be aggregated to:

$$\begin{aligned} V'_{..} - V_{..} &\equiv \sum_i \sum_j r_{ij} V_{ij} + \sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \\ &\equiv \sum_i \sum_j (r - r_i + r_i - r_i + r_{ij}) V_{ij} + \sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \\ &\equiv \sum_i \sum_j (r V_{ij} - r_i V_{ij} + r_i V_{ij} - r_i V_{ij} + r_{ij} V_{ij}) + \sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \\ &\equiv \sum_i \sum_j r V_{ij} + \sum_i \sum_j (r_i - r) V_{ij} + \sum_i \sum_j (r_{ij} - r_i) V_{ij} + \sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \end{aligned}$$

$$\begin{aligned}
&\equiv \Sigma i r V_i + \Sigma i (r_i - r) V_i + \Sigma i \Sigma j (r_{ij} - r_i) V_{ij} + \Sigma i \Sigma j (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \\
&\equiv (rV..) + \Sigma i (r_i - r) V_i + \Sigma i \Sigma j (r_{ij} - r_i) V_{ij} + \Sigma i \Sigma j (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \dots \dots \dots (4.8) \\
&\quad (1) \quad (2) \quad (3) \quad (4)
\end{aligned}$$

Identity 4.8 represents three-level analysis in which the growth of country A's export is broken into part attributed to (1) the general rise in world export (2) the commodity composition of country A in period 1 (3) the market distribution of A's export and (4) unexplained residual, the competitiveness effects that indicating the differences between actual export increase and the hypothetical increase if A had maintained its share of export of each commodity group to each country.

From equation 4.8 the market distribution effect is defined as:

$$\Sigma i \Sigma j (r_{ij} - r_i) V_{ij} \dots \dots \dots (4.9)$$

Equation 4.9 means that if the world export of commodity i to country j increase by more than total world export of commodity i, then  $(r_{ij} - r_i)$  will be positive. This positive number will receive a heavy weight when added to other term  $V_{ij}$ . The result is that 4.9 would be positive if A had concentrated its export in the market that were growing relatively fast and would be negative if A had concentrated its export in the more stagnant region.

### 2.2.2 Trade Specialization Index (TSI)

Static properties like the other methods such as RCA, the method also only describe CMSA phenomenon of the past, at least for the present. Therefore, this method should be equipped with the trade specialization index (TSI) to forward acceleration (LPEM FEUI, 1997: 18). This method is described the full period of the past, present and future through an industrialization phase to determine whether commodities have been on the stage of development should be. Trade specialization index is formulated as follows:

$$TSI = \frac{(X-M)}{(X+M)}$$

Where:

X = value of exports;

M = value of imports

TSI numbers ranging from -1 (net importer) to +1 (net exporter)

- In the introduction stage TSI is about -1.00 to -0.50
- Import substitution phase ranged from -0.49 to 0.00
- Phase growth ranged from 0.01 to 0.80
- At the level of maturity ranging from 0.81 to +1.00
- At this stage TSI are imported back around 0,8-0. (Ariff, 1985: 342)

From the results of the calculation Trade Specialization Index (TSI), it can be seen in stage whether cocoa products industry, because product development in a country usually has several stages starting from the introduction stage, import substitution, to grow into a product exports, then reached a peak of maturity and finally having cutting back or return to import.

According to Wijayanto (2008), there are some reasons to use the methodology by identifying the strength and weakness of the methodology:

Methodology	The objective	Strength	Weakness
Constant Market Share Analysis (CMSA)	Constant market share decomposes export growth of a country over a given time period into three components: market growth, commodity composition and competitiveness effect.	CMSA is useful in decomposing sources of export growth. CMSA is also useful in identifying precisely the potential comparative advantage of particular commodity. CMSA can identify the competitors more detail in the same market.	CMSA is weak since it ignores the dynamic of market share over observed time.
Trade Specialization	To construct the industrialization	TSI method can give information about the trade	

Index (TSI)	period and trade pattern.	pattern and the method is relatively easy to be operated.	
Acceleration Ratio (AR)	To provide the indication of the export growth compared to the import growth.	AR method is relatively easy to be operated.	AR cannot predict the future pattern.
RCA	To measure of relative export performance by country and industry/commodity, defined as a country's share of world exports of a commodity divided by its share of total world exports.	RCA can show the comparative advantage by using share export of the country. RCA method is relatively easy to be operated.	The assumption is every country as the exporter of all commodities.
Mandeng Competitiveness matrix	Mandeng competitiveness matrix is defined as the relative participation that the exporting sector of a country has in the world trade.	The different sectors from the export of services can also be classified from the point of view of their international competitiveness through time, when the degree of commercial specialization of each country and the evolution of the world imports simultaneously analyzed.	Mandeng competitiveness matrix cannot predict future pattern.

## CHAPTER III THE COCOA MARKET

### 3.1 Cocoa Product in the World

Cocoa is produced by more than 50 countries located in tropical regions which can be divided geographically into three regions namely Africa, Asia Oceania and America. In 2008/09, world cocoa production is 3,466 thousand tons. Africa region produced cocoa for 2,442 thousand tons or 70.5 % of world production. The biggest producer in Africa is Ivory Coast that has the biggest share in the world, follow by Ghana and Nigeria. While Asia Oceania (Indonesia) and America (Brazil and Ecuador) each produce 590 thousand tons and 434 thousand tons or 17 % and 12.5 % of world production. World's leading producer of cocoa in Côte d'Ivoire is total production of 1.2 million tons in 2008/09. Other major producers are Indonesia, Ghana, and Cameroon with Nigeria production in 2008/09 respectively each 485,000 tons, 660,000 tons, 210,000 tons and 220,000 tons.

Table 3.1.1  
World Cocoa Production, 2006/07 – 2008/09 (in thousand ton)

Year Country	2006/2007		2007/2008		2008/2009	
<b>Africa</b>	<b>2364</b>	<b>69.1%</b>	<b>2682</b>	<b>71.8%</b>	<b>2442</b>	<b>70.5%</b>
Cameroon	169		185		210	
Ivory Coast	1229		1382		1210	
Ghana	614		729		660	
Nigeria	215		220		220	
Others	137		166		142	
<b>Latin America</b>	<b>408</b>	<b>11.9%</b>	<b>451</b>	<b>12.1%</b>	<b>434</b>	<b>12.5%</b>
Brazil	126		171		145	
Ecuador	115		113		112	
Others	167		167		177	
<b>Asia&amp;Oceania</b>	<b>650</b>	<b>19.0%</b>	<b>602</b>	<b>16.1%</b>	<b>590</b>	<b>17.0%</b>
Indonesia	545		495		485	
Others	105		107		105	
<b>World Total</b>	<b>3422</b>	<b>100 %</b>	<b>3735</b>	<b>100%</b>	<b>3466</b>	<b>100 %</b>

Source: ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXV, No. 2, Cocoa year 2008/09



The growth of the world cocoa production in term 2006/07 until 2008/09 is increased. In 2006/07, the world production is about 3,42 million tons and increase in 2008/09 become 3,46 million tons. Even in 2007/08 the increasing of world cocoa production become 3.73 million tons. However, in the term of Indonesia's production growth is decrease from 545,000 tons become 485.000 tons. It's happened because cocoa plantations around Indonesia attack by Cocoa Pod Borers (CPB) that damage the quality and quantity of Indonesian cocoa production.

World consumption is usually measured by grinding. The biggest grinding is Europe (41.4 %) especially for Netherland and Germany. Demand for cocoa processed during 2006/07 and 2008/09 is decreased from 3,663 thousand tons to 3,515 thousand tons. Its means, in that range the processing cocoa growth is decreased. However, in 2007/08 the consumption is increase. The highest growth occurred in Africa, especially in Ivory Coast and Ghana. The increasing of the consumption in those countries as the increasing of domestic production and to create more value added from cocoa bean to become derivative products and than export to others countries in processing product. For instant, another country that to do it is Malaysia which creates high value added so its country gets more benefits from cocoa products. Beside Ivory Coast, Malaysia remained the top processing countries among the producing countries and accounted for more than 46 % of origin grindings (ICCO Annual Report 2004/05).

Table 3.1.2

World Cocoa Consumption, 2006/07 – 2008/09 (in thousand ton)

Year Country	2006/2007		2007/2008		2008/2009	
<b>Europe</b>	<b>1527</b>	<b>41.7%</b>	<b>1553</b>	<b>41.3%</b>	<b>1456</b>	<b>41.4%</b>
Germany	357		385		335	
Netherlands	480		491		475	
Others	690		676		646	
<b>Africa</b>	<b>544</b>	<b>14.9%</b>	<b>564</b>	<b>15.0%</b>	<b>650</b>	<b>18.5%</b>
Ivory Coast	360		374		440	
Ghana	121		123		145	

Others	64		67		65	
<b>America</b>	<b>848</b>	<b>23.2%</b>	<b>834</b>	<b>22.2%</b>	<b>775</b>	<b>22.0%</b>
Brazil	226		232		222	
US	418		391		355	
Others	204		211		198	
<b>Asia&amp;Oceania</b>	<b>743</b>	<b>20.3%</b>	<b>807</b>	<b>21.5%</b>	<b>635</b>	<b>18.1%</b>
Indonesia	140		160		110	
Malaysia	301		331		260	
Others	302		316		265	
<b>World Total</b>	<b>3663</b>	<b>100%</b>	<b>3758</b>	<b>100%</b>	<b>3515</b>	<b>100%</b>

Source: ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXV, No. 2, Cocoa year 2008/09

World balance production and consumption in 2004/05 to 2005/06 is surplus. However, since 2006/07 became deficit. The world production cannot cover the demand of world grindings of cocoa beans. It happen because the growth of production of world cocoa decline.

### 3.2 Cocoa Product in Indonesia

#### 3.2.1 Indonesian Cocoa Production

Cocoa plantations in Indonesia were developed rapidly within the last 20 years. Indonesian cocoa plantations covering 914,051 hectares were recorded. Cocoa plantation is largely (87.4%) managed by the people and the rest 6.0% is managed large estates and country 6.7% of private estates. Cocoa plants mostly cultivated species with a central bulk cocoa. The main production is in South Sulawesi, Southeast Sulawesi and Central Sulawesi. One also is cultivated species cocoa by a large country estate in East Java and Central Java. Cocoa plantations in general are cocoa types Forastero (bulk cocoa or cacao lindak), Criolo (fine cocoa), and hybrid (cross between Forastero type and Criolo). Generally in the large cocoa plantations which cultivated fine cocoa (Tumpal HS Siregar, et al., 2003).

In 2008, the wide area for cocoa plantation in Indonesia was 1,473,259 ha. It is significant increase from 2004. In 2004 the area of cocoa plantation is about 1,091 thousand hectare. Ministry of agriculture estimates the increment of the wide area for cocoa plantation as much as 4.40 % in 2009. Therefore, the forecasting of wide are in 2009 is reached 1,538 thousand hectare. Same condition in production of cocoa will

be increase every year. The last data of production of cocoa was 792,791 ton for 2008. And the estimating production will be increase as much as 882,931 for 2009. In 2000, productivity of cocoa was 0.89 ton/ha. The productivity of cocoa is fluctuates every years. In 2008, the increment of productivity of cocoa is 0.80 ton/ha.

Table 3.1.3  
The Indonesia's cocoa area and production, 2000-2008

Year	Area ( Ha )	Production (Ton)	Productivity (Ha/Ton)
2000	749,917	421,142	0.89
2001	821,449	536,804	0.95
2002	914,051	619,192	0.92
2003	961,107	695,361	1.10
2004	1,090,960	691,704	0.89
2005	1,167,046	748,827	0.92
2006	1,320,820	769,386	0.85
2007	1,379,279	740,006	0.80
2008	1,473,259	792,791	0.80

Source: Deptan.go.id, Basisdata perkebunan, Agustus 2009, processed.

In 2004, the regions of center cocoa production in Indonesia are South Sulawesi, Central Sulawesi, and Southeast Sulawesi. In 2004, South Sulawesi contributed 184,470 ha or equal to 28.3 % from total share and reached the highest region for contributing in production of cocoa. Central Sulawesi contributed 136,775 ha in term of production and shared 21 % from total cocoa production. The third regions is South Sulawesi, its production was 110,517 ha with wide area 175,349 ha.

Table 3.1.4  
The Indonesia's cocoa area and production by province in 2004

Province	Production (Ton)	Share (%)	Area (Ha)	Share (%)
South Sulawesi	184,470	28.3	217,400	21.9
Central Sulawesi	136,775	21.0	184,552	18.6
Southeast Sulawesi	110,517	17.0	175,349	17.7
North Sumatra	51,093	7.8	64,298	6.5
East Jawa	15,622	2.4	35,975	3.6
Rest of Indonesia	152,751	23.5	314,617	31.7
<b>Total</b>	<b>651,228</b>	<b>100.0</b>	<b>992,191</b>	<b>100.0</b>

Source: Deptan.go.id, Basisdata perkebunan, Agustus 2009, processed.

Indonesian cocoa production increased significantly. However, according to Sulystiowati and Yusianto (1999) the resulting quality is very low and varied, among others, is not fermented, and did not quite dry, seed size is not uniform; the taste is very diverse and inconsistent. Requirements for quality characteristics include government regulated cocoa beans, water content, seed weight, levels of skin and fat levels. The desired requirements can be obtained by application of fermentation technology and proper drying. Fermentation of cocoa will create tastes better (Alvi Yani, 2008). In the food and beverage of chocolate industry, cocoa quality is an absolute requirement. Thus, for the producer or exporter, the quality of cocoa beans should be a concern for competitive position for the better products and benefit from the selling price will be optimal. For entrepreneurs, the quality that can give satisfaction to customers without requiring high cost.

In terms of quality, Indonesian cocoa is not too low quality and if done properly fermentation can achieve equivalent flavor cocoa from Ghana. Indonesian cocoa has the special advantage that it is not easy melt so suitable when used for blending. In line with these advantages, Indonesian cocoa market opportunities open enough both export and domestic demand. In other words, the potential quality is

used to cocoa industry as one of drivers of growth and income distribution quite open. However, Indonesia's cocoa agribusiness was dealing with complex issues such as productivity of the plantation still low due to pest attack cocoa pod borers. Quality product is still low and still not optimal cocoa downstream product development. This becomes a challenge as well as opportunities for investors to develop business and achieve value added greater than agribusiness cocoa.

According to SNI 01-2323-2002 (Indonesia government regulation) there are some requirements for cocoa such as water content, fat and seed size.

- a) Water content of cocoa beans more than 7.5% lead cocoa beans more easily attacked by fungi. Declared safe storage at the maximum water content of 7.5% (SNI, 2002), the water content in equilibrium with relative humidity save space.
- b) Fats are the most expensive component of cocoa beans that this value is used by consumers as one of the pricing benchmark. Apart from the plant material and the season, the fat content is also affected by processing treatment. Cocoa beans come from the rainy season fertilization generally have high fat levels (Mulato and Widyotomo, 2003). Next Mulato and Widyotomo (2003) states that the physical character of the post-processing of cocoa beans depend on water content, fermentation rate and skin levels affect the yield of cocoa fat. Mulato and Widyotomo, 2003, state that seed size and moisture content determine the yield of fat. The larger seed size, it contain of the higher cocoa yield of fat from the seeds. The size of the average seed entering the export quality is between 1.0 - 1.2 g or equivalent to 85 to 100/100 seeds test sample. The size of dry cocoa beans is strongly influenced by the type of plant material, rainfall during fruit development, treatment and processing agronomies. (Alvi Yani,2008).
- c) According SNI 01-2323-2002 (SNI, 2002), specification of quality requirements based on the size of the cocoa beans are grouped into 5 levels

Table 3.1.5  
Quality of cocoa beans on the basis of seed size.

No.	Grade	Number of seeds per 100 g
1	AA	Max. 85
2	A	86-100
3	B	101-110
4	C	111-120
5	S	>120

Source: Ministry of Industry, 2007.

Food and Drug Administration (FDA) of USA take the initiative in set standards by the International Cocoa meeting between producers and consumers. The meeting agreed on the establishment of the International Cocoa Standards. This standard has been adopted by almost all cocoa-producer countries in the world, especially the cocoa export to America. In general, cocoa standards listed in the Indonesian cocoa consistent standard as specified in the International Cocoa standards.

According to Mulato and Widyotomo (2003), some general restrictions cocoa beans classified eligible for trading in international markets is as follows: 1). Cocoa be fermented seeds, dry (water content 7%), free from smoky beans, free from abnormal smell and the smell of foreign and independent of the evidence of forgery, 2). Cocoa beans must be free of insect life and 3). Cocoa beans in a package should have a uniform size, free from broken seeds, seed fragments and pieces of skin and free from foreign objects (Alvi Yani (2008).

### 3.2.2 Domestic Cocoa Industry

Cocoa is also to become one of the plantation commodities whose role is quite important to the national economy, especially as a provider of employment, sources of income and foreign exchange. Besides it also plays a role in cocoa encourage the development of the region and development agro-industries. In 2002, cocoa plantations have been providing employment and sources of income for about 900 thousand family farmers mostly in the Eastern Region Indonesia and the largest

foreign contribution to the three sub-sectors after the rubber plantation and palm oil with a value amounting to U.S. \$ 701 million (Ministry of Industry).

Based on Ministry of Industry, the need for cocoa in the country is still considered a little, approximately 250 thousand tons per year. While Indonesian cocoa production reached 445,000 tons per year. However, the low demand national cocoa was not without cause. This is because the government set Value Added Tax (VAT) for every 10% cocoa which purchased for processed in the domestic country. In the other hand, if the farmers export their products abroad, it is not subject to VAT. Thus, farmers prefer to export.

The production of Indonesian cocoa beans in 2008 is about 792 thousand tons. It exports in form of 332 thousand tons of cocoa beans and the remaining 99 thousand tons processed (cocoa butter, cocoa powder and coco paste).

Processed cocoa exports in 2004 -2008 were 451,880 tons by value of US\$ 1,229 million with details as follows:

Table 3.1.6  
Exports of cocoa products, 2004-2008.

Year	Cocoa Butter		Cocoa Powder		Cocoa Paste	
	Ton	US\$ 000	Ton	US\$ 000	Ton	US\$ 000
2004	43.226	108.404	30.192	44.103	7.784	9.593
2005	40.388	144.427	27.670	31.381	7.597	10.651
2006	49.503	179.073	34.096	28.107	24.705	12.119
2007	41.068	230.159	27.383	32.085	18.652	15.538
2008	47.168	326.446	28.540	37.150	23.908	19.928

Source: Indonesia Central Bureau of Statistics, 2009.

While Import Volume and Value of Cocoa Processing Indonesia in 2008 is 1,702 tons with a value of U.S. \$ 2,855 thousand with the following details:

Table 3.1.7  
Imports of cocoa products, 2004-2008.

Year	Cocoa Butter		Cocoa Powder		Cocoa Paste	
	Ton	US\$ 000	Ton	US\$ 000	Ton	US\$ 000
2004	38	132	1.176	2.787	17	25
2005	30	86	3873	6999	516	610
2006	1	3	414	714	28	11
2007	34	148	444	945	42	4
2008	1.702	2.855	5.029	8.854	3.815	1.990

Source: Indonesia Central Bureau of Statistics, 2009.

Between 2002 and 2008, Indonesia remains as the third largest producer of cocoa after Côte d'Ivoire and Ghana. Although cocoa producers of the world's largest cocoa production, in fact, it is difficult to grow and develop in Indonesia. According to the general chairman Indonesian Cocoa Industry Association (Aiki) Piter Jasman, the local cocoa industry there are 15 companies, excluding foreign. It is too slight for Indonesia as the big cocoa producer.

Indonesia managed to become the third largest cocoa producer of the world. The success of the expansion and improvement programs production implemented since the early 1980s. It is crucial that the price level in the international market is based on the quality of cocoa beans. Therefore, there is needed to pay attention for Indonesian cocoa producers to increase the quality cocoa beans are exported. Indonesian cocoa prices are relatively low and subject to discounted price compared to similar products from other producing countries. The main problem of low quality of Indonesian cocoa in the international market is the Indonesian cocoa product attack by pests (Cocoa Pod Borers) and old plants. In world markets especially in Europe, assessed the quality of Indonesian cocoa is still low because containing high acidity, low precursor compounds flavor, and low levels of fat, so the price of Indonesian cocoa always get a high price discount of about 15% of the world cocoa prices.



Cocoa tree produce two kind of cocoa product, there are cocoa bean and shell and pulp. Cocoa bean is processed become Liquor to make cake and fat. Cake made from cocoa process to get many intermediate goods such as paste, powder, concentrate, extract, essence flavor, lecithin, tannin and pectin. The intermediate product of cake cocoa is processed into intermediate or final goods. In example, concentrate and essence flavor are processed become food, drink, medicine or cosmetic. Another example is tannin and pectin process to produce chemical industry. Fat made of cocoa same with cake needs process to convert into various final and intermediate goods. Fat is process into cocoa butter, oleo chemical, fatty acid and vitamin D. The intermediate fat product is then processed into food, chemical industry and medicine.

Shell and pulp is the second product of cocoa. Shell and pulp process become many intermediate and final goods such as green fertilizer, single cell protein, jelly, bio gas, filler plastic, etc. The intermediate products of while and pulp can be directly used in industrial and agricultural sector.

Demand on cocoa is come from domestic and foreign market. In 1990, domestic consumption was about 3.2 million ton and increases become 200 million ton in 2004. The demand products of cocoa in domestic are like cocoa butter, cocoa powder and cocoa pasta. Some products used with several industries as intermediate products to produce some final good such as bread, chocolate, ice cream, candy, etc.

Based on data from ministry of industry, demand cocoa in domestic is only 250 million ton, while the production reached 445 million ton every years. This condition happened because government imposes tax 10 % for every cocoa production which is processed in domestic. However, if farmers sell their cocoa product in abroad, the government not imposes tax on the products. It makes farmers prefer sell their product to export rather than sell in domestic.

### 3.2.3 Indonesian cocoa Export

Indonesia is one of the countries in the world whose has open economy activities. Even through, Indonesia as industrial countries but Indonesia still relies on their national income from primary and mining products export activities. One of the primary commodity which has potential in export oriented is cocoa. Indonesia has great performance in cocoa's export. Until 2008, Indonesia was the thirds producer countries of cocoa after Ivory Coast and Ghana. The value of Indonesia export at that time was 367, 42 million ton. Cocoa (*Theobroma cocoa*) is a concrete plant trees originating from South America. From the seeds of this plant produced refined products known as chocolate. Eight largest cocoa-producing countries are (harvest year 2005 data) is a Côte d'Ivoire (38%), Ghana (19%), Indonesia (13%, most of the bulk cocoa), Nigeria (5%), Brazil (5%), Cameroon (5%), Ecuador (4%) and Malaysia (1%). Other countries produced the remaining 9% (Warintek, Alvi Yani, 2008).

From 2004 until 2008, the export of Indonesian cocoa is increase every year. Based on BPS data, total export volume cocoa bean reach 487 thousand tons in 2007, compare to total export volume in 1998 is only 328 thousand tons. The trend of cocoa export from 1998 until 2007 is 5.83 percent. The positive sign indicate that growth in export cocoa has positive impact and Indonesian cocoa acceptance in the world market. The highest volume export in last 10 decades is in 2006 about 602 million tons. However, the export of cocoa is not only depends on the quantity but also the value of cocoa. The value of cocoa indicates national acceptance from cocoa. The highest value of export cocoa is US\$ 901 million in 2007 compared to previous year the value of export cocoa is only US\$ 839.3 million, its happen because in 2006 value of rupiah depreciated as much as 15,245 in term of rupiah per dollar.

Export of cocoa bean is still the highest value of Indonesian cocoa export. Cocoa bean reach US\$ 369 million in 2004 increase significantly become US\$ 854 million in 2008. Cocoa butter is the largest export for cocoa processing products. In 2004, export of cocoa butter is US\$ 108 million and increase until US\$ 326 million in 2008. It means cocoa processing product in the five recent years significantly

increase. In the other word, the production of cocoa product in domestic increases significantly.

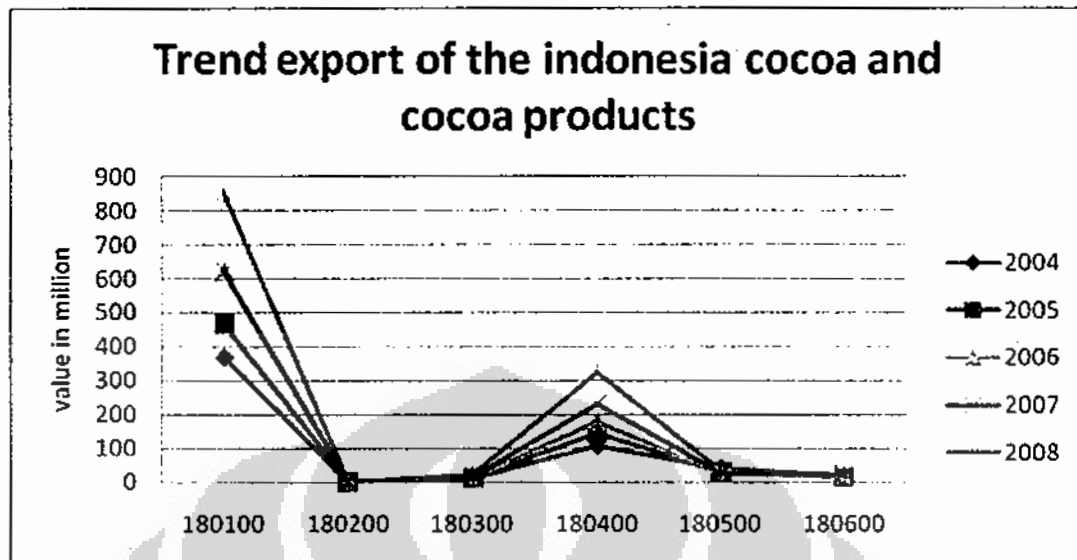
Table 3.1.8  
Indonesia export of cocoa and cocoa product, 2004-2008. (in thousand US\$)

Year HS	2004	2005	2006	2007	2008
1801	369,863	467,827	619,017	622,600	854,585
1802	380	451	1,269	681	1,441
1803	9,593	10,651	12,119	15,538	24,184
1804	108,404	144,427	179,073	230,160	326,447
1805	42,271	30,154	27,804	32,085	37,151
1806	18,836	14,483	15,765	23,094	25,140
<b>Total</b>	<b>549,348</b>	<b>667,993</b>	<b>855,047</b>	<b>924,159</b>	<b>1,268,947</b>

Source: Ministry of Trade, processed.

Indonesian cocoa export has various types of cocoa and cocoa products such as HS 1801 (cocoa bean, whole or broken raw or roasted), HS 1802 (cocoa shells, husks, skins and other cocoa waste), HS 1803 (cocoa paste), HS 1804 (cocoa butter, fat and oil), HS 1805 (cocoa powder, not containing added sugar or other sweetening matter) and HS 1806 (chocolate and other food preparations containing cocoa).

HS 1801 has the highest share in Indonesian cocoa export. Almost of Indonesian cocoa bean is exported in primary products. However, in the recent year, there are some cocoa products (derivative products) exported to international markets in small share. In general, the trend export of Indonesia's cocoa and cocoa products to international market still increases. It is the opportunity for Indonesia business to improve the cocoa industry in domestic.



Source: Ministry of Trade, Processed

Figure 3.

Trend of Indonesia export of cocoa and cocoa product, 2004-2008.

In last five years, the trend of volume export cocoa was increased 14.39 percent compared to previous five years (1998-2002). Based on data in 1998 until 2002, the highest volume export cocoa is 445.9 million tons in 2002 and the value export cocoa is 666.9 million US\$ which is the highest value with value of rupiah is 12,154 in term of one US\$. And the lowest volume export in 1998 until 2002 is only 311 tons in 2000, it's surprising due to value of rupiah in term of dollar almost same compare to 2002.

In 2005, period October until December share volume export was 32.68 percent, and the volume export reach about 149 million ton, this condition is the highest share of volume export in last quarter and in 1998 until 2008. In 1999, Indonesia was recovered from south Asia Crisis in 1997 until 1998. At that time value of rupiah is 9,724 in term of one US\$, and volume export cocoa is increasing with average volume was around 97 million tons which is increase compare to previous year.

Based on the destination countries, Indonesian cocoa bean export has been concentrate in some countries such as Malaysia, The United State, Singapore, China and Thailand.

Table 3.1.9  
Indonesia export of cocoa bean based on destination countries. (in thousand US\$)

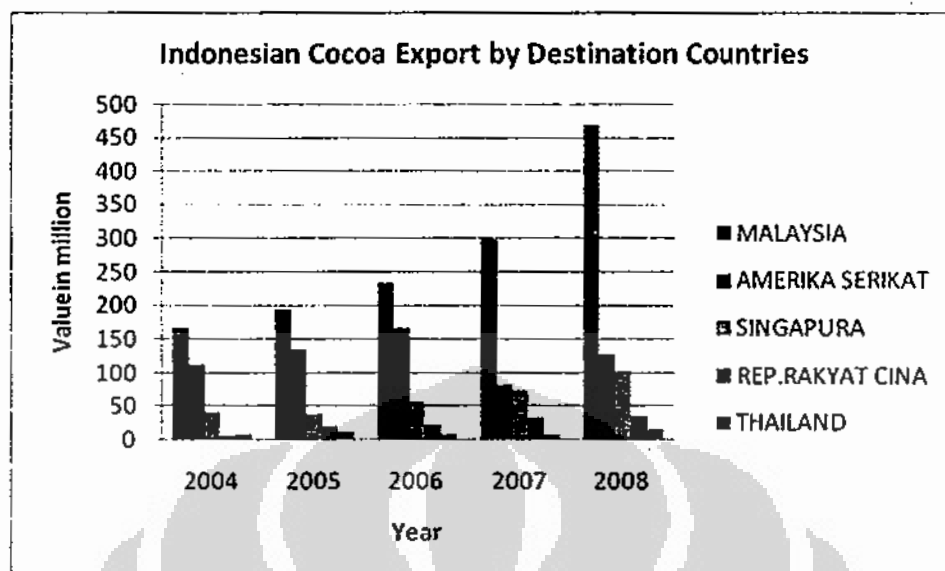
Year Country	2004	2005	2006	2007	2008
Malaysia	167,101	193,707	234,812	296,882	468,788
The United State	112,408	135,204	163,987	83,287	128,154
Singapore	43,349	40,393	57,825	74,093	102,529
China	7,907	20,904	23,092	34,454	35,600
Thailand	8,663	13,541	9,124	9,529	16,722

Source: Ministry of trade, processed.

Malaysia is become the largest importer of Indonesian cocoa bean. The country process the cocoa bean to become some derivative product of cocoa, so Malaysia gets more value added than Indonesia. Beside that Malaysia is also as exporter of cocoa and cocoa products. It means Malaysia is the rival in the international cocoa market.

Import cocoa bean from Indonesia always increase in the last years. In 2004, the import of Indonesian cocoa is US\$ 167 million and in the 2008 increase significantly into more than US\$ 468 million. The United State is also increase in import of Indonesian cocoa bean in the last five years.

However, the increasing of The United State import is more fluctuative in the five years. In 2006, import of Indonesian cocoa bean until US\$ 163 million while in 2008 decrease again into US\$ 128 million but the trend from 2004 -2008 is still increase.



Source : Ministry of trade, processed.

Figure 4.

Trend of Indonesia export of cocoa bean to main destination countries.

Malaysia is the highest destination country of volume export into 2008. The other main destination countries based on volume export beside Malaysia are United States, Singapore, Thailand and China. In 2006, Indonesia export a huge volume of cocoa to united states compare to other countries which reached about 163 million tons or equal to 45 percent from total export at that time. The whole export performance of cocoa indicates that Indonesian cocoa still favorable in international market, especially because price of Indonesian cocoa cheaper than other countries even though we still need to increase our quality.

In the period 2004 to 2008, the increasing of export value of Indonesian cocoa and cocoa products in the destination countries is generally influenced by increasing volume and price. In the other words, the increasing value does not just depend on volume but also influenced by the own price. In 2004, according to ICCO (International Cocoa Organization), the international price is 15.5 million US\$/ton. In 2008, the price increase significantly become 25.8 million US\$/ton. In the other hand, the export volume of Indonesian cocoa and cocoa product increase from 549.3 thousand ton in 2004 to 1,268.9 thousand ton in 2008. (WITS data). In the US market, the volume and value is decreased in 2007 because the production of

Indonesian cocoa is also decreased. The decreasing of production is caused by cocoa pod borer (the kind of insect pest attack) in the almost of cocoa plantation. In the other hand, because of Indonesia still export in primary product (cocoa bean) in the US market so that the implication of the declining of domestic production make the volume of export decrease too. However, the Indonesian cocoa butter in the US market still increases. Moreover, in 2008, the value of Indonesia cocoa butter become has more than cocoa bean. In the same time, the supply of the competitors of the products, in world market, is increased for Ivory Coast, Ghana and Malaysia.

Beside this opportunity, Indonesia has a problem in the US market. The US government imposes tariff escalation to protect its domestic industry. Tariff escalation imposes for processed products and for raw material is free from the policy. So, to improve the Indonesian export of cocoa products, Indonesia should export the product to new market, for instant to Europe.

In the China and Singapore market, Indonesian export of cocoa and cocoa products is also still focus in primary product. The highest value of export dominates in cocoa bean. In China market Indonesia has cocoa powder that has increasing value for cocoa powder. So the product should be maintained and improve in the future.

There is a challenged to develop the domestic cocoa industry. Malaysia that does not has more production of cocoa can produce more derivative products of cocoa. Malaysia can create high value added for cocoa products. It means Malaysia gets more benefit from the cocoa industry and will give more revenue for domestic industry. To compete in the international market, Indonesia should develop the domestic cocoa industry to increase the export value.

The other problem in the Indonesian cocoa is collector traders. This trader is the representative of the cocoa exporters who have cooperated with the big importers. There are some collector traders in around of plantation that give a direct capital to cocoa's farmer before the farmer has cocoa's harvest. It makes the farmer dependent on the traders. In the harvest time, the farmers had to sell their cocoa to the traders within given price. So, the farmers do not have bargaining power to sell the cocoa. As

the result, almost of cocoa's farmers has to sell the cocoa to the traders. It is the real problem.

This issue became one of the obstacles for the domestic industry to obtain raw materials easily. Although there are some other factor that become obstacles in the domestic cocoa industry such as imposing value added tax by government, credits banking problems for capital, and etc.

Indonesia government should improve the domestic cocoa industry to increase the export of cocoa product and to create value added for domestic. The government should impose an appropriate policy to support the domestic industry. The government must also protect the farmers from dependence on collector traders who tend to be very adverse the position of farmers. So, the domestic cocoa industry will improve the production and can produce more derivative cocoa products. As the result, in the future time, Indonesia can export more cocoa products than cocoa bean and Indonesia will get more benefit from the value added of the cocoa products.



## CHAPTER IV RESULT AND ANALYSIS

### 5.1 The growth of the share export of cocoa exporter countries in the world market

The growths of the share value of exports from some exporting countries of cocoa products are presented in Table 5.1. Indonesia exported various types of cocoa products such as cocoa beans, whole or broken raw or roasted (Harmonize System 1801), cocoa shells, husks, skins and other cocoa waste (1802), cocoa paste, whether or not defatted (1803), cocoa butter, fat and oil (1804), cocoa powder, not containing added sugar or other sweetening matter (1805), chocolate and other food preparations containing cocoa (1806). Trend growth of export value of Indonesian cocoa exports in Indonesia 2004 - 2008 reached 22.13% in world markets.

Table 5.1  
The growths of the share value of exports from some exporting countries of cocoa products, 2005-2008. (in %)

Country HS	World	Indonesia	Ghana	Ivory Coast	Malaysia
	12.17	22.13	2.27	5.88	22.30
1801	7.10	21.66	1.80	1.39	15.21
1802	18.75	36.01	21.95	14.54	-13.32
1803	11.75	24.94	-11.04	19.10	17.02
1804	18.40	30.61	16.45	13.52	29.24
1805	-2.17	-1.94	-47.51	2.19	15.02
1806	13.85	11.00	39.72	26.72	11.77

Source: World Integrated Trade Solution (WITS) processed.

Indonesia is the third rank for the main cocoa exporter under Ivory Coast and Ghana. Indonesia's export share to the international market increased from 2.46% in 2004 to 3.65% in 2008. This is in line with the increase in world exports of cocoa in the international market. Although Indonesia is ranked as the 3rd world supplier of world cocoa, but the Indonesian share is able to show improved performance better

than the other 2 major suppliers of Ghana and Ivory Coast who share both experienced a decline (4.79% of Ghana in 2004 to 3.18% in 2008, while Côte d'Ivoire from 9.75% in 2004 fell to 8.08% in 2008). From the results of the analysis also shows that the share of Malaysia also increased from 1.99% in 2004 to 2.89% in 2008. Increased share of Indonesia and Malaysia in those cocoa exports are not uniformly the same in all products, but to increase share Indonesia is still going to Harmonize System (HS) in 1801 which is a product of cocoa beans, while for Malaysia share increase comes from cocoa derivative products in addition to HS 1801. Malaysia so much benefited by an increase in value added from cocoa beans produced in Malaysia. However, Indonesia is also experiencing an increase in cocoa derivative products, especially for cocoa butter products are exported to Europe.

Table 5.2

Share exports of cocoa exporter's countries in the world market, 2004-2008. (in %)

Country Year	Indonesia	Ghana	Ivory Coast	Malaysia
2004	2.46	4.79	9.75	1.99
2005	2.90	3.88	8.95	2.23
2006	3.35	4.86	7.97	2.22
2007	3.07	3.50	7.33	2.51
2008	3.65	3.18	8.08	2.89

Source: World Integrated Trade Solution (WITS) processed.

Although, Indonesian cocoa export is dominated by primary products, cocoa butter products of Indonesia have received in the international market. This fact can be seen from the results of the analysis that the product with Harmonize System (HS) 1804 cocoa butter has a fairly significant increase from 19.73% in 2004 to 25.73% in 2008. This is a step forward for the national cocoa industry to increase production of cocoa derivative products such as cocoa butter, cocoa powder, cocoa paste, and chocolate or chocolate-containing foods. From the trend of increased share of cocoa exports, Indonesia shows that the Indonesian cocoa industry has begun to grow, although still relatively low. Until 2008 the export value of Indonesian cocoa

products is still dominated by cocoa beans with the HS 1801 in the amount of 67.35%. The second position is for derivative products with the HS 1804 (cocoa butter) with 25.73% share. Cocoa butter from 2004 to 2008 has increased because of increased demand from European markets.

Although the cocoa bean exports are still to become main of Indonesia export, Indonesia has started to develop a cocoa processing industry in the domestic country. Even for cocoa beans, Indonesia's exports tend to remain and not significantly increased while the national cocoa production increased. This means that the product has a lot of Indonesian cocoa is processed into derivative products which will increase the added value of Indonesian cocoa beans.

Table 5.3  
Share exports of Indonesian cocoa and cocoa products, 2004-2008. (in %)

Year HS	2004	2005	2006	2007	2008
1801	67.33	70.03	72.40	67.37	67.35
1802	0.07	0.07	0.15	0.07	0.11
1803	1.75	1.59	1.42	1.68	1.91
1804	19.73	21.62	20.94	24.90	25.73
1805	7.69	4.51	3.25	3.47	2.93
1806	3.43	2.17	1.84	2.50	1.98

Source: World Integrated Trade Solution (WITS) processed.

Indonesia also experienced export growth significantly. In 2005, the growth of world cocoa exports 0.03 %, while Indonesian cocoa growth is 0.22 %. This shows that the positive growth of Indonesian exports to the growth of world exports. It means Indonesia has good export performance for cocoa and cocoa products. Until 2008 Indonesia always has a positive export growth than export growth of the world, except in the year 2007 is only 0.08 % while the growth of the world 0.179 %. Main Indonesia's competitor countries like Ghana export growth is fluctuated each year and Ivory Coast as the largest exporter in the world, their export growth relatively smaller than the growth of Indonesian exports and tend to be smaller than the growth

of world exports. This is an opportunity for Indonesia to develop a national cocoa industry to be optimum.

The export growth of Indonesia's cocoa product to the world market is 0.22 % in 2005 increase to 0.37 % in 2008. It is higher when it compared with standard growth of the world that has 0.03 % in 2005 and 0.15 % in 2008. The both of the biggest competitor of cocoa product in the world market such as Ivory Coast and Ghana have relative lower growth than Indonesia. Ivory Coast has growth as much as - 0.06 % in 2005 and 0.27 % in 2008 and Ghana has - 0.17 % in 2005 and 0.05 % in 2008. Although, in order to the volume of export, Indonesia is still losing than the both countries, but Indonesia has better growth then those competitors in the world market.

Standard growth reflects the general standard of export growth of all countries in the world market. It's higher shown the good export performance of Indonesia's cocoa product in the world market. Export growth of Indonesian cocoa's export increase as well as the increase of standard growth in the period (2005 - 2008). It is the positive sign of Indonesian cocoa export performance in the world market. It is the good opportunity for Indonesia's cocoa industry to develop the business into more excellent performance in the cocoa export products. So that in the future time, Indonesia will become the winner in the world market.

In the overall, countries growth has good performance in the same period, include Malaysia that the country increases highly in 2005 until 2008 from 0.15 % to 0.33 %. The detail of the growths can see in the table 5.4.

Table 5.4  
Index standard growth of export of cocoa exporter's countries in the world market,  
2005-2008.

Year	world	Indonesia	Ghana	Ivory Coast	Malaysia
2005	0.028	0.216	-0.167	-0.056	0.154
2006	0.109	0.280	0.391	-0.012	0.106
2007	0.179	0.081	-0.151	0.083	0.330
2008	0.154	0.373	0.047	0.273	0.329

Source: World Integrated Trade Solution (WITS) processed.

Based on table 5.5, on period 2005-2008 Indonesia's cocoa product has positive performance in the international market. Almost of the cocoa product in global market increase in the commodity composition such as HS 1801(cocoa beans, whole or broken raw or roasted) has negative sign in 2005 (-39531) increase to 28246 in 2008, and so on HS 1802 (cocoa shells, husks, skins and other cocoa waste), HS 1803 (cocoa paste, whether or not defatted), HS 1804 (cocoa butter, fat and oil), HS 1805 (cocoa powder, not containing added sugar or other sweetening matter) also increase, except for HS 1806 (chocolate and other food preparations containing cocoa) decline from 748 to -869 in the same period.

There are some negative sign that show the weakness of the commodity composition effect in the constant market share analysis. It means the Indonesia's supply is not appropriate with the customer demands of the international market. There are some requirements that can not meet by Indonesian cocoa products.

The positive sign of commodity composition can indicate the products is not focus on the one main product but the derivation or processing product is also developed. Based on table 5.5, in the period 2005 – 2008, the commodity composition of HS 1801 (cocoa bean, whole or broken raw or roasted), HS 1803 (cocoa paste, whether or not defatted), and HS 1804 (cocoa butter, fat and oil) is experienced increase. The international market has been received Indonesian cocoa products beside the traditional product (cocoa bean). It shows the commodity

composition product of Indonesia's cocoa products are differentiated into some derivative products.

In the future, Indonesian cocoa industry can produce more varied product as well as the demand requirement in the world market. More detail, look in the following table 5.5.

Table 5.5  
Index commodity composition effect of Indonesia's cocoa, 2005-2008.

HS Year	1801	1802	1803	1804	1805	1806
2005	-39531	-46	-768	26744	-13274	748
2006	10168	-57	435	-11344	-6826	414
2007	-86632	511	-504	8692	1187	390
2008	28246	128	1141	29306	-1118	-869

Source: World Integrated Trade Solution (WITS) processed.

### 5.1.1 The United States Market

The market distribution effect of HS 1801 (cocoa bean whole or broken raw or roasted) has positive sign in the period 2005 to 2008, except in 2006. However, Indonesia's cocoa bean has been decline, 32807 in 2005 decrease into 19351 in 2008. Market distribution effect reflects the concentration of export market of cocoa and cocoa products in the world market. If the market distribution has positive sign, it means the market distribution does not concentrate in the one main destination country and the growth of the import demand of the destination country is also increase. When cocoa bean (HS 1801) decreases in the destination country, it indicates the demand of the product from the market decline.

In the other hand, market distribution for cocoa products such as HS 1804 (cocoa butter, fat and oil) and HS 1805 (cocoa powder, not containing added sugar or

other sweetening matter) are increased that it show the increasing of the demand in the US market. The US market is potential market for Indonesian cocoa products. It is the opportunities for cocoa products to develop to cover the US demand because Indonesia still has export opportunities in the US market.

Table 5.6

Index market distribution effect of Indonesia's cocoa in the US market, 2005-2008.

HS Year	1801	1802	1803	1804	1805	1806
2005	32807	0	137	534	-147	25
2006	-34976	0	-88	3314	-58	-7
2007	-39387	0	-376	-15921	-795	-34
2008	19351	0	-85	29360	509	-22

Source: World Integrated Trade Solution (WITS) processed.

In the constant market share analysis, there is one other important indicator that shows the export performance beside the commodity composition effect and market distribution effect. It is the competitiveness effect. The positive sign of competitiveness effect indicates that the export performance of Indonesian cocoa and cocoa products in the US market is good.

More large positive sign means the products has higher competitiveness in the market than other supplier's country in the US market. Since Indonesia has positive competitiveness, Indonesia is strong competitor in the market.

Based on table 5.7, in the period 2005 – 2008, the competitiveness of HS 1801 (cocoa bean, whole or broken raw or roasted), HS 1803 (cocoa paste, whether or not defatted), and HS 1804 (cocoa butter, fat and oil) is experienced increase. It indicates that beside cocoa bean, cocoa products such as cocoa paste and cocoa butter are received in the US market. So, we should improve the export performance for those cocoa products for the US market.

Table 5.7

Index competitiveness effect of Indonesia's cocoa in the US market, 2005-2008.

HS Year	1801	1802	1803	1804	1805	1806
2005	-1198	0	-867	2217	476	-2117
2006	46027	0	-541	-4473	2793	85
2007	-47708	0	617	15009	-736	56
2008	8874	0	143	17498	-6297	-95

Source: World Integrated Trade Solution (WITS) processed.

Based on the market distribution and the competitiveness effects, Indonesian export cocoa and cocoa products should focus on cocoa paste (HS 1803), cocoa butter (HS 1804) and cocoa powder (HS 1805) beside the cocoa bean (HS 1801) in the US market. In the future time, Indonesia should be left export of cocoa bean and increase export of cocoa butter and cocoa powder in the US market. For cocoa paste, the market distribution is still negative, but the number is small. The product is also has competitiveness in the US market, so cocoa paste is also the potential product in the next's the US market.

### 5.1.2 Singapore market

In the Singapore market, almost of Indonesian cocoa and cocoa products is dominated in HS 1801 (cocoa bean, whole or broken raw or roasted). Market distribution of HS 1801 is experienced increase from -5345 in 2005 to 18230 in 2008. The positive sign give us information that distribution of cocoa bean in Singapore market is appropriate in the center of import growth. It means, the export growth of the product is received well in Singapore market. However, Indonesia's cocoa products relatively do not have good distribution in Singapore market. In table 5.8 show that just HS 1801 (cocoa bean, whole or broken raw or roasted) increase in period 2005 – 2008. The Indonesia product (HS 1801) has positive growth and the import demand of Singapore market is experienced increase too.



**Table 5.8**  
**Index market distribution effect of Indonesia's cocoa in Singapore market,**  
**2005-2008.**

HS	year	1801	1802	1803	1804	1805	1806
	2005	-5345	0	43	175	1356	-236
	2006	9101	0	48	8	-92	380
	2007	18245	16	3	4	-85	357
	2008	18230	0	-7	-12	3	59

Source: World Integrated Trade Solution (WITS) processed.

The competitiveness effect of Indonesian cocoa and cocoa products in Singapore market give negative sign in 2007 and 2008. It indicates the competitiveness of the Indonesian export is decline. Decreasing of the competitiveness in the period is caused by increasing of Malaysian cocoa products as the competitor in Singapore market. Export Malaysia cocoa products increase significantly in derivative products such as HS 1803 (cocoa paste, whether or not defatted), HS 1804 (cocoa butter, fat and oil), HS 1805 (cocoa powder, not containing added sugar or other sweetening matter) and HS 1806 (chocolate and other food preparations containing cocoa).

Although Indonesian cocoa export more than Malaysia cocoa export in Singapore market, but Malaysia gets more advantage from the trade. Almost half of Singapore's cocoa import is cocoa derivative products so that it is indeed beneficially for Malaysia export because its export most in derivative products. Detail analysis of competitiveness effect of Indonesia's cocoa in Singapore market can see in table 5.9.

In Singapore market, Indonesia just focuses on cocoa bean (HS 1801). The product can compete well, so that Indonesia should maintain the export of cocoa bean. However, in the future, Indonesia also creates value added from the primary product into derivative product to increase more benefit from the trade.

Table 5.9

Index competitiveness effect of Indonesia's cocoa in Singapore market, 2005-2008.

HS Year	1801	1802	1803	1804	1805	1806
2005	5789	0	7	-473	-2700	314
2006	3033	0	-214	-51	-236	-510
2007	-4232	-150	73	25	321	-577
2008	-4598	5	-122	-47	-258	-750

Source: World Integrated Trade Solution (WITS) processed.

### 5.1.3 China market

In the China market, almost of Indonesian cocoa and cocoa products is dominated in HS 1801 (cocoa bean, whole or broken raw or roasted). Market distribution of HS 1801 is experienced increase from 6572 in 2005 to 11610 in 2008. In the aspect of the commodity composition, although a positive value but most of the products produced and exported by Indonesia is still in a raw material which has a lower trading value compared to the finished products or semi-finished. Otherwise, Indonesia has second main export cocoa product to Singapore in HS 1805 (cocoa powder, not containing added sugar or other sweetening matter). For the commodity composition of this product Indonesia can follow Malaysia model which produce finished and semi-finished products for its export.

Indonesia market distribution in China market has negative sign for HS 1801 (cocoa bean, whole or broken, raw or roasted) in 2006. Indonesia export cocoa products still focus on certain countries. So the market distribution is not balance in the world market. Aspect of the market distribution of all countries including Indonesia have not export to all countries because exports of Indonesia focused only to some countries and the increasing export does not match with the growth of the demand in the China market. This can be seen from the negative sign of market distribution. However, generally the market distribution of Indonesian cocoa export

still increase that means the increasing growth of export is match with the import growth of China, especially significant for HS 1801 and HS 1805.

Table 5.10

Index market distribution effect of Indonesia's cocoa in China market, 2005-2008.

HS Year	1801	1802	1803	1804	1805	1806
2005	6572	-13	-18	-12	144	25
2006	-2058	-3	92	5	58	20
2007	7051	98	-49	13	85	290
2008	11610	1	10	-21	1093	-19

Source: World Integrated Trade Solution (WITS) processed.

Indonesian cocoa export in China market has low competitiveness. Some cocoa products have negative sign in the competitiveness effect. The others have positive sign but it's too small. Especially for HS 1805 is experience increased. In the aspect of competitiveness, cocoa products produced Indonesia has the low competitiveness due to a negative sign. Negative sign show the product is produced by Indonesia is uncompetitive with other exporting countries. This was shown by decreasing values Indonesian exports in 2005 when compared with 2008. It caused that demand of China change from raw material to finished or semi-finished products. Indonesia still has low quality and quantity for the finished or semi-finished products. The real competitor in Asian is Malaysia that produces more quantity with higher quality.

Table 5.11

Index competitiveness effect of Indonesia's cocoa in China market, 2005-2008.

HS Year	1801	1802	1803	1804	1805	1806
2005	7045	-10	179	-1703	-438	-76
2006	1505	44	245	17	-135	328
2007	3410	-168	-633	-23	876	-623
2008	-17347	9	-45	-5	1248	-810

Source: World Integrated Trade Solution (WITS) processed.

In the China market, cocoa powder (HS 1805) should be maintained because the product becomes the Indonesian priority export of cocoa and cocoa product. From the result analysis, cocoa bean (HS 1801) that become main product until 2007 is decline in 2008, so Indonesia should focus on the other product (cocoa powder/HS 1805) that has opportunity and potentially increased in the future in China market.

## 5.2 Indonesian market position among other competitors

Based on table 5.13, In US market, market distribution gave positive impact in the period 2005-2008 for Indonesian cocoa products in HS 1801, 1804 and 1805. The competitors in US market such as Ivory Coast and Ghana has positive sign in HS 1801 and 1804. Malaysia has positive sign in HS 1804. Its means in US market has increased demand on HS 1801, 1804 and 1805. If compared with Ivory Coast and Ghana, Indonesia has higher market distribution effect in US market.

In general, market distribution in US market, Indonesia has enough appropriate distribution because the export product has met with the US demand especially for HS 1801, 1804 and 1805. Those positive sign of market distribution in US market give information that Indonesia has appropriate distributed the cocoa products to US demand as the potential market of Indonesia's cocoa products.

Table 5.12  
Index market distribution in US market, 2005 - 2008.

HS	Indonesia		Ivory Coast		Ghana		Malaysia	
	2005	2008	2005	2008	2005	2008	2005	2008
1801	32807	19351	110173	73394	2738	5249	0	387
1802	0	0	-2556	-7793	-5	-3	-558	0
1803	137	-85	698	-446	103	-149	231	-128
1804	534	29360	141	5927	52	1929	951	42031
1805	-147	509	-370	706	0	2	-541	905
1806	25	-22	0	-86	1	-18	27	-188

Source: World Integrated Trade Solution (WITS) processed.

Indonesian competitiveness in US market in period 2005-2008 has positive impact in HS 1801 and 1804. It indicates those cocoa products have high competitiveness in US market. Ivory Coast has positive competitiveness for HS 1801, 1803, and 1806. Malaysia competitiveness is high in HS 1803, 1804 and 1805.

Table 5.13  
Index competitiveness in US market, 2005 - 2008.

HS	Indonesia		Ivory Coast		Ghana		Malaysia	
	2005	2008	2005	2008	2005	2008	2005	2008
1801	-1198	8874	50423	30027	6768	-23592	0	-1451
1802	0	0	4257	-10	-5	-15	-3673	0
1803	-867	143	-2898	19625	912	-2564	-657	2632
1804	2217	17498	8560	-8370	487	-7178	-8400	49294
1805	476	-6297	-2899	-1164	11	-28	3772	13560
1806	-2117	-95	0	8230	97	-28	328	-1053

Source: World Integrated Trade Solution (WITS) processed.

Especially in HS 1804, Malaysia has the highest growth of competitiveness in US market. Malaysia is has been focused in cocoa products than export in cocoa bean, so the competitiveness of cocoa bean (HS 1801) has negative sign for Malaysia. However, Indonesia is also has cocoa butter that has good position in the US market. The competitiveness is also increase in positive sign. It means Indonesian cocoa butter (HS 1804) has potential market in the US market. In the other hand, Indonesia and Ivory Coast still export to US market based on primary product. Although, in the recent of time, those countries just beginning to export cocoa derivative products.

Ghana has negative sign for competitiveness almost of the product in US market because share export of Ghana cocoa products in US is small compared with others competitors.

Table 5.14  
Share export of exporters countries in US market, 2005 - 2008. (in %)

Country Year	Indonesia	Ghana	Ivory Coast	Malaysia
2004	6.35	0.59	16.85	4.25
2005	6.83	0.92	19.66	3.97
2006	8.19	2.51	15.43	4.06
2007	5.79	1.09	13.92	4.25
2008	7.80	0.30	17.22	7.42

Source: World Integrated Trade Solution (WITS) processed.

In US market, Indonesia is the second rank for the main cocoa exporter under Ivory Coast and follow by Malaysia. Indonesia's export share to the US market increased from 6.35 % in 2004 to 7.80 % in 2008. Based on the data indicates that Indonesia still has good export performance in the US market. However, Indonesia has problem in the commodity composition. Indonesia still focuses in primary products in the US market.

In the Singapore market distribution, almost of exporters' countries has negative sign. In the other world, Singapore has not growing demand for cocoa products. Except for cocoa bean (HS 1801) Indonesia is the biggest number of market distribution. It means the growth of Indonesian cocoa bean export has match with the increasing growth of import demand in Singapore market. Ghana and Malaysia have positive sign market distribution in 2008 but the number is relatively small compared with Indonesia. In this position Indonesia has higher than others. It indicates that Indonesia export has met with the increasing of Singapore demand for cocoa bean (HS 1801). Indonesia and Malaysia is the largest supplier in Singapore market. It can see in the share of cocoa products in the market.

Table 5.15  
Index market distribution in Singapore market, 2005 - 2008.

HS	Indonesia		Ivory Coast		Ghana		Malaysia	
	2005	2008	2005	2008	2005	2008	2005	2008
1801	-5345	18230	-991	0	-429	784	-903	1797
1802	0	0	0	0	0	0	-4	-74
1803	43	-7	1199	-356	82	-4	874	-949
1804	175	-12	0	0	0	0	2352	-1815
1805	1356	3	0	0	0	0	2803	16
1806	-236	59	-31	12	0	0	-894	189

Source: World Integrated Trade Solution (WITS) processed.

The Indonesia competitiveness effect in Singapore market has positive sign in 2005 for cocoa bean (HS 1801) but in 2008 the competitiveness become negative. The sign give information that competitiveness in Singapore market is decreasing. The changed of the sign in period 2005 to 2008 is experience too in Ghana and Malaysia, except in Ivory Coast increase to be positive. For cocoa paste (HS 1803) and chocolate (HS 1806), Malaysia has competitiveness in Singapore market.

Table 5.16  
Index competitiveness in Singapore market, 2005 - 2008.

HS	Indonesia		Cote d'Ivoire		Ghana		Malaysia	
	2005	2008	2005	2008	2005	2008	2005	2008
1801	5789	-4598	-6416	14994	2271	-656	3587	-10464
1802	0	5	0	0	0	0	0	1
1803	7	-122	-1241	-1496	335	-63	1618	4750
1804	-473	-47	0	0	0	0	-473	-1692
1805	-2700	-258	0	0	0	0	-1192	2
1806	314	-750	399	-531	0	0	-787	4252

Source: World Integrated Trade Solution (WITS) processed.

In Singapore market, Indonesia is the top rank for the main cocoa exporter follow by Malaysia and Ivory Coast. Indonesia's export share to the Singapore market increased from 23.81 % in 2004 to 24.56 % in 2008. There is fluctuation in the value of export in the period 2004-2008. It happened because in 2007 trend demand of world cocoa is decreasing. Singapore is trader country, so the market depends on the trend in the world.

Table 5.17  
Share export of exporters countries in Singapore market, 2005 - 2008. (in %)

Country Year	Indonesia	Ghana	Ivory Coast	Malaysia
2004	23.81	1.83	5.76	12.89
2005	21.59	2.84	1.92	16.08
2006	24.50	2.96	2.22	13.60
2007	23.23	0.98	1.79	12.51
2008	24.56	0.93	4.65	10.82

Source: World Integrated Trade Solution (WITS) processed.

Based on the data indicates that Indonesia still has good export performance in the Singapore market. However, Indonesia has problem in the commodity composition. Indonesia still focuses in primary products in the Singapore market.

In the China market, Indonesia has increased of positive sign in the market distribution in almost of cocoa products such as cocoa bean (HS 1801) and cocoa powder (HS 1805). In the other hand, the competitor such as Ghana has decrease of positive for cocoa bean (HS 1801). Malaysia has increase positive sign for cocoa paste (HS 1803) and cocoa powder (HS 1805). It indicates that Indonesian export is appropriate with the demand in China market especially for cocoa bean (HS 1801) and cocoa powder (HS 1805). Increasing Indonesia's growth of cocoa export is same as with China's growth of cocoa import.



Table 5.18  
Index market distribution in China market, 2005 - 2008.

HS	Indonesia		Ivory Coast		Ghana		Malaysia	
	2005	2008	2005	2008	2005	2008	2005	2008
1801	6572	11610	2805	1727	13268	6659	547	120
1802	-13	1	0	0	-176	0	-286	755
1803	-18	10	-45	296	0	11	-237	580
1804	-12	-21	0	0	0	0	-42	-3069
1805	144	1093	19	0	0	0	136	1719
1806	25	-19	0	0	0	0	222	-129

Source: World Integrated Trade Solution (WITS) processed.

Indonesia competitiveness in China market has positive sign for cocoa powder (HS 1805) and in the other products Indonesia has not competitiveness in China market. Ivory Coast has competitiveness in cocoa bean (HS 1801). In the other hand, Ghana has competitiveness in cocoa bean and cocoa shell. For cocoa derivative products, Malaysia has competitiveness in cocoa butter (HS 1804) and chocolate (HS 1806).

Table 5.19  
Index competitiveness in China market, 2005 - 2008.

HS	Indonesia		Cote d'Ivoire		Ghana		Malaysia	
	2005	2008	2005	2008	2005	2008	2005	2008
1801	7045	-17347	1370	5107	-7467	28661	-755	247
1802	-10	9	0	0	-138	929	1941	-713
1803	179	-45	3257	-1450	43	-370	5106	-4386
1804	-1703	-5	0	0	0	0	584	14151
1805	-438	1248	-116	0	0	0	1435	-1993
1806	-76	-810	0	0	0	0	-1903	4570

Source: World Integrated Trade Solution (WITS) processed.

Universitas Indonesia

Share export cocoa products in China market dominated by Malaysia, Indonesia and Ghana. Share export Indonesia increase from 8.62 % in 2004 to 17.77 % in 2007. However, share export Indonesia in 2008 decline to 12.93 %. It happens because the increasing supply from Ghana that increases from 9.51 % in 2007 to 19.16 % in 2008.

Table 5.20  
Share export of exporters countries in China market, 2005 - 2008. (in %)

Country Year	Indonesia	Ghana	Ivory Coast	Malaysia
2004	8.62	12.07	3.15	12.90
2005	12.84	11.62	6.31	14.25
2006	14.04	12.90	6.41	15.87
2007	17.77	9.51	6.25	17.62
2008	12.93	19.16	6.94	18.27

Source: World Integrated Trade Solution (WITS) processed.

### 5.3 Trade Specialization Index

Static properties like the other methods such as RCA, market concentration, acceleration ratio, and constant market share analysis (CMSA), the method also only describe the past phenomenon, at least for the present. Therefore, this method should be completed with the trade specialization index (TSI) to accelerate forward.

The method describes the complete period of the past, present and future through an industrialization to determine whether a commodity has been on the appropriate stage development.

The results of calculations Indonesian Trade Specialization Index for each product in table 5.21.

Table 5.21

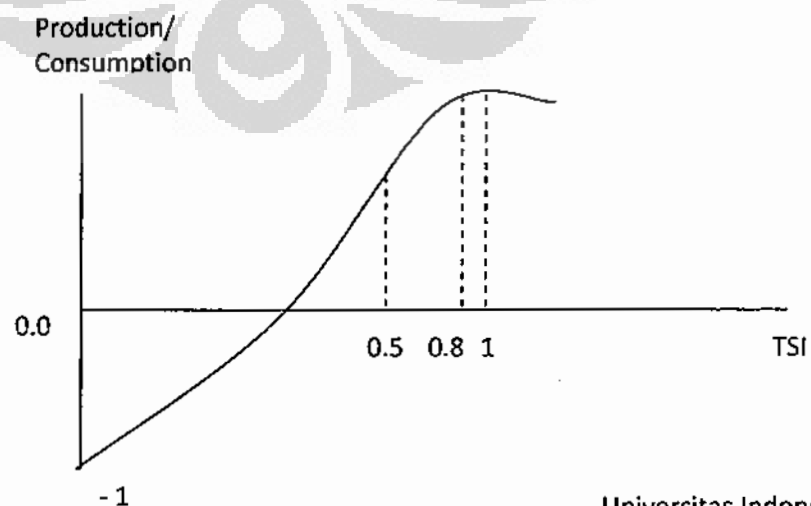
Trade specialization index of Indonesia's cocoa and cocoa products, 2004-2008.

Year	1801	1802	1803	1804	1805	1806
2004	0.76	0.81	0.95	0.99	0.67	-0.16
2005	0.81	1.00	0.87	1.00	0.62	-0.34
2006	0.87	0.92	0.90	1.00	0.59	-0.23
2007	0.88	1.00	0.86	0.99	0.54	-0.16
2008	0.87	0.98	0.67	1.00	0.52	-0.26

Source: World Integrated Trade Solution (WITS) processed.

Based on the trade specialization index (TSI) calculations in the period 2004-2008, the development of HS 1801 (cocoa bean, whole or broken, raw or roasted), HS 1802 (cocoa shells, husks, skins and other cocoa waste), 1803 (cocoa paste, whether or not defatted), HS 1804 (cocoa butter, fat and oil) and HS 1805 (cocoa powder, not containing added sugar or other sweetening matter) show the growth stage that about 0.52 % to 1,00 %. In this stage of these cocoa products produced by Indonesia is well known in the world market, so the Indonesian cocoa bean products will continue to grow and develop to the stage of maturity.

While based on the HS 1806 (chocolate and other food preparations containing cocoa) based on TSI calculations within the last five years (2004-2008) maturity stage of its development shows a range between - 0.34 to - 0.16. This value indicates that this product is not yet known in the market and the product still in import substitution level.



## CHAPTER V

### CONCLUSION

The US market is the potential market of Indonesia's cocoa products. Indonesia's cocoa products is also has competitiveness in US market. Based on the constant market share analysis, Indonesian export of cocoa and cocoa products should focus on cocoa paste (HS 1803), cocoa butter (HS 1804) and cocoa powder (HS 1805) beside the cocoa bean (HS 1801). In the future time, Indonesia should be left export of cocoa bean and increase export of cocoa butter and cocoa powder in the US market. For cocoa paste, cocoa butter, cocoa powder is also has potential and great opportunities in the US market, so the cocoa products are also become the potential product in the next's the US market.

Compared with the competitors (Ghana and Malaysia), Indonesia has higher competitiveness. However, Malaysia also has high competitiveness especially for cocoa derivative products such as HS 1803 (cocoa paste), 1804 (cocoa butter) and 1805 (cocoa powder). It means Indonesia has challenged to compete with Malaysia product in the US market. So, Indonesia must develop the domestic cocoa industry to produce more cocoa products within high quality.

In the Singapore market, Indonesia is the top rank for the main cocoa exporter follow by Malaysia and Ivory Coast. Indonesia just focuses on cocoa bean (HS 1801). The product can compete well, so that Indonesia should maintain the export of cocoa bean. However, in the future, Indonesia also creates value added from the primary product into derivative product to increase more benefit from the trade. Generally, in Singapore market Indonesian cocoa and cocoa product has not competitiveness.

In the China market, Indonesian export is appropriate with the demand in China market. Indonesia has competitiveness in China market especially for HS 1805 (cocoa powder) and in the other products Indonesia has not competitiveness in China market. The biggest competitor in the China market is Malaysia. Cocoa powder (HS 1805) should be maintained because the product becomes the Indonesian priority

export of cocoa and cocoa product in China market. From the result analysis, cocoa bean (HS 1801) that become main product until 2007 is decline in 2008, so Indonesia should focus on the other product (cocoa powder/HS 1805) that has opportunity and potentially increased in the future in China market.

Based on Trade Specialization Index (TSI) the development of HS 1801 (cocoa bean, whole or broken, raw or roasted), HS 1802 (cocoa shells, husks, skins and other cocoa waste), 1803 (cocoa paste, whether or not defatted), HS 1804 (cocoa butter, fat and oil) and HS 1805 (cocoa powder, not containing added sugar or other sweetening matter) show the growth stage that about 0.52 to 1.00. In this stage of these cocoa products produced by Indonesia is well known in the world market, so the Indonesian cocoa bean products will continue to grow and develop to the stage of maturity. However, for HS 1806 (chocolate and other food preparations containing cocoa) has negative sign (-0.34 to -0.16). It means the product has in import substitution phase. The product should be developed and promoted in international market.

Indonesia government should improve the domestic cocoa industry to increase the export of cocoa product and to create value added for domestic. The government should impose an appropriate policy to support the domestic industry. The government must also protect the farmers from dependence on collector traders who tend to be very adverse the position of farmers. So, the domestic cocoa industry will improve the production and can produce more derivative cocoa products. As the result, in the future time, Indonesia can export more cocoa products than cocoa bean and Indonesia will get more benefit from the value added of the cocoa products.

## REFERENCES

- Edith Skriner, 2009. *Competitiveness and Specialization of the Austrian Export Sector: A Constant Market Share Analysis*. Institute for Advanced Studies, Vienna.
- Esterhuizen. A. 2006. *An Evaluation of the Competitiveness of the South African Agribusiness Sector*. University of Pretoria.
- Fadilah, Yudi, 2007. *The Analysis of The Effects of export Tax on Cocoa in Indonesia*. Thesis, University of Indonesia.
- Goenadi, Didiek H, 2005. *Prospek dan Arah Pengembangan Agribisnis Kakao di Indonesia*. Balitbang Deptan.
- Hawes, John M., Rao C. P. 1983. *A Market Share Analysis of International Trade*. International marketing review. MCB UP Ltd.
- Krugman, Paul R. and Maurice Obstfeld. 2006. *International Economics Theory and Policy*. 7<sup>th</sup> Edition. USA: Addison Wesley.
- LPEM FEUI, 1997. *Penyusunan Peta. Keunggulan Komparatif Produk Ekspor Indonesia di Beberapa Pasar Internasional*. Ditjen. PLN Depperindag.
- Lu, Weiguo. (1996). *Performance of Australian Merchandise Exports in East Asia : Constant Market Share Analysis*. Australia Parliamentary Research Service.
- Poter, ME. 1990. *The competitive advantage of nations*. London: Macmillan.
- Rachman, H. 2005. *Analyzing the Competitiveness of Indonesian Agricultural Commodities under WTO commitments*.
- Salvatore, Dominick, 2004. *International Economics, 8<sup>th</sup> Edition*. USA. John Wiley and Son, Inc.
- Suprihatini, Rohayati, 2005. *Daya Saing Ekspor Teh Indonesia di Pasar Dunia*. Lembaga Riset Perkebunan Indonesia.
- Wijayanto, 2008. *Assessing Indonesia's Coffee Export Competitiveness*. Thesis, Magister Perencanaan dan Kebijakan Publik, FEUI. University of Indonesia.
- Yani, Alvin. *Profile of Physical Quality of Fermented Cocoa Beans in Lampung*. Balai Pengkajian Tehnologi Pertanian Lampung.

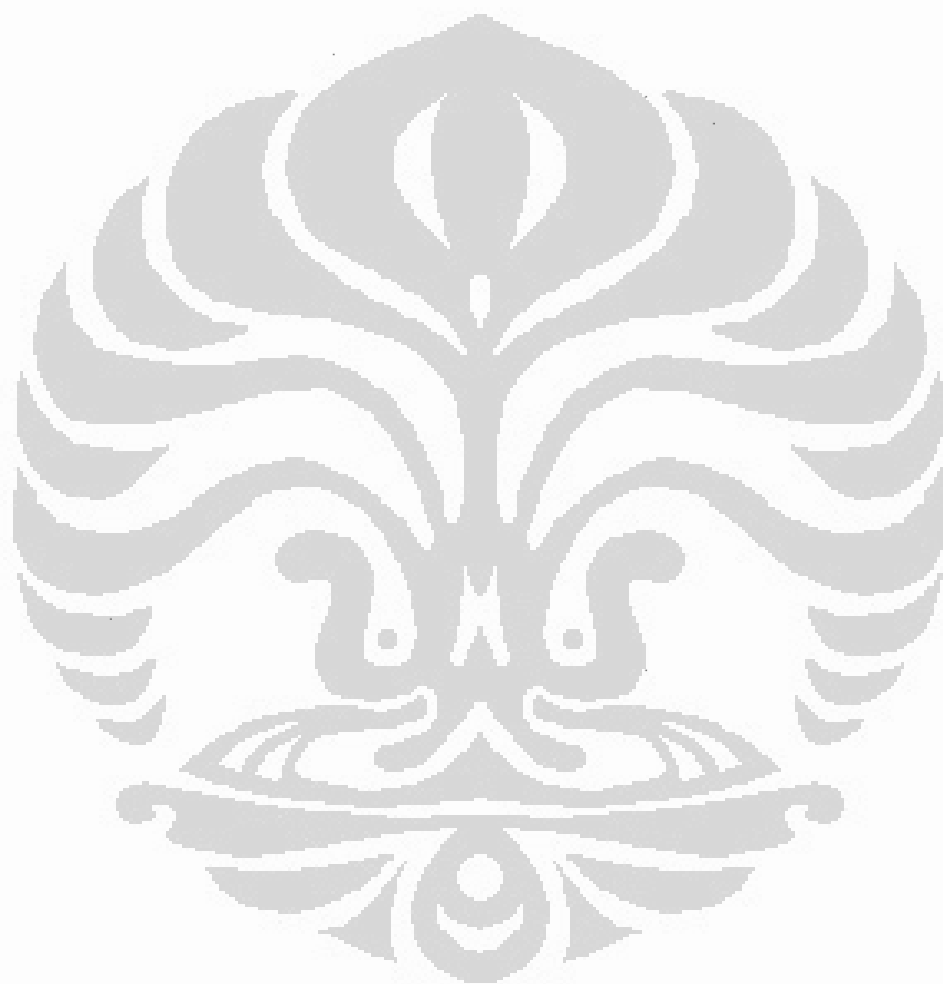
[www.depdag.go.id](http://www.depdag.go.id)

[www.bps.go.id](http://www.bps.go.id)

[www.deptan.go.id](http://www.deptan.go.id)

[www.deperin.go.id](http://www.deperin.go.id)

[www.nafed.go.id](http://www.nafed.go.id)



Universitas Indonesia

Annex 1. Total export of cocoa in main exporter countries, 2004-2008

Year	World	Indonesia	Ghana	Cote d'Ivoire	Malaysia
2004	22371662	549348	1071124	2181938	444919
2005	23008750	667993	892224	2060325	513644
2006	25526182	855047	1241079	2035045	567926
2007	30094092	924159	1053370	2204547	755174
2008	34741746	1268947	1103123	2807307	1003767
Trend	12,17	22,13	2,27	5,88	22,30

Source: World Integrated Trade Solution (WITS) processed.

Annex 2. Trend export of cocoa in main exporter countries, 2004-2008

HS	World	Indonesia	Ghana	Cote d'Ivoire	Malaysia
	12,17	22,13	2,27	5,88	22,30
1801	7,10	21,66	1,80	1,39	15,21
1802	18,75	36,01	21,95	14,54	-13,32
1803	11,75	24,94	-11,04	19,10	17,02
1804	18,40	30,61	16,45	13,52	29,24
1805	-2,17	-1,94	-47,51	2,19	15,02
1806	13,85	11,00	39,72	26,72	11,77

Source: World Integrated Trade Solution (WITS) processed.



Annex 3. Share export of cocoa in main exporter countries, 2004-2008

Year	Indonesia	Ghana	Cote d'Ivoire	Malaysia
2004	2,46	4,79	9,75	1,99
2005	2,90	3,88	8,95	2,23
2006	3,35	4,86	7,97	2,22
2007	3,07	3,50	7,33	2,51
2008	3,65	3,18	8,08	2,89

Source: World Integrated Trade Solution (WITS) processed.

Annex 4. Export of cocoa in main exporter countries by Harmonize System (HS), 2004-2008

HS	Year	Indonesia	Ghana	Cote d'Ivoire	Malaysia
1801	2004	369.863	1.003.458	1.617.485	13.757
	2008	854.585	1.031.154	1.754.113	18.036
1802	2004	380	2.686	73.764	5.535
	2008	1.441	5.960	114.141	2.642
1803	2004	9.593	34.411	211.566	44.090
	2008	24.185	16.021	431.725	77.323
1804	2004	108.404	28.401	166.663	210.700
	2008	326.447	47.549	282.538	628.202
1805	2004	42.271	1.347	63.315	107.680
	2008	37.151	31	61.606	178.446
1806	2004	18.836	819	49.146	63.156
	2008	25.140	2.407	163.185	99.120
Total	2004	549348	1071124	2181938	444919
	2008	1268947	1103123	2807307	1003767

Source: World Integrated Trade Solution (WITS) processed.

Annex 5. Share export of cocoa in main exporter countries by HS, 2004-2008

HS	Year	Indonesia	Ghana	Cote d'Ivoire	Malaysia
1801	2004	67,33	93,68	74,13	3,09
	2008	67,35	93,48	62,48	1,80
1802	2004	0,07	0,25	3,38	1,24
	2008	0,11	0,54	4,07	0,26
1803	2004	1,75	3,21	9,70	9,91
	2008	1,91	1,45	15,38	7,70
1804	2004	19,73	2,65	7,64	47,36
	2008	25,73	4,31	10,06	62,58
1805	2004	7,69	0,13	2,90	24,20
	2008	2,93	0,00	2,19	17,78
1806	2004	3,43	0,08	2,25	14,19
	2008	1,98	0,22	5,81	9,87
		100,00	100,00	100,00	100,00

Source: World Integrated Trade Solution (WITS) processed.

Annex 6. Export growth of the main cocoa exporter countries, 2004-2008

Year	g world	Indonesia	Ghana	Cote d'Ivoire	Malaysia
2005	0,028	0,216	-0,167	-0,056	0,154
2006	0,109	0,280	0,391	-0,012	0,106
2007	0,179	0,081	-0,151	0,083	0,330
2008	0,154	0,373	0,047	0,273	0,329

Source: World Integrated Trade Solution (WITS) processed.

Annex 7. Value of export of each exporters countries to US market, 2004-2008

Year	US Import	Export			
		Indonesia	Ghana	Cote d'Ivoire	Malaysia
2004	2611408	165771	15414	439962	111049
2005	2906429	198376	26851	571337	115262
2006	2803720	229562	70393	432606	113793
2007	2786092	161440	30302	387945	118400
2008	3433912	267983	10390	591323	254894

Source: World Integrated Trade Solution (WITS) processed.

Annex 8. Share export of each exporters countries to US market, 2004-2008

Country Year	Indonesia (%)	Ghana (%)	Cote d'Ivoire (%)	Malaysia (%)
2004	6,35	0,59	16,85	4,25
2005	6,83	0,92	19,66	3,97
2006	8,19	2,51	15,43	4,06
2007	5,79	1,09	13,92	4,25
2008	7,80	0,30	17,22	7,42

Source: World Integrated Trade Solution (WITS) processed.

## Annex 9. Value of export of each exporters countries to China market, 2004-2008

Year	China Import	Export			
		Indonesia	Ghana	Cote d'Ivoire	Malaysia
2004	135660,3	11697	16373	4271	17500
2005	177457,1	22784	20614	11206	25289
2006	183234,6	25730	23644	11747	29080
2007	210796,6	37468	20053	13175	37138
2008	312958,5	40470	59958	21714	57177

Source: World Integrated Trade Solution (WITS) processed.

## Annex 10. Share export of each exporters countries to China market, 2004-2008

Country Year	Indonesia (%)	Ghana (%)	Cote d'Ivoire (%)	Malaysia (%)
2004	8,62	12,07	3,15	12,90
2005	12,84	11,62	6,31	14,25
2006	14,04	12,90	6,41	15,87
2007	17,77	9,51	6,25	17,62
2008	12,93	19,16	6,94	18,27

Source: World Integrated Trade Solution (WITS) processed.

Annex 11. Value of each exporters countries to Singapore market, 2004-2008

Year	Singapore Import	Export			
		Indonesia	Ghana	Cote d'Ivoire	Malaysia
2004	203250	48394	3712	11717	26201
2005	200452	43273	5686	3841	32238
2006	246248	60321	7288	5474	33501
2007	331930	77122	3239	5930	41511
2008	426668	104807	3948	19853	46182

Source: World Integrated Trade Solution (WITS) processed.

Annex 12. Share export of each exporters countries to Singapore market, 2004-2008

Country Year	Indonesia (%)	Ghana (%)	Cote d'Ivoire (%)	Malaysia (%)
2004	23,81	1,83	5,76	12,89
2005	21,59	2,84	1,92	16,08
2006	24,50	2,96	2,22	13,60
2007	23,23	0,98	1,79	12,51
2008	24,56	0,93	4,65	10,82

Source: World Integrated Trade Solution (WITS) processed.

## Annex 13 Export volume of Indonesian Cocoa and Cocoa Product, 2004 - 2008

## The US Market

Year/HS	2004	2005	2006	2007	2008
1801	84.006.954	107.630.513	131.738.530	53.224.395	53.689.650
1802	0	0	0	0	0
1803	2.481.700	1.478.590	2.200.000	3.180.000	1.280.360
1804	13.437.274	14.662.522	15.099.961	14.920.034	22.177.963
1805	3.952.749	2.779.103	4.409.228	4.818.600	1.875.537
1806	1.535.885	44.543	87.013	59.183	32.106
Total	105.414.562	126.595.271	153.534.732	76.202.212	79.055.616

## Singapore Market

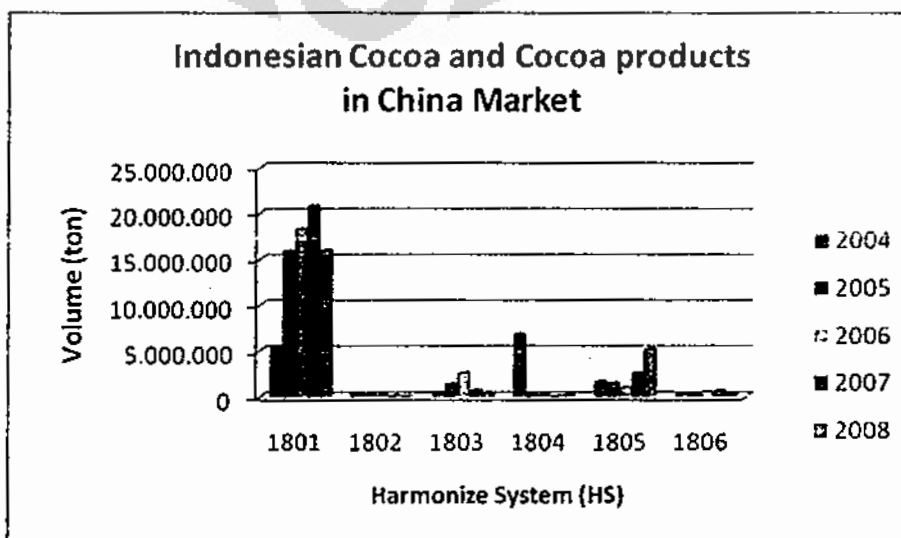
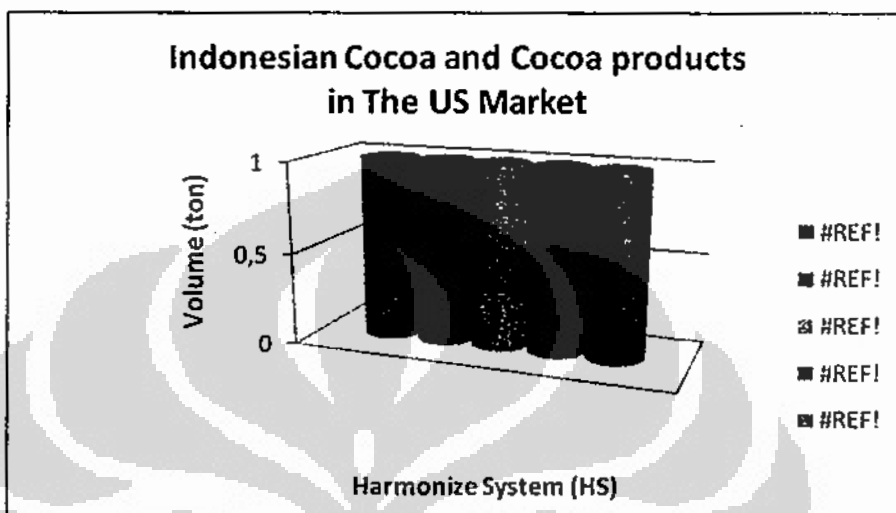
Year/HS	2004	2005	2006	2007	2008
1801	5.474.576	15.830.127	18.240.928	20.746.109	15.902.495
1802	397.503	151.000	125.000	55.661	26.040
1803	405.439	1.326.120	2.585.156	634.826	455.830
1804	6.749.629	133.255	166.019	21.307	109.149
1805	1.597.241	1.423.371	940.648	2.500.779	5.117.615
1806	315.897	323.818	545.024	597.453	150.682
Total	14.940.285	19.187.691	22.602.775	24.556.135	21.761.811

## China Market

Year/HS	2004	2005	2006	2007	2008
1801	31.570.287	30.093.945	43.976.494	43.683.484	45.157.536
1802	0	0	50.000	0	38.001
1803	60.000	80.000	12.000	56.685	0
1804	112.743	18.443	17.025	13.732	6.622
1805	1.640.400	715.851	446.872	665.661	484.790
1806	820.805	1.055.320	987.384	962.146	689.771
Total	34.204.235	31.963.559	45.489.775	45.381.708	46.376.720

Annex 14 Figure of Trend Export of Indonesian Cocoa and Cocoa Products

Indonesian Cocoa and Cocoa products in The US Market



Annex 15 International price of cocoa, 2004 - 2008

Year	Price in million US\$/ton
2004	15.5
2005	15.4
2006	15.9
2007	19.5
2008	25.8

Source: ICCO processed, 2009