

**ANALYSIS OF BILATERAL FREE TRADE AGREEMENT
BETWEEN INDIA AND INDONESIA**

THESIS

**DEASI NATALIA
0706299523**



**UNIVERSITY OF INDONESIA
FACULTY OF ECONOMICS
MASTER OF PLANNING AND PUBLIC POLICY
DEPOK
DECEMBER 2008**

**ANALYSIS OF BILATERAL FREE TRADE AGREEMENT
BETWEEN INDIA AND INDONESIA**

THESIS

**Submitted in partial fulfillment
of the requirements for the degree of
Master of Economics**

**DEASI NATALIA
0706299523**



**UNIVERSITY OF INDONESIA
FACULTY OF ECONOMICS
MASTER OF PLANNING AND PUBLIC POLICY
DEPOK
DECEMBER 2008**


ENDORSEMENT

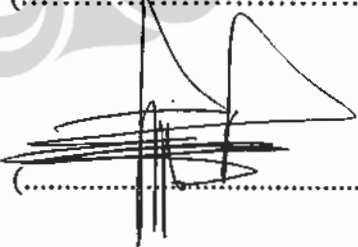
This thesis is proposed by : Deasi Natalia
Name : Deasi Natalia
Student Register Number : 0706299523
Program : Master of Planning and Public Policy
Title of Thesis : Analysis of Bilateral Free Trade Agreement
between India and Indonesia

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

BOARD OF EXAMINERS

Supervisor : Dr. Andi Fahmi Lubis (.....)

Examiner : Prof. Dr. Lepi T. Tarmidi (.....)

Examiner : Dr. Maddaremmeng A. Panennungi (.....)

Stipulated in : Depok

Date : December , 2008

STATEMENT OF AUTHORSHIP

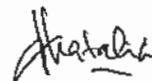
"I certify that the attached material is my original work. I declare that no other person's work has been used without due acknowledgement".

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 this 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 : Deasi Natalia
Student Register Number : 0706299523
Document : Thesis
Title of Thesis : Analysis of Bilateral Free Trade Agreement
between India and Indonesia
Date : December 2008
Advisor/Supervisor : Dr. Andi Fahmi Lubis

Depok, December 2008



Deasi Natalia

STATEMENT OF ASSERTION

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

Name : Deasi Natalia
Student Register Number : 0706299523
Study of 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 in title :

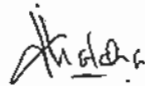
“Analysis Bilateral Free Trade Agreement between India and Indonesia”

along with available of set of equipment if It's needed. By exclusive Royalty – Free Right, University of Indonesia has right to save, format, manage in database, maintain and published my thesis without ask the license from me as long as write down my name as writer inventor and as owner of copyright.

Thus this statement I made truly

Made in : Depok

Date : December 2008



(Deasi Natalia)

ABSTRACT

Name : Deasi Natalia
Study of Program : Magister of Planning and Public Policy
Title of Thesis : Analysis of Bilateral Free Trade Agreement
between India and Indonesia

The FTA is a basic type of economic integration. Indonesia needs bilateral FTA with the other countries to minimize its market losses. FTA, if used strategically, can be a tool to enhance Indonesia's competitiveness and economic growth. One of potential partner country for Indonesia is India, because India is the seventh biggest export destination and India as one of country which the fastest growing economies in the world. The focus of this study is to analyze the trade flow and trade potential between Indonesia and India then it examines the impact of tariff elimination as one of FTA condition toward export and import of selected commodities between Indonesia and India. From the trade flow and trade potential analysis, there are 42 product groups which have great potential to improve in Indian market. The products which have great potential are Mineral Fuels and Oils, Electrical Equipments, Ores, Slag and Ash, Machinery, Fats, Oils and Waxes. The Indonesian and Indian tariff has significant impact to trade between them. The tariff elimination simulation result show that commodity or product which have high percentage of increasing the export are Fats, Oils And Waxes (15), Mineral Fuels And Oils (27), and Ores, Slag And Ash (26).whereas, in increasing of import are Plastics & Plastic articles (39), Iron and steel (72), and Cotton (52). The general conclusion is FTA between Indonesia and India will give more gain to Indonesia than India, This is because of high tariff regime in India and low tariff regime in Indonesia. So, Indonesia was expected to gain more from the FTA than the India, at least for the first phase because of its much less tariffs compared to India.

Key words : Free Trade Agreement (FTA), Trade Flow, Trade Potential, Panel Data.

ABSTRAK

Nama : Deasi Natalia
Program Studi : Magister Perencanaan dan Kebijakan Publik
Judul Tesis : Analisa Bilateral Free Trade Agreement antara India and Indonesia

FTA merupakan salah satu bagian dasar dari integrasi ekonomi. Saat ini, Indonesia membutuhkan bilateral FTA dengan Negara lain untuk meminimalisasi hilangnya pasar. FTA, jika dilakukan dengan strategi yang baik and terencana akan sangat berguna untuk meningkatkan daya saing dan pertumbuhan ekonomi. Salah satu negara yang sangat potensial untuk membentuk kerjasama dengan Indonesia adalah India, karena India merupakan tujuh besar negara tujuan utama ekspor Indonesia dan India merupakan salah satu Negara dengan pertumbuhan ekonomi tercepat di dunia. Tujuan utama dari studi ini adalah pertama untuk menganalisa arus perdagangan antara Indonesia dan India, yang kemudian mencari produk dari Indonesia yang mempunyai potensi besar untuk di perdagangkan dengan India, kedua menganalisa faktor-fakor yang mempengaruhi arus perdagangan antara keduanya, kemudian memprediksikan kemungkinan keuntungan dan kerugian dari dampak penurunan tariff sebagai persyaratan utama dari sebuah kerjasama FTA. Berdasarkan hasil dari analisa perdagangan, terdapat 44 kelompok komoditi yang mempunyai potensi besar untuk di perdagangkan dengan India. Kelompok komoditi tersebut diantaranya, Bahan akar Mineral, Mesin atau Peralatan Listrik, Ores, Biji Kerak dan Abu Logam, Machinery, Lemak dan Minyak Hewan/Nabati. Secara garis besar, FTA antara Indonesia dan India akan memberikan keuntungan lebih kepada Indonesia daripada India. Ini dikarenakan tingginya bea masuk yang dikenakan di India dibanding bea masuk di Indonesia yang relatif sudah kecil. Sehingga diharapkan dengan adanya kerjasama perdagangan antara Indonesia dan India akan memberikan keuntungan lebih pada Indonesia, setidaknya pada jangka pendek di karenakan perbedaan tariff yang cukup tinggi dengan india.

Kata Kunci : Free Trade Agreement (FTA), Arus Perdagangan, Produk Potensial, Data Panel.

ACKNOWLEDGEMENTS

I would like to say Alhamdulillah to Allah SWT because finally I could complete this thesis that be entitled of: "Analysis of Bilateral Free Trade Agreement between India and Indonesia".

This research is a partial fulfillment of the requirements for the degree of Master of Economics in International Trade Policy, Master of Planning and Public Policy Program, Faculty of Economy, University of Indonesia. With the completion of this research, I would like to express my sincere gratitude to the following peoples who made this research possible:

1. Mr. Andi Fahmi Lubis, my supervisor for his patience and very helpfulness to guide me in make this thesis;
2. Mr. Lepi T. Tarmidi and Mr. Maddaremmeng A. Panennugi for their patience and suggestion on the examination;
3. Mr. B. Raksaka Mahi, Mrs. Hera Susanti, Mr. Mahyus, Mr. Mulyadi and all of lectures, staffs (specially Mba Siti and Mas Asep) and securities of the Program of Master of Planning and Public Policy, Faculty of Economy University of Indonesia;
4. Mrs. Retno Rukmawati, the Head of Data Centre of Trade Research and Development Agency (TREDA) for her support and her recommendation to study on MPKP;
5. Mr. Roger Freeman and all of ITAP-USAID staffs, who have been very helpful in supporting all of our needs during the class;
6. Mr. Kasan, Mr. Nurozy, Mr. Prihata, Mr. Wisnu, Mr. Iman, Mr. Kukuh, Mr. Singgih, Mr Azas, Mrs. Sondang, Mrs. Wenny, Mrs. Joely and all of my supervisors on Trade Data centre;
7. My parents, parents in law, sisters, brothers and all of my family for your support and kindness;
8. Very special for my lovely Husband *Fitroh B.S*, thank you so much for your love; for your patience to listen my grumbles, my stresses and my sadness within doing this thesis; thank you for all your support (without you I can't finish my thesis on time);

9. For all of my friends on MPKP Class batch 2, Suci, Ida, Susi, Irma, Hanny, Lintang and her fiancé Theo, Ali, Ayu, Bambang, Erick, Bang Ernest, Friska, Gina, Afifah, Krisna, Musokib, Taufik, Willie, Mario, Mas Teeon, Marina and Bang Yonathan, who have been great partners during I studied on MPKP;
10. Mr. Wahyu, Mrs. Citra, Miss. Yati, Mr. Miftah, Mr Yudhi, my Friends in “Angye Medra” and All of the people who have helped and inspired me in completing this research and study on MPKP;
11. For all of my friends on EKPI Class batch 2, who have been great partners when I prepared to study for my comprehension test.

Last but not least, I believe that this research is still imperfect. Therefore, suggestions are welcome to enhance this research.

Depok, December 2008



Deasi Natalia

TABLE OF CONTENT

	Page
PAGE OF TITTLE	i
APPROVAL OF THESIS	ii
ENDORSEMENT	iii
STATEMENT OF AUTHORSHIP	iv
STATEMENT OF ASSERTION	v
ABSTRACT	vi
ACKNOWLEDGEMENT	viii
TABLE OF CONTENT	x
LIST OF TABLE	xii
LIST OF FIGURE	xiii
I. INTRODUCTION	1
1.1. Background	1
1.2. Problem Statement	3
1.3. Objectives of the Study	4
1.4. Research Methodology	4
1.5. Scopes of the Study	5
1.6. Organization of the Thesis	5
II. LITERATURE REVIEW	6
2.1. International Theory	6
2.1.1. Ricardian Model	7
2.1.2. Heckscher – Ohlin (H-O) Model	7
2.2. Theory of Economic Integration	8
2.3. Barriers to Trade	11
2.4. Empirical Research	15
III. INDONESIA - INDIA ECONOMIC RELATIONS	20
3.1. Indonesian Economy	20
3.2. Indian Economy	21
3.3. Indonesia - India Trade Relations	23
3.3.1. Indonesia's Trade	23
3.3.2. Indonesia's Main Export to India	25
3.3.3. Indonesia's Main Import from India	26
3.3.4. India's Trade	27
3.3.5. India's Tariff and Non Tariff Profile	28
3.4. Current Status of Indonesia-India Trading Arrangements ...	31
3.4.1. Indonesia's Trading Arrangements	31
3.4.2. India's Trading Arrangements	32

IV. METHODOLOGY	35
4.1. Trade Flow and Trade Potential Analysis.	35
4.2. Spesification of the Model	37
4.2.1. Model of Indonesian Export to India	38
4.2.2. Model of Indonesian Import from India	39
4.2.3. Expected Sign of the Coefficient	39
4.3. Scenarios of Simulation for Export- Import	40
4.4. Data Description	42
V. RESULT AND ANALYSIS	43
5.1. Identifying Export Potential.	43
5.2. Result of the Export Equation	47
5.3. Result of the Import Equation	53
5.4. Result of Simulation	56
5.4.1. Simulation of Indonesian Export to India	56
5.4.2. Simulation of Indonesian Import to India	58
VI. CONCLUSION AND RECOMMENDATION	62
5.1. Conclusion	62
5.2. Recommendations.	63
LIST OF REFFRENCES	65

LIST OF TABLE

		Page
Table 2	Welfare Effect	13
Table 3.1	Profile of Indonesian and Indian Economies	23
Table 3.2	Indonesia's Exports, Imports and Trade Balance: Global and India 1998-2007 (Billion US\$)	24
Table 3.3	Indonesia Position in Indian Trade, 2006	25
Table 3.4	Top Ten Indonesian Main Export to India (Million US\$)	26
Table 3.5	Top Ten Indonesian Main Import from India (Million US\$)	27
Table 3.6	India's Exports, Imports and Trade Balance: World and Indonesia 1996-2006	28
Table 3.7	Structure of Tariff Regimes of Indonesia and India	29
Table 4.1	Classifying category according to export growth	36
Table 4.2	Table 4.2. Scheme of EHP	41
Table 4.3	Table 4.3. Scheme of Normal Track	41
Table 5.1	Category 4 and 5 commodities with Indicative Trade Potential	44
Table 5.2	Category 3 commodities with Indicative Trade Potential Greater than US\$ 1 Million	46
Table 5.3	F-Test Result of Export Model	47
Table 5.4	Hausmann Test Result of Export Model	48
Table 5.5	The Regression Result of Export Model	49
Table 5.6	Individual Effect for 10 Selected Commodity Groups	50
Table 5.7	F-Test Result of Import Model	52
Table 5.8	Hausmann Test Result of Import Model	52
Table 5.9	The Regression Result of Import Model	53
Table 5.10	Individual Effect for 10 Selected Commodity Groups	55
Table 5.11	Value and Percentage of Increasing Export According to all Scenarios	56
Table 5.12	Value and Percentage of Increasing Import According to all Scenarios	57

LIST OF FIGURE

	Page	
Figure 1	Comparison between Main Partners of Trade of Indonesia	3
Figure 2	Diagram of Tariff Equilibrium	12
Figure 3.1	The Growth of GDP's India	22
Figure 3.2	Share of Indonesia's Trade with India	24
Figure 3.3	India's Tariff Profile	30
Figure 5.1	Percentage Potential Export according to Category	47
Figure 5.2	Comparison between RER and Import	54
Figure 5.3	Percentage Increasing Export for HS 15 in All Tariff Elimination Scheme	58
Figure 5.4	The Comparison of Increasing Export and Import for Same Product Due to FTA	60
Figure 5.5	Percentage Export and Import	61

CHAPTER 1

INTRODUCTION

1.1. Background

One of the interesting events of the world economy over the past one and a half decade has been the phenomenal growth of regional trading agreements and significant increase in world trade emerging from these arrangements. In East Asian, the proliferation of free trade agreements (FTA) has become so widespread. Before the late 1990s, the focus of economic liberalization for East Asian countries, including Indonesia, was the multilateral trade process. It was not until 1992 when ASEAN reached a milestone agreement to establish a free trade area that finally regionalism in the form of FTA came into prominence in the region. However, since the onset of the Asian financial crisis in 1998, many countries in the region have embarked on bilateral FTA.

Singapore led with a bilateral FTA with New Zealand, signed in 2000, and has since made five others, with Japan, European free trade area, Australia, Jordan and US. Now other countries have followed Singapore's initiative, and currently India, Japan, Thailand and Korea, in addition to Singapore, are the lead countries, with most number of FTAs. Many of the FTA initiatives in East Asia are currently under various phases of negotiation. As of now, there are 49 major sub regional and bilateral trade and cooperation agreements in the Asian region. All the RTAs registered with the WTO are either based on Article XIV of WTO or Article XII of the Enabling Clause (Kalirajan, 2007, p.2).

Bilateral free trade agreements (FTA) are not a major element of Indonesia's trade diplomacy and policy. Indonesia has thus far promoted bilateral trade relations through efforts other than forming FTAs (Soesastro, 2004). It is only rather recently that Indonesia begins to contemplate more seriously the role of bilateral FTAs in promoting trade and economic cooperation with a number of countries. On October 2003 the Ministry of

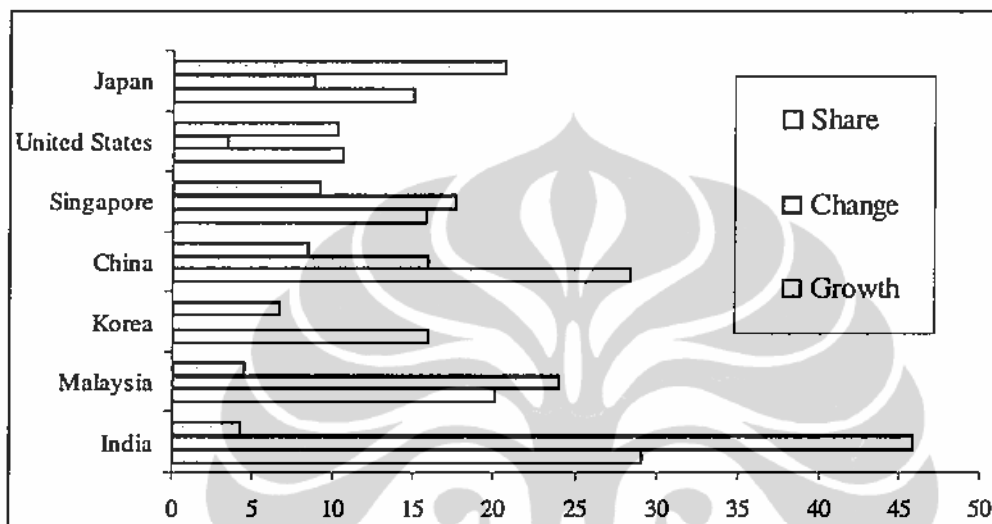
Industry and Trade formed a FTA Team to undertake studies on a number of possible bilateral FTAs. At the same time, Indonesia has sensitive sectors as well as important social considerations. The rapidly changing global and regional conditions require Indonesia to respond in a timely and strategic manner. The global environment is becoming more competitive and the scope of trade, particularly trade, is expanding rapidly. FTA, if used strategically, can be a tool to enhance Indonesia's competitiveness and economic growth. Yet, the FTA path should be consistent and complementary with Indonesia's other international commitments.

In a sense Indonesia is a newcomer in forming bilateral FTAs. It is examining this trade policy option more seriously largely in response to offers by a number of countries. It will definitely give priority to FTAs with countries that it regards as politically and economically important, namely Japan and the United States (Soesastro, 2004). Now, Indonesia considers expanding the market in the emerging market such as India and Middle East.

The age-old trade relations between India and Indonesia were formalized by a Trade Agreement signed in June 1978, committing both countries to take all appropriate measures to facilitate, strengthen, maximize and diversify trade, within the framework of their respective laws and regulations in force. From time to time, official discussions have taken place to strengthen economic and commercial ties within the framework of this Agreement. In an effort to promote trade and investment cooperation between the two countries, the government was set up a Joint Study Group (JSG) to explore the feasibility of Comprehensive Economic Cooperation Agreement (CECA) between India and Indonesia. The governments of Indonesia and India started negotiating a comprehensive Economic Partnership Agreement in January 2007. They expect to conclude a deal in 2009. (Ministry of Commerce of India, 2008)

India is one of potential partner countries. It can be seen from the development trade between India that has increase significantly. Although

the share of Indonesia's export to India just about 4.33 percent from the total export, still lower than Japan, United States, Singapore, China, Korea and Malaysia, but the trend of the export from 2002 until 2007 is the highest, which reach 29.1 percent, and also the change of value export is the highest too, it reach 45.8 percent.



Graphic 1

Comparison between Main Partners of Trade of Indonesia

In 2007, export for non oil and gas to India reached US\$ 4,885.0 million or increase about 45.80 percent compare to 2006 that reached US\$ 3,326.5 million. Beside that India has one of the fastest growing economies in the world, and India also as the country with the large populations about 1.09 billion people. So, India is great potential country for Indonesia, therefore FTA with India has been considered by the government. But, before the agreement is signed, it is very important to analyze the prospect of its cooperation.

1.2. Problem Statement

India is a great potential partner for Indonesian export, the main problem of this study which want to be answered are which product or commodities that has great potential and prospect to expand in Indian market

within trade agreement framework with India and how the impact of tariff elimination as one of FTA requirement to Indonesia's trade?

1.3. Objective of the Study

The objectives of the study are:

1. To analyze trade potential between Indonesia and India;
2. To identify various Indonesian commodities or product which have prospect to develop in India Market;
3. To determine the factors which influence export and import between Indonesia and India;
4. To forecast how much increasing the value of export and import of Indonesia-India FTA if agreement is signed.

1.4. Research Methodology

This thesis is using secondary data which come from many resources such as National Statistical Agency (BPS), Ministry of Trade, WITS (Comtrade Database), and International Financial Statistic (IFS). The details of the methodology are as follow:

- a. For the first and second objective, the method which is used identifying export potential by trade flow analysis and calculation of indicative trade potential. This section will attempt to identify products with a potential for trade expansion in India market based on trade flow analysis and trade potential.
- b. According to the result of trade potential, 10 main products will be analysis with export and import model equation using software Eviews, to determine the factors or variable which affect trading between Indonesia and India, especially to observe the impact of tariff variable.
- c. From the equation result, then it will try to make a simulation to estimate how much increasing value of export and import if free trade with India occurs. The simulation is base on four scenarios of elimination the tariff barriers.

1.5. Scope of the Study

To avoid broad of discussion and deviation from the objectives of the research, the research coverage is limited to some important issues as follow:

1. The identification of commodities use Harmonize System (HS) classification two digit;
2. The analysis focuses on the selected product of export and import product according to trade potential analysis.
3. The analysis does not consider the sensitive sector, it assume that all product has same condition.
4. Simulation base on 4 scenario tariff reduction with assumption *ceteris paribus* for GDP and exchange rate.

1.6. Organization of the Thesis

This study consists of six chapters. In chapter one, we describe the background, problem statement, the objectives of the study, methodology and scope of the study. The theory and empirical research or previous studies which support and relate to this study will be described in chapter 2.

Chapter 3 reviews the current economic condition and the trade flows between Indonesia and India recently. The methodology of the analysis is reviewed in next chapter, it is chapter 4. Followed by chapter 5 attempts to identify product potential of Indonesia (at the HS 2-digit level) to expand in Indian market. In addition in same chapter is discussed analysis of estimation result and simulation result. And the last are conclusion and recommendation are discussed in last chapter, it is chapter six.

CHAPTER II

LITERATURE REVIEW

The purpose of this chapter is to explain the theoretical and empirical foundations on which this thesis is based.

2.1. International Trade

International trade is the exchange of capital, goods, and services across international borders or territories. In most countries, it represents a significant share of gross domestic product (GDP). Industrialization, advanced transportation, globalization, multinational corporations, and outsourcing are all having a major impact on the international trade system. Increasing international trade is crucial to the continuance of globalization. International trade is a major source of economic revenue for any nation that is considered a world power. Without international trade, nations would be limited to the goods and services produced within their own borders.

International trade is in principle not different from domestic trade as the motivation and the behavior of parties involved in a trade does not change fundamentally depending on whether trade is across a border or not. The main difference is that international trade is typically more costly than domestic trade. The reason is that a border typically imposes additional costs such as tariffs, time costs due to border delays and costs associated with country differences such as language, the legal system or a different culture. There are some basic reasons why trade may take place between countries.

First is because difference in technology; advantageous trade can occur between countries if the countries differ in their technological abilities to produce goods and services. Technology refers to the techniques used to turn resources (labor, capital, land) into outputs. The basis for trade in the Ricardian Model of Comparative Advantage is differences in technology.

Second is difference in resource endowments; advantageous trade can occur between countries if the countries differ in their endowments of

resources. Resource endowments refers to the skills and abilities of a country's workforce, the natural resources available within its borders (minerals, farmland etc.), and the sophistication of its capital stock (machinery, infrastructure, communications systems). The basis for trade in the Pure Exchange model and the Heckscher-Ohlin Model is differences in resource endowments.

Next reason is differences in demand; advantageous trade can occur between countries if demands or preferences differ between countries. Individuals in different countries may have different preferences or demands for various products. The Chinese are likely to demand more rice than Americans, even if facing the same price. Canadians may demand more beer, the Dutch more wooden shoes, and the Japanese more fish than Americans would, even if they all faced the same prices.

Existence of economies of scale in production is another reason why trade may take place between countries. Economies of scale refer to a production process in which production costs fall as the scale of production rises. This feature of production is also known as "increasing returns to scale."

2.1.1. Ricardian Model

In a Ricardian model, trade is determined by relative and not absolute efficiency in production. Unlike the theory of absolute advantage, it can be shown that it will be in the interest of every country to engage in trade since every country will find a product in which it has comparative advantage. Once again specialization in production would occur and because trading countries face the same relative prices, specialization would occur in different goods, thus facilitating exchange between the two trading countries. (Salvatore, 2004:35).

2.1.2. Heckscher – Ohlin (H-O) Model

The basic of H-O model is the assumption that technologies are identical across countries. In the theories of absolute and comparative

advantage, there is an implicit assumption of one factor of production, thus, leaving the question of the effect of trade on a country's factorial distribution on income unanswered. According to the H-O Model the country exports those goods which intensively uses its abundant factor and imports those goods which are intensive in its scarce factor. As the theorem says:

"A nation will export the commodity whose production requires the intensive use of the nation's relative abundant and cheap factor and import the commodity whose production require the intensive use of the nation's relatively scarce and expensive factor". (Salvatore, 2004:125)

The H-O model than followed by some theorems namely factor price equalization theorem, Stopler-Samuelson theorem, and Rybczynski's theorem. In factor price equalization theorem, trade equalizes factor price internationally. Given identical technologies of production throughout the world, the equalization of the domestic product price ration will tend to equalize factor process across trading countries.

Stopler-Samuelson theorem explained that a small increase in the relative price of the capital-intensive product increases or reduce the return to capital (labor) in terms of both products. (Salvatore, 2004:251) at constant relative prices, small increases (reduction) in an economy's capital/labor endowment ratio will increase (reduce) the output of the relatively capital/labor intensive good, relative to both factors. This is known as Rybczynski's theorem which attempt to highlight the link between changes in factor endowment and changes in the composition of output at given product prices (Salvatore, 2004:202)

2.2. Theory of Economic Integration

For a variety of reasons it often makes sense for nations to coordinate their economic policies. Coordination can generate benefits that are not possible otherwise. Any type of arrangement in which countries

agree to coordinate their trade, fiscal, and/or monetary policies is referred to as economic integration. Obviously, there are many different degrees of integration.

1. *Preferential Trade Agreement (PTA)*

A preferential trade agreement is perhaps the weakest form of economic integration. In a PTA countries would offer tariff reductions, though perhaps not eliminations, to a set of partner countries in some product categories. Higher tariffs, perhaps non-discriminatory tariffs, would remain in all remaining product categories. This type of trade agreement is not allowed among WTO members who are obligated to grant most-favored nation status to all other WTO members. Under the most-favored nation (MFN) rule countries agree not to discriminate against other WTO member countries. Thus, if a country's low tariff on bicycle imports, for example, is 10%, then it must charge 10% on imports from all other WTO members. Discrimination or preferential treatment for some countries is not allowed.

2. *Free Trade Area (FTA)*

A free trade area occurs when a group of countries agree to eliminate tariffs between themselves, but maintain their own external tariff on imports from the rest of the world. The North American Free Trade Area is an example of a FTA. When the NAFTA is fully implemented, tariffs of automobile imports between the US and Mexico will be zero. However, Mexico may continue to set a different tariff than the US on auto imports from non-NAFTA countries. Because of the different external tariffs, FTAs generally develop elaborate "rules of origin". These rules are designed to prevent goods from being imported into the FTA member country with the lowest tariff and then transshipped to the country with higher tariffs.

Winters (1998) argues that members of an FTA have an incentive to liberalize on an MFN basis to reduce the degree of distortion in the choice between imports from members and third countries. If, as result, imports remain evenly balanced between other members of an RTA and third

countries, then the importing country can collect more tariff revenue on imports from third countries without harming local procedures.

3. *Customs Union*

A customs union occurs when a group of countries agree to eliminate tariffs between themselves and set a common external tariff on imports from the rest of the world. The European Union represents such an arrangement. A customs union avoids the problem of developing complicated rules of origin, but introduces the problem of policy coordination. With a customs union, all member countries must be able to agree on tariff rates across many different import industries.

4. *Common Market*

A common market establishes free trade in goods and services sets common external tariffs among members and also allows for the free mobility of capital and labor across countries. The European Union was established as a common market by the Treaty of Rome in 1957, although it took a long time for the transition to take place. Today, EU citizens have a common passport, can work in any EU member country and can invest throughout the union without restriction.

5. *Economic Union*

An economic union typically will maintain free trade in goods and services, set common external tariffs among members, allow the free mobility of capital and labor, and will also relegate some fiscal spending responsibilities to a supra-national agency. The European Union's Common Agriculture Policy (CAP) is an example of a type of fiscal coordination indicative of an economic union.

6. *Monetary Union*

Monetary union establishes a common currency among a group of countries. This involves the formation of a central monetary authority which will determine monetary policy for the entire group. The Maastricht treaty signed by EU members in 1991 proposed the implementation of a single

European currency (the Euro) by 1999. The degree of monetary union that will arise remains uncertain in 1998.

Perhaps the best example of an economic and monetary union is the United States. Each US state has its own government which sets policies and laws for its own residents. However, each state cedes control, to some extent, over foreign policy, agricultural policy, welfare policy, and monetary policy to the federal government. Goods, services, labor and capital can all move freely, without restrictions among the US states and the Nations sets a common external trade policy.

2.3. Barriers to Trade

A trade barrier is a general term that describes any government policy or regulation that restricts international trade. The barriers can take many forms, including the following terms that include many restrictions in international trade within multiple countries that import and export any items of trade. International trade theory has two common kinds of policy restriction or barriers. Those are tariff barriers and non tariff barriers.

1. *Tariff Barrier*

A tariff, the simplest of trade policies, is a tax levied when a good is imported (Krugman, Obstfeld, 2006: 176). Tariff is the oldest form of trade policy and has traditionally been used as a source of government income. Tariff is usually associated with protectionism, the economic policy of restraining trade between nations. For political reasons, tariffs are usually imposed on imported goods, although they may also be imposed on exports.

There are three various kinds of tariff, they can be ad valorem, specific, or compound. The ad valorem tariff is expressed as a fixed percentage of the value of the traded commodity. The specific tariff is expressed as a fixed sum per physical unit of the traded commodity. And finally is compound tariff, it is a combination of an ad valorem and a specific tariff. A tariff raises the price of a good in the importing country

and lowers it in the exporting country. As a result of these price changes, consumers lose in the importing country and lose in the exporting country. In addition, the government imposing tariff gains revenue. To compare these cost and benefits of a tariff depends on two concept, consumer and producer surplus.

Suppose a market in a small importing country that faces an international or world price of P_{FT} in free trade. The free trade equilibrium is depicted in the adjoining diagram where P_{FT} is the free trade equilibrium price. At that price, domestic demand is given by D_{FT} , domestic supply by S_{FT} and imports by the difference $D_{FT} - S_{FT}$ (the blue line in the figure). When a specific tariff is implemented by a small country it will raise the domestic price by the full value of the tariff. Suppose the price in the importing country rises to P_T^{IM} because of the tariff. In this case the tariff rate would be $t = P_T^{IM} - P_{FT}$, equal to the length of the green line segment in the diagram.

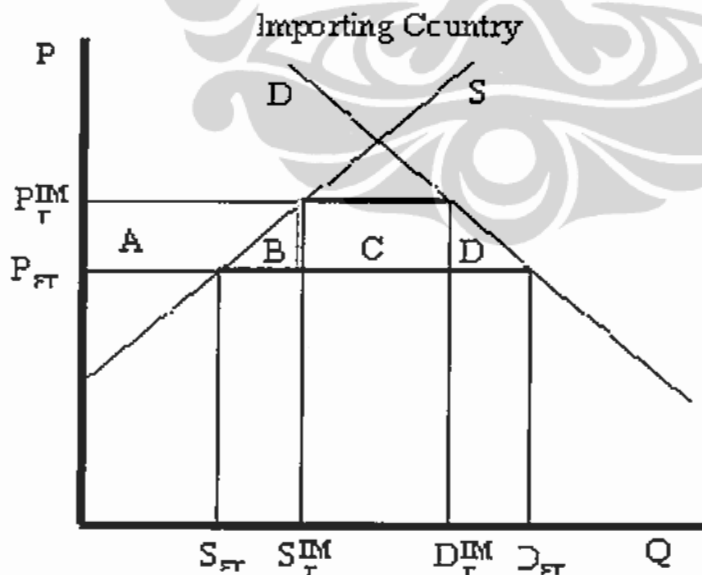


Figure 2

Diagram of Tariff Equilibrium

The following Table provides a summary of the direction and magnitude of the welfare effects to producers, consumers and the governments in the importing country. The aggregate national welfare effect is also shown. Positive welfare effects are shown in black, negative effects are shown in red.

Table 2
Welfare Effect

Welfare Effects of an Import Tariff	
	Importing Country
Consumer Surplus	- (A + B + C + D)
Producer Surplus	+ A
Govt. Revenue	+ C
National Welfare	- B - D

Tariff Effects on:

- **Importing Country Consumers** - Consumers of the product in the importing country are worse-off as a result of the tariff. The increase in the domestic price of both imported goods and the domestic substitutes reduces consumer surplus in the market.
- **Importing Country Producers** - Producers in the importing country are better-off as a result of the tariff. The increase in the price of their product increases producer surplus in the industry. The price increases also induces an increase in output of existing firms (and perhaps the addition of new firms), an increase in employment, and an increase in profit and/or payments to fixed costs.
- **Importing Country Government** - The government receives tariff revenue as a result of the tariff. Who will benefit from the revenue depends on how the government spends it. These funds help support

diverse government spending programs, therefore, someone within the country will be the likely recipient of these benefits.

- **Importing Country** - The aggregate welfare effect for the country is found by summing the gains and losses to consumers, producers and the government. The net effect consists of two components: a negative production efficiency loss (B), and negative consumption efficiency loss (D). The two losses together are typically referred to as "deadweight losses."

Because there are only negative elements in the national welfare change, the net national welfare effect of a tariff must be negative. This means that a tariff implemented by a "small" importing country must reduce national welfare.

2. *Non Tariff Barrier*

Non-tariff barriers to trade (NTB's) are trade barriers that restrict imports but are not in the usual form of a tariff. There some types of non tariff barrier. The following is type of NTB's:

- a. **Barrier to control the volume of import**
These include prohibition and quantitative restriction of imports as well as export restraint agreements (ERAs). For example import quotas.
- b. **Barrier to control the price of imported goods**
These include the use of reference or trigger price mechanism, variable levies, antidumping duties and countervailing measures.
- c. **Monitoring Measure**
For example price and volume investigation and surveillance
- d. **Production and export measure**
These include subsidy on production process as well as export subsidy; the other side of these measure consist of tax and prohibition of exports.

e. Technical barriers and standards

These are used to apply various standards for health and safety reason to ensure that imported products conform to the same standard as those required by law for domestically produced goods.

f. Rule and regulation

Include customs procedures and other regulations concerning domestic trading arrangement.

2.4. Empirical Research

There are some empirical research of international trade, especially focus on economic integration or free trade area, they are:

1. Kalirajan (2007) examined the feasibility of FTA between India and Japan by measuring the trade intensity indices. In measuring the trade impacts of PTAs and FTA deals with the gravity modeling including the impact of 'behind the border' constraints on trade flows, and simulation procedures measuring the trade impacts of PTAs and FTA. The specification the gravity model for the research as follow :

$$\ln X_{ij} = \alpha_0 + \beta_1 \ln (GDP_j) + \beta_2 \ln (Pop_j) + \beta_3 \ln (Dist_{ij}) + \beta_4 \ln (Tariff_j) + \beta_5 \ln (REXR_j) - u_i + v_j \dots\dots\dots(1)$$

Where

- X_{ij} = Exports of country 'i' to country 'j'
 GDP_j = Gross Domestic Product of country j (i.e. importing country)
 Pop_j = Population of country 'j' (i.n. population of importing country)
 $Dist_{ij}$ = Distance between country 'i' and 'j'
 $Tariff_j$ = Average weighted tariffs of the importing country
 $REXR_j$ = Real exchange rate of the currencies of importing countries
 u_i = Combined effects of "behind the border" constraints that prevent concerned country (India/Japan) from reaching its

potential with its partner country. In other words, $\exp(u)$, which is the ratio of actual to estimated exports, can be called as export efficiency of India/Japan.

V_i = Combined effects of "beyond the border" constraints and 'usual statistical' errors.

i , and j = India and Japan respectively.

The analysis is done using total aggregated exports data and also using major commodity-specific data for both India and Japan. They have taken 10 major commodities at the 2-digit HS categories for both the countries. The research found that the coefficients of all variables are significant at least at the 10 percent levels in both cases. India and Japan could increase their exports to their partner countries by about 40 percent and 36 percent respectively by eliminating the existing 'behind the border constraints' in India and Japan.

Thus, the overall results indicate that due to FTA, Japan's exports to the Indian market will increase by 2.46 per cent compared to only 0.3 per cent increase in India's exports to the Japanese market. Obviously, India will be the loser in the short run. Any amount of tariff reduction in the Indian market will significantly increase Japanese exports because of higher tariffs in India.

2. Bhattacharya, K Swapan and Bhattacharyay N Biswa did research about gains and losses of India-China trade cooperation using a gravity model analysis. This paper makes an attempt to estimate the likely benefits in terms of gains or losses in imports of both India and China due to free trade arrangements.

Analytical tool for measuring the impact of PTAs and FTA on bilateral trade between India and China is the simple and extended version of the well-known gravity model used by Frankel et al. (1993). Quite a number of empirical studies are available quantifying the impact of tariff reductions on bilateral trade flows using the Gravity Model. This paper

mainly focuses on the likely increase in India-China trade under some hypothetical situations. In this analysis, the impact of PTAs by the proportionate change in exports and imports of India and China in dollar terms are basically measured. The higher the initial tariff level on trade between partners, the greater the final effect of reduction and elimination of tariffs. The main texture of model is as follows:

$$\text{Log BTI}_{c,d,t} = a_0 + a_1 \log (\text{GNP}_{c,t} * \text{GNP}_{d,t}) + a_2 \log (\text{PCGNP}_{c,t} * \text{PCGNP}_{d,t}) + a_3 D_{c,d} + a_4 \log (1 + \text{TR}_{d,c}) + a_5 \log (1 + \text{TR}_{c,d}) + a_6 \log \text{REXRT}_{c,d,t} + E$$

Where:

$\text{BTI}_{c,d,t}$	= Bilateral trade of commodity 'i' between country 'c' and country 'd' at time 't'.
$\text{GNP}_{c,t}$ (or $\text{GNP}_{d,t}$)	= Gross National Product of country 'c' (or 'd') at time t
$\text{PCGNP}_{c,t}$ (or, $\text{PCGNP}_{d,t}$)	= Per capita Gross National Product of country 'c' or country 'd'.
$D_{c,d}$	= Distance between relevant centres of 'c' on country 'd'.
$\text{TR}_{c,d}$	= Tariff rate imposed by country 'c' on products imported from country 'd'.
$\text{TR}_{d,c}$	= Tariff rate imposed by country 'd' on products imported from country 'c'.
$\text{REXRT}_{c,d,t}$	= Real Effective Exchange Rate between countries 'c' and 'd', at time 't'.
c, d	= India, China

The paper tries to make a hypothetical exercise measuring the impact of tariff reductions to bilateral trade between India and China. If tariff reductions are implemented through bilateral negotiations and in a phased manner then it must have a positive impact on intra-regional trade. Trade cooperation must start with PTAs with the objective of completely eliminating tariffs to facilitate FTA between these two countries, which is the ultimate objective of bilateral cooperation.

Empirical results show that in the short run India's potential gain is relatively less compared to China because of its high tariffs but in the long

run, India's gains are higher than China once its tariff levels are brought at par with them. Free trade arrangement is a win-win situation for both countries and is consistent with their growing dominance in the international trade.

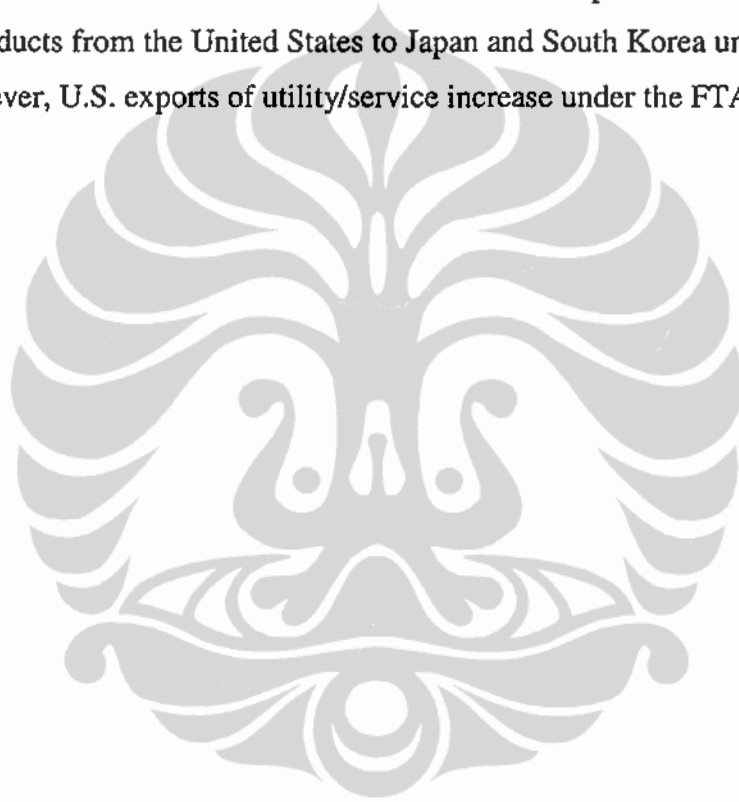
In the simulation exercise, four kinds of hypothetical scenarios were taken into account. The simulation results are very much consistent with a priori idea that the country, whose tariffs are low, will gain much than the country whose tariffs are high. In the exercise, China's simple average mean tariff was 9.8% in 2004 and India's simple average mean tariff was 28.3 % in the same period. Such huge difference in tariff structure is reflected in the simulation results. Simulation results show the likely increase in India's imports from China and latter's imports from the former due to FTA. The percentage is notional in the sense that increases in value of exports and imports depend on the base values of both way trade.

3. Sang-yirl Nam (2004)

Hyun Joung Jin, Won W. Koo And Bongsik Sul evaluated the economic effects of a Free Trade Agreement among China, Japan, and South Korea on the world economy using A computable general equilibrium model, in specific, the Global Trade Analysis Project (GTAP) model. There were two different scenarios in their analysis for the economies of the northeast Asian countries; the model with the current trade policies in the countries and the model with a free trade agreement among China, Japan and Korea (without all trade barriers). The GTAP data base originally has five primary factors, 87 world countries and regions, and 57 industrial sectors. In their study, they are regrouped into five primary factors, six world regions, and six industrial sectors.

The study was focused on estimating trade creation and diversion effects of the FTA. The results show that member countries would benefit from the FTA among China, Japan, and South Korea. Evidently, there is no doubt that the FTA will boost the economic systems of the three countries, keeping them close to each other through an economic integration. This will

result in substantial economic gains to member countries. Despite negative effects to some sectors in each country, overall benefits of the FTA would be significant for the three countries. The study also reveals that the FTA stimulates trade among the member countries through trade creation and trade diversion. There is significant trade diversion of high technology manufacturing goods between the member countries and the ROW, including the United States and the European Union. This is especially true for U.S. and China bilateral trade. China diverts its imports of high-technology products from the United States to Japan and South Korea under the FTA. However, U.S. exports of utility/service increase under the FTA.



CHAPTER III

INDONESIA-INDIA ECONOMIC RELATIONS

Bilateral relations are underpinned by close historical and civilization interaction and shared commonalities in terms of size, diversity (ethnic and religious) and multi-cultural. Indonesia's market of 220 million is the largest among India's ASEAN partners. The Indonesian economy has stabilized after its 1997-98 crisis, its strengths resting on the country's enormous natural resources (oil and gas, coal, copper, gold, forestry and plantation products) and manufacturing for the domestic and export markets (textiles, footwear, electronics, automotive, pulp and paper). While stable in macro-economic terms, the Indonesian economy is marked by low investment growth, slowing exports and high unemployment, making it largely consumption driven.

Trade relations between India and Indonesia go back to ancient times, contributing to the historical and civilization affinities between the two countries. In the modern era, a bilateral Agreement on Avoidance of Double Taxation between the two countries was concluded in January, 1986. An Agreement for the Promotion and Protection of Investments, which was signed in February, 1999, came into force in January, 2004. The first ever India-Indonesia Joint Commission Meeting (JCM) was held in Yogyakarta in September, 2003. Apart from taking major decisions to promote bilateral economic and commercial relations in various fields, the JCM decided to constitute an "India-Indonesia Expert Working Group" with the specific mandate of reporting back to the JCM with concrete recommendations for enhancing and diversifying bilateral trade, economic and investment relations. Both sides are in the process of constituting this Working Group.

2.1. Indonesian Economy

Indonesia's modern-day economy has evolved from the early 1970s on the strength of its oil and gas resources into manufacturing for the domestic and export markets. Its open and market-based economy has stabilized after a major collapse in 1997-1998, with macro economic

stability being restored and 2007 GDP growth of 6.3 %, which is largely consumption driven¹.

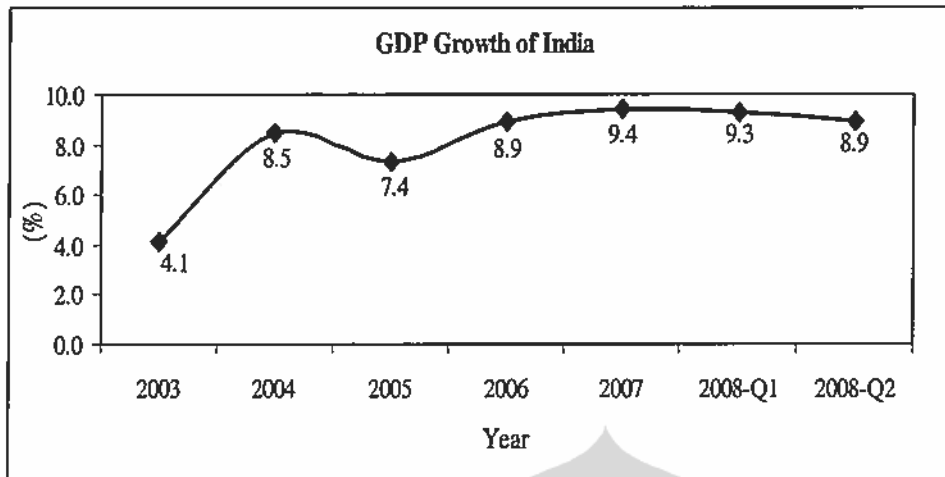
The strengths of the Indonesian economy rest on the country's enormous natural resources (oil and gas, coal, copper, gold, forestry and plantation products) and manufacturing for the domestic and export markets (textiles, footwear, electronics, automobiles, pulp and paper). Major sectors of the economy include oil and gas, mining, agriculture, plantations, fisheries, transport and communications, banking and financial services and tourism.

2.2. Indian Economy

During the 1990s India has embarked upon economic openness which is reflected in policy reforms in the areas of trade, industry, investment, exchange rate, etc. This has entailed reduction in tariff duties, removal of quantitative restrictions, and liberalization of FDI policies, liberalization and improvement in exchange rate management and so on. All these together have been coincided with a sustained economic growth performance in different sectors of the Indian economy. Nevertheless, Indian economic development in recent times is note-worthy and a special mention needs to be made in terms of its success on account of a strong resilience in situations when different parts of the world confronted with economic crisis and shocks (Rajesh, Mehta, 2003).

Indian Economy has significantly grown in the recent years. Both social and economic indicators have reflected their respective positive impact for the development of the Economy. India's GDP has been increasing over the last few decades. It has recorded an annual average growth rate of above 4 percent approximately during the last decade.

¹ <http://meaindia.nic.in/foreignrelation/indonesia.htm>, Apr 2008



Source: Economic Advisory Council to the Prime Minister New Delhi, 2008

Figure 3.1
The Growth of GDP's India

With a GDP growth rate of 9.4% in 2006-07, the Indian economy is among the fastest growing in the world. India's GDP in terms of USD exchange-rate is US\$ 1,289.9 billion. When measured in terms of purchasing power parity (PPP), India has the world's third largest GDP at US\$ 4.164 trillion. India's per capita income (nominal) is US\$ 1,089.0, while its per capita (PPP) is US\$ 4,543.

Although the Indian economy has grown steadily over the last decades; its growth has been uneven when comparing different social groups, economic groups, geographic regions, and rural and urban areas. Income inequality in India is relatively small (Gini coefficient: 32.5 in year 1999–2000), though it has been increasing of late. Wealth distribution in India is fairly uneven, with the top 10% of income groups earning 33% of the income.

While these economic differences will shape each country's approach in negotiating an FTA, the presence of marked differences in levels of development would be expected to increase the scope for trade creation and positive benefits to each economy. The table following describe the comparison of the economic from both.

Table 3.1
Profile of Indonesian and Indian Economies

Description	Indonesia	India
Surface land area (million km ²)	1.90	3.29
Population (million, 2007)	224.94	1,123.97
GDP (US\$ billion, current prices, 2007)	432.94	1,289.58
GDP Growth (2007, %)	6.30	9.40
Per capita GDP (US\$/person, 2006, current price)	1,640.97	1,089.00
Export goods (US\$ billion, 2006)	100.80	124.64
Import goods (US\$ billion, 2006)	61.07	182.98
Export goods (% GDP, 2006)	27.66	14.21
Import goods (% GDP, 2006)	16.76	20.86
Inflation 2007 (Index, 2000=100)	184.12	137.27
Current account balance (US\$ billion, 2007)	11.01	-19.35

Source: IMF World Economic Outlook

2.3. Indonesia – India Trade Relations

2.3.1. Indonesia's Trade

Indonesia's export and imports from India had been fluctuating since the 1996. In 2007, bilateral trade between Indonesia and India reach a record high of 6,553 million dollars. This places Indonesia and India's 3.48% global trading partner.

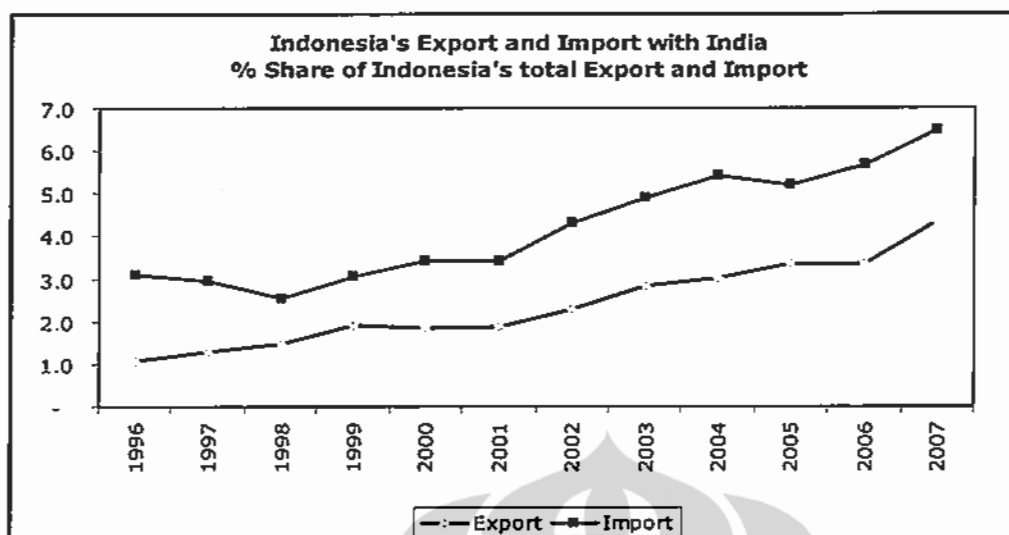
The growth in trade between Indonesia and India is the result of a more than average evolution in exports and imports, thus generating an increase in bilateral exchange around 545.1% between 1998 and 2007, three times of the growth of Indonesia's global trade in the same period (147.5 %).

Table. 3.2
Indonesia's Exports, Imports and Trade Balance:
Global and India 1998-2007 (Billion US\$)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
I. India										
Export	0.72	0.92	1.15	1.05	1.30	1.74	2.17	2.88	3.39	4.94
Import	0.29	0.28	0.52	0.49	0.64	0.67	1.10	1.05	1.41	1.61
Trade Balance	0.43	0.65	0.63	0.57	0.66	1.08	1.07	1.83	1.98	3.33
Trade Exchange	1.02	1.20	1.68	1.54	1.94	2.41	3.27	3.93	4.80	6.55
II. Global										
Export	48.8	48.7	62.1	56.3	57.2	61.1	71.6	85.7	100.8	114.1
Import	27.3	24.0	33.5	31.0	31.3	32.6	46.5	57.7	61.1	74.5
Trade Balance	21.5	24.7	28.6	25.4	25.9	28.5	25.1	28.0	39.7	39.6
Trade Exchange	76.2	72.7	95.6	87.3	88.4	93.6	118.1	143.4	161.9	188.6
III. Share										
Export	1.48	1.90	1.85	1.87	2.28	2.85	3.03	3.36	3.36	4.33
Import	1.07	1.15	1.57	1.57	2.04	2.04	2.37	1.82	2.30	2.16
Trade Exchange	1.33	1.65	1.75	1.76	2.19	2.57	2.77	2.74	2.96	3.48

Source : Comtrade Wits Database, processed

Export to India in 2007 reached 4,943.9 million dollars. Export to India have increased at a higher pace than import, reaching between 1998 and 2007 a growth rate of 583.9%, higher than global export only grew in 133.6% in the same period. The share of export to India in Indonesia's total imports increased slightly, the range between 1.48 percent and 4.33 percent during 1998-2007. Not only the share of export, but the percentage share of imports from India's in Indonesia's total imports also increases over year, the range between 1.07 percent and 2.37 percent during 1998-2007. Though the value of Indonesia's import from India increased from US\$ 292.93 million in 1998 to US\$ 1,609.61 in 2007. (Table 3.2). The trade balance during 1998 until 2007 was surplus. In 2007, it marked surplus of US\$ 3,334.3 million. The poor record that Indonesian exports towards India shown in 2001. The mainly the result of that are reduction of the Indonesia economy in those years, process that has reversed in the last few years.



Source: BPS, Peocessed

Figure 3.2

Share of Indonesia's Trade with India

About position Indonesia in Indian market, can be seen in table following. Totally, Indonesia places 17th partner countries not only for export but also for its import. The main competitors of Indonesia in Indian market are United State, China, United Arab Emirates, and Singapore, which is the member of ASEAN.

Table. 3.3

Indonesia Position in Indian Trade, 2006

Indian Import from Indonesia			Indian Export to Indonesia		
No.	Partner Name	Share (%)	No.	Partner Name	Share (%)
	All Countries	100.0		All Countries	100.0
1.	China	10.2	1.	United States	15.0
2.	Saudi Arabia	7.8	2.	United Arab Emirates	9.5
3.	United States	6.8	3.	China	6.6
4.	Iran, Islamic Rep.	4.5	4.	Singapore	4.8
5.	Germany	4.4	5.	United Kingdom	4.4
6.	United Arab Emirates	4.1	6.	Hong Kong, China	3.7
7.	Nigeria	4.1	7.	Germany	3.1
8.	Kuwait	3.5	8.	Italy	2.8
9.	Iraq	3.2	9.	Belgium	2.7
10.	Singapore	3.2	10.	Japan	2.3
17.	Indonesia	2.4	17.	Indonesia	1.6
	Others	45.8		Others	43.4

Source: WITS database

2.3.2. Indonesia's main Export to India

Main commodities of Indonesian exports to India are dominated by agriculture product. Fats, Oil and Waxes (HS 15) is the top commodities, the share of total to world is high, it is about 22.39 percent. Followed by Mineral Fuel and Oils (HS27), Ores, Slag and Ash (HS 26) and Miscellaneous Chemical Products (HS 38). Some of those commodities are commodities which have competitive with high RCA.

Table. 3.4
Top Ten Indonesian Main Export to India (Million US\$)

HS2	Description	2006	2007	Export to World 2007	Growth (%) '03-'07	Share of World 2007
15	Fats, Oils And Waxes	1,046.4	2,289.7	10,226.8	19.44	22.39
27	Mineral Fuels And Oils	679.5	864.0	29,211.1	38.99	2.96
26	Ores, Slag And Ash	701.4	537.6	5,103.9	39.90	10.53
38	Miscellaneous Chemical Products	74.8	124.8	928.6	32.39	13.44
40	Rubber And Rubber Articles	64.2	108.6	6,248.7	158.19	1.74
29	Organic Chemical	78.2	100.8	2,564.8	33.05	3.93
84	Machinery	78.8	84.4	4,670.2	38.88	1.81
72	Iron And Steel	85.8	80.2	1,118.5	161.00	7.17
08	Fruit And Nuts	66.8	69.5	279.9	18.05	24.83
47	Wood Pulp And Waste	52.3	59.5	1,068.1	24.95	5.57
	Others	462.4	624.7	52,680.3	26.28	1.19
	Total to India	2,928.4	4,319.2	114,100.9	29.20	3.79

Source : WITS database, processed

2.3.3. Indonesia's main Import from India

The most important items of Indonesia's imports from India belong to commodity groups like manufactured goods, Electrical Equipment, Machinery, etc.

Table. 3.5
Top Ten Indonesian Main Import from India (Million US\$)

HS2	Description	2006	2007	M from World 2007	Growth (%) 03-07	Share of World 2007
29	Organic Chemical	374.4	373.9	3,881.2	31.34	9.6
72	Iron And Steel	178.3	212.5	4,175.0	31.16	5.1
23	Food Waste And Animal Fodder	168.7	174.2	1,147.5	19.04	15.2
85	Electrical Equipments	25.9	86.6	4,642.0	59.55	1.9
17	Sugars And Sugar Confectionery	15.5	80.9	1,116.4	47.85	7.2
87	Vehicles Other Than Trains	44.4	78.7	2,778.7	86.29	2.8
52	Cotton	55.7	73.1	953.0	74.29	7.7
84	Machinery	59.6	66.8	9,518.7	17.71	0.7
76	Aluminum	17.6	58.8	815.1	46.41	7.2
12	Seeds And Grains	52.1	51.6	568.4	26.56	9.1
	Others	415.3	352.4	44,877.5	4.98	0.8
	Total	1,407.4	1,609.6	74,473.4	22.27	2.2

Source : WITS database, processed

2.3.4. India's Trade

In 2006, Indonesia was India's second largest trading partner in the ASEAN, after Singapore. Trade between India and Indonesia has increased significantly over the years and is likely to exceed US\$ 6.1 billion in 2007. This places Indonesia as India 2,1 percent global trading partner. The potential for increasing the total trade is much more and could be realized, provided the trade partners agree for mutual cooperation in services.

India's imports from Indonesia had been fluctuating since the 1996. The share of imports from Indonesia in India's total imports range between from 1.55 percent to 2.40 percent during 1990-2007. Though the value of India's import from Indonesia increased from US\$ 596.7 million in 1996 to US\$ 4,098.90 in 2006, the percentage share in India's total imports increased slightly, from 1.55 per cent in 1996 to only 2.40 per cent in 2006 (Table 3.6).

Table 3.6.

India's Exports, Imports and Trade Balance: World and Indonesia 1996-2006

Year	Indonesia			World		
	Export	Import	Trade Balance	Export	Import	Trade Balance
1996	591.38 (1.77)	596.74 (1.55)	-5.36	33,404.1	38,424.3	-5,020.1
1997	437.34 (1.26)	730.64 (1.89)	-293.30	34,721.0	38,658.3	-3,937.3
1998	185.01 (0.56)	829.84 (2.19)	-644.83	33,109.6	37,895.8	-4,786.2
1999	324.78 (0.88)	964.09 (2.10)	-639.30	36,920.0	45,831.2	-8,911.3
2000	412.03 (0.91)	925.58 (1.96)	-513.55	45,249.6	47,136.0	-1,886.4
2001	540.74 1.22	1,047.73 (2.20)	-506.99	44,306.3	47,694.0	-3,387.7
2002	822.16 (1.57)	1,374.48 (2.40)	-552.33	52,471.3	57,290.8	-4,819.5
2003	1,113.35 (1.77)	2,096.57 (2.96)	-983.21	63,034.5	70,762.3	-7,727.8
2004	1,284.90 (1.61)	2,515.07 (2.57)	-1,230.18	79,833.9	97,987.2	-18,153.3
2005	1,385.50 (1.34)	3,005.19 (2.16)	-1,619.69	103,396.0	138,876.0	-35,480.0
2006	2,024.41 (1.61)	4,098.90 (2.40)	-2,074.49	126,123.6	170,950.0	-44,826.4

Source: WITS, processed

2.3.5. India's Tariff and Non Tariff Profile

Trade between countries sometimes faces the barrier which the basis point is to protect the domestic industry. The barrier could be tariff barriers and also non tariff barriers. For some common commodity, such as crude palm oil (CPO), it imposed tariff duty which is very high in India market. In 2006, India's government imposed standarization policy or non tariff policy for food product, it was Food Safety Standard and Act 2006. The other standarization policy related to food product which have been implemented are:

1. Standards of weight & measures & packaged commodities act & rules
2. Meat food products order (MFPO)
3. Seeds act & insecticides Act
4. Infant milk substitutes act & rules
5. Essential commodities act

The restrictions on imports of raw materials and manufactured intermediates were removed during India's 1991/92 reforms, but imports of nearly all industrial consumer goods and agricultural products continued to be restricted, either by import licensing which operated as a de facto import ban in most cases, or—especially in the agricultural sector—by “canalization” such as FCI. Among other things these import restrictions hobbled SAPTA, especially in the first two negotiating rounds in 1995 and 1997, when the other South Asian countries complained that it was meaningless for India to grant tariff preferences when the same products were subject to import licensing.

In response to these complaints, in 1998 India exempted the SAARC countries from its general system of import licensing. At about the same time (following pressure at the WTO) it started removing these controls vis a vis the rest of the world, and the final 715 tariff lines were freed on April 1, 2001.

Table. 3.7

Structure of Tariff Regimes of Indonesia and India

Tariff Rate	Indonesia (2007)*		India (2006-07)**	
	Tariff lines*	% Share	No. of Lines	% Share
0 - 5	5,674	64.89	1,273	10.15
> 5 - 10	1,398	15.99	903	7.20
> 10 - 15	1,256	14.36	8,825	70.36
> 15 - 20	155	1.77	140	1.12
> 20 - 25	33	0.38	8	0.06
> 25 - 30	29	0.33	1,030	8.21
> 30 - 35	-	-	5	0.04
> 35 - 40	44	0.50	8	0.06
> 40 - 45	49	0.56	7	0.06

Tariff Rate	Indonesia (2007)*		India (2006-07)**	
	Tariff lines*	% Share	No. of Lines	% Share
> 45 - 50	8	0.09	18	0.14
> 50	71	0.81	305	2.43
Others	27	0.31	20	0.16
Total	8,744	100.00	12,542	100.00

Source: BTBMI and Ministry of Commerce and Industry, Government of India

Note: * Tariff lines based on 2007 Indonesian tariff at HS 9-digit level

** Tariff lines based on 2006-2007 Indian tariff at HS 8-digit level

India imposes a customs duty on its imported commodities very high. Average tariff is around 20 percent in 2007. Agriculture product have tariff higher than non agriculture. Agriculture has tariffed around 42 per cent meanwhile non agriculture around 15 percent in 2007. Average tariff base on sector can be seen in following figure.

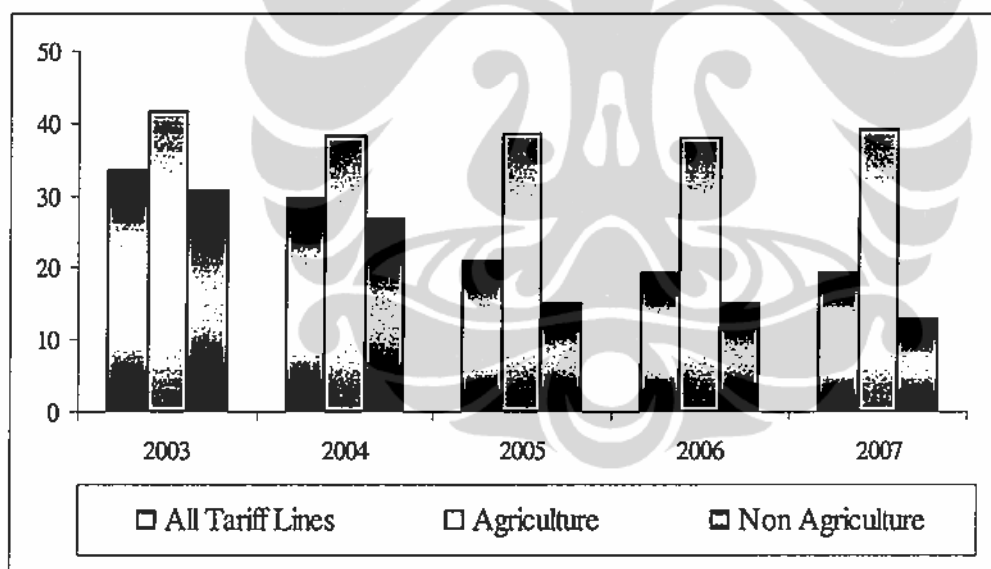


Figure 3.3
India's Tariff Profile

2.4. Current Status of Indonesia's and India's Trading Arrangements

2.4.1. Indonesia

1. Asean

The ASEAN Free Trade Area (AFTA), including Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand, was established in January 1992 whose objective is to ensure ASEAN integration with a view to promoting and accelerating the economic development of the Southeast Asian region and in order to strengthen economic cooperation between ASEAN members. This agreement provided for the elimination of tariffs and non-tariffs barriers within the 15 years from January 1993 with the completion date set at 2008. Until then, tariffs will be reduced to less than 5%. In the mid-1990s four countries joined ASEAN: Vietnam in 1995, Myanmar and Lao PDR in 1998 and Cambodia in 1999. They are also participating in AFTA with deadlines set for Vietnam in 2006, Myanmar and Lao PDR in 2008 and Cambodia in 2010. In summary, AFTA that currently has a membership of ten countries. AFTA's final goal is to eliminate altogether import duties on all products, to create a truly free-trade, or tariff-less, region.

2. IJ-EPA

Following the successful in negotiating the formation of Japan-Singapore closer Economic partnership (JSCEP), Japan announced its desire to establish Economic Partnership Agreement (EPA) with other ASEAN countries. This economic partnership formed via regional negotiation with each ASEAN countries. Indonesia is the last five biggest country of ASEAN that start negotiating process with Japan. The initiation of FTA with Japan has begun in the regional framework that is ASEAN-Japan economic partnership agreement (AJCEP) which started since April 2005. Japan wanted the form of this AJCEP is comprehensive and covered trade in good and services. But differently with AJCEP, in bilateral EPA with Indonesia, the offered form of economic cooperation is comprehensive and covered three pillars. The establishment of IJEPA was based on some important

consideration and hoped it could be basic and development to Indonesia economic. Japan is Indonesia's main partner and has significant roles in the economic activities and trade. Therefore, the increasing of Indonesia-Japan relationship will give significant benefits to the Indonesia economic development.

2.4.2. India

India be apart in many arrangement with other countries, following are agreement which India involved:

1. Agreement on South Asia Free Trade Area (SAFTA)

The Agreement on South Asian Free Trade Area (SAFTA) was signed by all the member states of the South Asian Association for Regional Cooperation (SAARC), namely, India, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka. SAARC Summit held in Islamabad on 4-6th January, 2004. SAFTA, along with its four annexes, has come into force from 1st January, 2006.

2. Agreement on India-Bhutan Trade & Commerce

The Agreement on Trade and Commerce between India and Bhutan was concluded in 17.1.1972. It has been renewed periodically, with mutually agreed modifications. The current Agreement between the two countries on Trade, Commerce and Transit was renewed on 28th July 2006 and operational from 29 July 2006 for a period of 10 years.

3. India-Sri Lanka Free Trade Agreement

There is a bilateral Free Trade Agreement (ISLFTA) with Sri Lanka which has been signed on 28.12.98. Under this Agreement, both countries are committed to the elimination of tariffs in a phased manner. ISLFTA became operational from March 2000.

4. Trade Agreement between India and Bangladesh

A bilateral trade agreement was signed between India and Bangladesh on 4.10.80 for a period of three years with provision for extension of three years by mutual consent subject to such modifications

as agreed upon. Its validity has been extended from time to time. An amended Trade Agreement was signed on 21.03.2006 which came into force from 1.4.2006 and presently the agreement is valid till 31.03.2009.

5. Trade Agreement between India and Maldives

India and Maldives signed Trade Agreement on 31st March, 1981 which shall progressively remain in force until it is modified or terminated by either country on giving three months` notice to the other. The Agreement provides for Most Favored Nation (MFN) treatment to each other in trade and merchant vessels, promotion of commercial and technical cooperation through exchange of delegations and participation in trade fairs and exhibitions and supply of essential commodities by Government of India to Government of Maldives on annual quota.

6. India-Nepal Treaty of Trade

The bilateral trade between India and Nepal is regulated by the Treaty of Trade. The current Treaty has been in force for a period of five years with effect from 6.3.2002. Presently, this Treaty was to expire on 6th March, 2007. Hence, both Governments of Nepal and India have decided to renew the Treaty in its current form with effect from 6th March, 2007. Under this Treaty, there is free trade on mutually agreed to primary products from each other as indicated in Protocol of the Treaty.

7. India-Afghanistan Preferential Trade Agreement

A Preferential Trade Agreement was signed between India and Afghanistan on March 6, 2003 in New Delhi which provides for, among others, establishing a Preferential Trading Arrangement between the two countries to promote harmonious development of the economic relations and free movement of goods through reduction of tariffs between the two countries. The Agreement would remain in force till either party gives to the other a notice for the Agreement's termination.

8. India-MERCOSUR PTA

The Framework Agreement, a Preferential Trade Agreement (PTA) was signed in New Delhi on January 25, 2004. The aim of this Preferential Trade Agreement is to expand and strengthen the existing relations between MERCOSUR and India and promote the expansion of trade by granting reciprocal fixed tariff preferences with the ultimate objective of creating a free trade area between the parties.

9. FTA between ASEAN and India

A Framework Agreement on Comprehensive Economic Cooperation between the Association of South East Asian Nations (ASEAN) and India was signed by the Prime Minister of India and the Heads of Nation of ASEAN members during the Second ASEAN – India Summit on 8th October 2003 in Bali, Indonesia.

The key elements of the Framework Agreement on Comprehensive Economic Cooperation between the ASEAN and India cover FTA in Goods, Services and Investment, as well as Areas of Economic Cooperation. The Agreement also provided for an Early Harvest Programme (EHP) which covers areas of Economic Cooperation and a common list of items for exchange of tariff concessions as a confidence building measure. Negotiations in Trade in Services and Investment are expected to begin immediately after the Agreement on Trade in Goods is concluded.

10. Joint Study Group between India and Others

There many JSG to examine the feasibility of a comprehensive economic partnership agreement (CEPA) between India and some countries in ASIA, such as with Republic of Korea, Japan, China, Singapore, Thailand, Malaysia, Indonesia, and others countries such as Israel, Mauritius, South Africa Customs Union (SACU) and Russia.

CHAPTER IV METHODOLOGY

The methodology which is used in this study contains some steps and ways. For the detail the methodology is as follow:

4.1. Trade Flow and Trade Potential Analysis

Building on methodologies employed by the International Trade Centre ITC in Geneva (part of the UN system and closely affiliated with UNCTAD and the WTO) to evaluate the potential for increased trade within RTAs and further adapted for other bilateral trade studies. This study will attempt to identify products with a potential for trade expansion in India market based on trade flow analysis. The approach attempts to reveal product groups which are exported by one country towards the other and rest of the world, and for which there is a significant import demand in another country.

The first concept that needs to be introduced is the notion of potential supply capacity, which determines the lesser of total India import and total Indonesia exports of a particular commodity. In other words, we determine the most that Indonesia could export to the India, constrained either by total export supply or import demand. From this we subtract actual current India exports to the India to arrive at indicative trade potential (ITP). In basic terms, the indicative trade potential is defined as the lowest value between the amount the target market can absorb and the amount the target exporting country can supply.

$$\text{Indicative trade potential} = \text{MIN} (\text{Supply capacity}, \text{Market absorption})$$

Indicative potential trade thus shows of the as yet untapped the India import market, thereby directing policy-makers towards identifying commodity groups offering substantial export potential for Indonesia. Then, we rank all HS 2 commodity groups according to the indicative potential trade. Next, we introduce growth and size dimensions into the framework.

The growth rates are calculated for Indonesia exports to the India and to the world and the India imports from the world for the period 2002 to 2007 at the HS2 commodity group level. If trade is measured as zero for any of the observations during this period, we assign a zero growth rate to this commodity group. With three sets of growth rates – one for Indonesia’s total exports, one for Indonesia’s exports to the India and one for India total imports – and two possible solutions – either positive growth or negative/zero growth – six possible combinations can be identified.

To determine whether or not a sector shows these attributes, they are categorized according to the growth of Indonesia exports to the world, India imports from the whole world and India imports from Indonesia. Growth rates are calculated for the last five years. Using these criteria, commodity groups can be categorized according to table below.

Table 4.1:
Classifying Category According to Export Growth

Potential Export Code	Indonesia Export to India	Indonesia Total Export	India Total Import	Comment
5	0 or –	+	+	High potential in India but not realized by Indonesia exports in that market, although significant Indonesia exports elsewhere occur
4	+	+	+	High potential in India, realized by Indonesia exports in that market with significant Indonesia exports elsewhere
3	+	0 or –	+	High potential in India, realized by Indonesia exports in that market but with export supply constraints elsewhere
2	0 or –	0 or –	+	High potential in India, not realized by Indonesia exports in that market and with export supply constraints elsewhere
1	+	+	0 or –	Low potential in India, realized by Indonesia exports in that market with significant Indonesia exports elsewhere
0	0 or –	+	0 or –	Low potential in India but not realized by Indonesia exports in that market, although significant Indonesia exports elsewhere occur

It can be argued that the highest priority should be given to those commodities that have shown high growth in the India and for which Indonesia has displayed high growth of exports to the world but not to the India. We assign the potential export code 5 to these commodities. However, even if Indonesia exports to the India were to be positive instead of flat or negative, policy-makers would want to improve access to perhaps facilitate gain in market share in the India (code 4). Commodities with negative or flat total export growth for Indonesia may feature less on the radar screens of policy-makers (code 2), even if the India market is expanding and Indonesia exports to that market are positive (code 3). For all potential export codes discussed so far (2 to 5), a minimum market size of US\$ 100 Million is required to trigger an offensive interest. Exports less than US\$ 100 Million are considered to be less interesting. In this study, it choose to look at those commodities with codes 4 and 5, an ITP value of 100 US\$ million and higher and a non-zero tariff.

4.2. Specification of the Model

In estimate model equation, it is used pooled data. There some reason why it uses pooled data. First, application of data panel is to enhance a number of observations, in other word, to solve unlimited of time series data that was often necessary in research. Second, variation among different units and variation according to time will appear in panel data model. Hence, analysis of this model is probably to explain, to analyze and examine hypothesis. Finally, it is supposed that each individual has different effect or characteristic.

The purpose of this section is to estimate in equation model what the potential impact of further reduction in tariff barriers on trade between the Indonesia and India for 10 main commodities (base on trade flow analysis before) traded between the Indonesia and India. This study has two model equations, it differentiate between export and import. So there are two model, model for Indonesian export to India, and model for Indonesian import from India.

4.2.1. Model of Indonesian Export to India

In this analyze, it will use cross section data of 10 potential export commodities from Indonesia to India using HS 2 code with period 2001-2007. The reason why it is chosen just 10 commodities is based on identification of indicative trade potential and those commodities represent more than 80 percent of share to total export to India. The basic equations for the regression analysis develop from Kalirajan model, as follow form:

$$\ln \text{Export}_k = \alpha_0 + \beta_1 \ln (\text{GDP}_j) + \beta_2 \ln (\text{REXR}) + \beta_3 (\text{Tariff}_j) + \varepsilon$$

Where :

- Export_k = Export of Indonesia to India for commodity k
- GDP_j = Gross Domestic Product of India
- REXR = Real exchange rate of the Rupiah in term of Rupee
- Tariff_j = Simple Average tariffs of India
- α = Constanta
- ε = Error Term, the effect of another variable not in model

The difference with the Kalirajan model is in distance. Kalirajan used distance between the countries as independent variable. The reason why I exclude the distance variable is because this analysis only between two countries, so using the distance variable is not appropriate since there is no changes the distance between two countries year by year. The analysis is done using total export and import of Indonesia's specific commodity using HS code 2-digit. These commodity groups are selected on the trade potential basis and from their share of export and import. The reason why chosen 10 commodities because it represented about 80 percent share of Indonesian export to India and 70 percent share of Indonesian import.

The data for exports import of both were available from the UN and BPS for the Period 2000-2007. Hence, data used in this study are confined to this period. The UN and BPS publications present export data in their current values. Real export is taken by Indonesia nominal export to India converted into real values via deflating by the Wholesale Price Index (WPI).

Nachrowi, Djalal and Usman (2002) said that one indicator which is used to measure national economic condition is export. In this study, the real exchange rate of India is constructed by multiplying the domestic price (CPI) level by nominal exchange rate and then dividing by the Indonesia consumer price. Real GDP is constructed by data in current prices based are converted into real values via deflating by the gross domestic product (GDP) deflator.

4.2.2. Model of Indonesian Import From India

For the Indonesian import model, I applied the same process to tackle the endogenous problem. Because the imports are just the opposite movement of goods as exports, we reversed the process we adopted for the export model.

In this analysis, it will use cross section data of 10 main import commodities of Indonesia from India using HS 2 code with period 2001-2007. The reason why it is chosen just 10 commodities is based on the share more than 75 percent of share to total Import from India. The equations for Import model is as follow:

$$\ln \text{Import}_k = \alpha_0 + \beta_1 \ln (\text{GDP}_i) + \beta_2 \ln (\text{REXR}_{ij}) + \beta_3 (\text{Tariff}_i) + \varepsilon$$

Import_k = Import of Indonesia from India for commodity k

GDP_i = Gross Domestic Product of Indonesia

REXR = Real exchange rate of the Rupiah in term of Rupee

Tariff_i = Simple Average tariffs of Indonesia

α = Constanta

ε = Error Term, the effect of another variable not in model

4.2.3. Expected signs of the coefficients

The real GDP are used to proxy for the economic sizes of the countries; hence, if real GDP increases, countries seem to export more or

import more. That is, trade between the countries rises, so the coefficients of real GDPs in both equation models are expected to be positive.

Blanchard (2003) asserts that the real exchange rate represents the price of foreign goods in terms of domestic goods; thus, the depreciation of the domestic currency makes domestic goods relatively cheaper, leading to an increase in exports due to higher foreign demand. So, the variable for the real exchange rate is expected to have a positive coefficient in the unilateral exports model since depreciation in the country *i* will stimulate export flows from the country *i* to the country *j*. Otherwise, coefficient for import model is expected have a negative sign, it is contrary with the export.

Trade barriers such as tariff have a statistically significant negative effect on trade flows between countries. It is common knowledge within the economic and business arena that tariffs will reduce the volume of trade and serve as a trade impediment measure. So, negative sign is expected for the result analysis.

4.3. Scenarios of Simulation for Export- Import Indonesia-India

Refer to estimation result, so it will try to make simulation on increasing export and import value after FTA. In simulation stage, only reduction of tariffs under *ceteris paribus* assumption was taken. The scenario on tariff elimination use modality which usually practiced in bilateral arrangement. There are four schemes or scenarios in this simulation, they are as follow:

1. Early Harvest Program (EHP)

EHP is one of type of modality tariff elimination which use in arrangement in ASEAN countries and also ASEAN with China. The scenario under EHP is as follow:

Table 4.2. Scheme of EHP

EHP	
Existing MFN Tariff Rates (X)	Preferential Tariff Rate
$X > 15\%$	10%
$5\% < X < 15\%$	5%
$X < 5\%$	0%

2. Normal Track (NT)

Normal track which tariffs would be reduced more slowly. The scenario under Normal Track is as follow:

Table 4.3. Scheme of Normal Track

Normal Track	
Applied MFN Tariff Rate (X)	Preferential Tariff Rate
$X > 20\%$	20%
$15\% < X < 20\%$	15%
$10\% < X < 15\%$	10%
$5\% < X < 10\%$	5%
$X < 5\%$	0%

3. Sensitive Track

This study tries to eliminate by 50% by both countries.

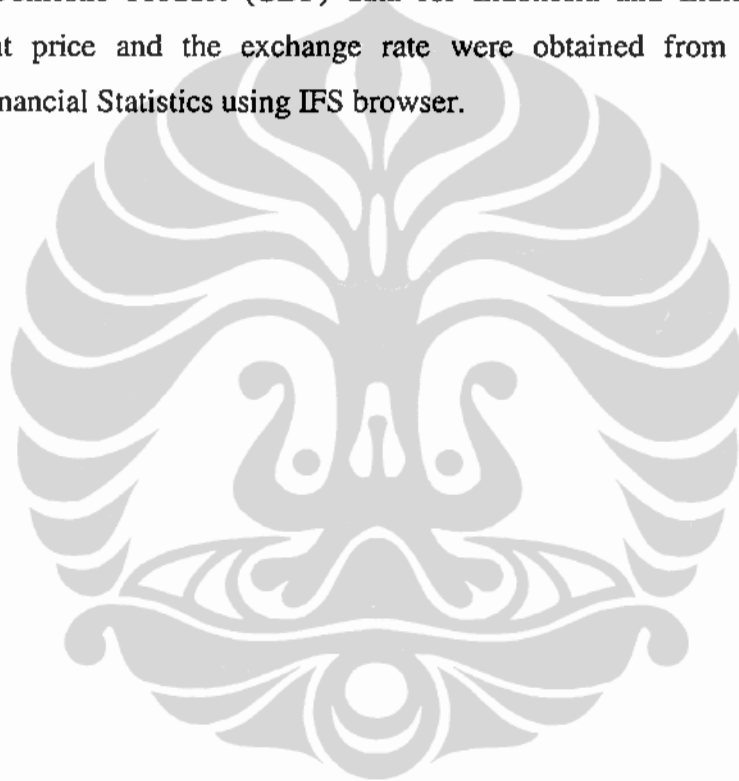
4. 100% tariff cuts i.e. free trade between Indonesia and India

This would give some idea of the sort of producer gains and losses that could result from an FTA with the India. The final scenario of simulation is the maximum benefit that could be gained. This would occur if all Indonesia and India tariffs were reduced to zero. In this section we first consider market access gains for Indonesia exporters to India, followed by a view on potential gains to India exporters.

4.4. Data Description

Data used in this study based on the secondary data. Data on export, import and tariff of both Indonesia and India are taken from the UN COMTRADE database provided through the online WITS software developed by the World Bank and UNCTAD. Trade data recorded in US dollars and the classification of the product base on two digit of harmonized system (HS).

Gross Domestic Product (GDP) data for Indonesia and India at dollars constant price and the exchange rate were obtained from the International Financial Statistics using IFS browser.



CHAPTER V

RESULT AND ANALYSIS

The objective of this chapter is to provide the result of the identifying potential product of Indonesia in Indian market base on trade flow analysis. Next, it provides the result from estimation the equation of export import model and then it shows how much increasing value of export and import from tariff elimination base on some scenarios of simulation.

5.1. Identifying Export Potential

To identify potential commodity or product of Indonesia to export to Indian market, this study attempt to identify commodities with high export potential to India markets based on trade flow analysis. The approach attempts to reveal product groups which are exported by Indonesia to India and rest of the world, and for which there is a significant import demand in India market.

According to explaining in methodology about the concept of trade flow analysis and indicative trade potential, in this analysis, I choose to look at those commodities which is under code or category 4 and 5, and ITP value of 100 US\$ million and higher and a non-zero tariff. From a total of about 97 HS2 commodities there are 44 met the conditions set above (table 5.1). It means there are many potential commodities of Indonesia that could be improve the access to perhaps facilitate gain in market share in India. Besides the oil and gas commodity, Electrical Equipment (HS 85)) has the highest potential of about US\$ 7.29.2 billion followed by Ores, slag and ash (HS 26); Machinery (HS 84) and Fats Oil and Waxes (HS15) and they are making a top five list based on indicative trade potential. Export potential of each these group products are US\$ 4.9 billion; US\$ 4.3 billion; US\$ 2.26 billion respectively.

On a sector basis, most industry sector shows significant potential as paper, furniture, organic chemical, footwear, wood pulp and waste and many others. On agriculture sector, the potential commodity could be

improved the access such as wood, fish, cocoa and tobacco. Besides that, Man-Made Staple Fibers (HS55) and Nickel (HS75) show very high potential to improve.

Table 5.1
Category 4 and 5 commodities with Indicative Trade Potential
Greater than US\$ 100 Million

No.	HS2	Description	ITP 2007	Category	Tariff	Idn X to india
1	27	Mineral Fuels And Oils	29,211.1	4	11.8	864.0
2	85	Electrical Equipments	7,596.2	4	10.5	28.7
3	26	Ores, Slag And Ash	4,935.8	4	5.6	537.6
4	84	Machinery	4,670.2	4	12.0	84.4
5	15	Fats, Oils And Waxes	2,583.9	4	64.8	2,289.7
6	29	Organic Chemical	2,564.8	4	12.6	100.8
7	39	Plastic & Plastic Articles	1,906.5	4	12.5	49.0
8	87	Vehicles Other Than Trains	1,902.9	4	29.8	17.9
9	40	Rubber And Rubber Articles	1,388.9	4	13.5	108.6
10	74	Copper	1,373.9	4	12.5	3.4
11	48	Paper	1,242.5	4	12.5	59.0
12	73	Articles Of Iron Or Steel	1,148.1	4	12.5	24.4
13	72	Iron And Steel	1,118.5	4	20.0	80.2
14	38	Miscellaneous Chemical Products	928.6	4	14.1	124.8
15	71	Pearls, Precious Stones & Metals, & Imitation Jewellery	897.5	4	12.5	0.0
16	76	Aluminium	868.1	4	12.5	5.4
17	75	Nickel	750.6	5	12.5	0.0
18	47	Wood Pulp And Waste	745.6	4	6.4	59.5
19	89	Ships And Boats	643.3	4	12.5	18.2
20	94	Furniture, Bedding, Lamps, Illum.	528.3	4	12.5	4.4
21	90	Opticals, Photographic & Measuring Equipmt, Medical Ins	518.1	4	11.5	8.6
22	54	Man-Made Filaments	435.4	5	12.5	28.3
23	28	Chemicals And Allied Products	400.1	4	12.1	39.0
24	70	Glass And Glassware	381.4	4	12.5	19.1
25	25	Salt, Sulphur, Earths & Stone	291.3	4	12.3	3.4
26	69	Ceramic Products	290.0	4	12.5	3.2
27	08	Fruit And Nuts	279.9	4	35.0	69.5
28	32	Tans, Dyes, Pigments, Paints,	261.8	4	12.5	27.8
29	34	Soap, Washing Preparations, Lubricating Preparations, Waxes	251.1	4	12.5	14.6
30	55	Man-Made Staple Fibres	233.1	4	12.5	12.8
31	33	Essential Oils And Resinoids, Perfumery, Cosmetics Or Toilet	221.5	4	20.3	7.7
32	09	Coffee, Tea And Spices	206.2	4	56.8	48.4
33	96	Miscel Manufactured Articles	200.8	4	12.5	1.5

No.	HS2	Description	ITP 2007	Category	Tariff	Idn X to india
34	88	Aircraft And Spacecraft	194.7	5	8.7	16.3
35	41	Raw Hides, Skins And Leathers	183.9	4	9.5	12.8
36	30	Pharmaceutical Products	176.4	4	12.1	24.4
37	95	Toys, Games & Sports Equipment	154.9	4	12.5	0.9
38	68	Articles Of Stone, Plaster, Cement, Asbestos And Mica	140.5	5	12.5	1.0
39	64	Footwear	139.6	4	12.5	1.6
40	83	Miscs Articles of Base Metals	137.7	4	12.5	1.6
41	59	Industrial Textile Fibers	116.6	4	12.5	13.4
42	63	Other Textile Articles And Used Clothing	113.3	4	12.5	0.8
43	12	Seeds And Grains	112.5	4	31.1	2.8
44	23	Food Waste And Animal Fodder	102.2	5	30.0	3.7

Source: WITS, processed

However, only a half of these product groups exceeded US\$ 20 million in 2007 trade with India. Furthermore, there are many groups in the list were not exported to the India or just a few in 2007. We already know (by definition of code 4 and 5) that supply is not the constraining factor for these products. This suggests that there may be possible constraints that are restricting these commodities from realizing the potential in the Indian market. These constraints may range from export competitiveness, consumer preferences, transport costs, trade barriers (tariff and non-tariff), business cycles, and seasonal factors, as well as political and economic events.

Next we match the product groups up with tariff barriers, and look into the possibility of those being the constraining factors. From the 44 identified commodities, almost all of them have tariff more than 10%, just 2 of them had a tariff of less than 10% imposed on them by the India in 2007. One of the high was 29.8 % imposed on HS 87 Vehicles Other Than Trains, which unsurprising little recorded exports to the India in the same year. Among the agricultural products, HS 15: Fats, Oils & Waxes with the highest tariff of about 64.8%. Despite that, the value export is the highest of US\$ 2.3 billion in 2007. The implication here is that India is a main destination county for Indonesian export of HS 15. Totally, the average

tariff imposed in India is higher than 18 percent, so further removal of the constraining factor, it is expected will result in more commodities achieving high export performances and thus realizing the potential.

There are only two HS 2 products falling under code 3 and all of them with the market size larger than US\$ 100 million. All these products have high potential in the India market, but Indonesian export of them is still low. Two products are, HS 44: Wood, and HS 52: Cotton. Of these two, the tariffs more than 10% imposed on them. In this case, tariffs could be considered as one of the main barriers.

Table 5.2
Category 3 commodities with Indicative Trade Potential
Greater than US\$ 100 Million

No.	HS2	Description	ITP 2007	Category	Tariff	Idn X to India
1	44	Wood	1,327.8	3	11.2	4.4
2	52	Cotton	514.5	3	12.7	7.5

Source : WITS, processed

According to figure the percentage of potential export, we can conclude that Indonesia has many potential products to improve in expanding market in India. More than 80% our product groups have market in India. But for overall, Indonesia still not exploits that condition. It can be concluded from many products have under the category 5 (24 percent), that means if Indonesia has high potential in India but not realized by Indonesia exports in that market, although there is significant Indonesia exports elsewhere. With the cooperation on trade with India is expected to Indonesia could expand their market with low trade barrier. We can see that it just 3 percent from the entire product which have low potential in India market (code or category 0). Consequently, FTA with India will give gain much to Indonesia if we could take chance and opportunities within penetrating the market. The following graphic shows the percentage of each category.

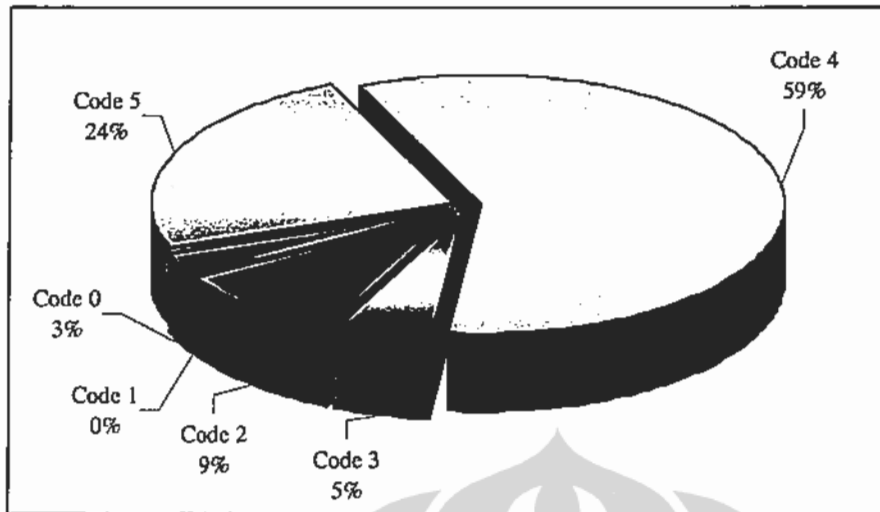


Figure 5.1

Percentage Potential Export according to Category

5.2. Result of Export Equation

5.2.1. The Result of F or Chow test

The first step to determine the best approach in estimating the model is by testing the model using Chow-Test or F Test which is the test to confirm about the existence of individual effects. Firstly, we need to do F test and Chow test from pooled least square with elaborate common intercept with no weighting. The F test and chow test is used to analyze whether the cross section have an individual effect or not to the model.

Table 5.3

F-Test Result

SSR 1 (PLS)	SSR 2 (FEM)	F-stat	F - table		Result	Conclusion
			α	F -table		
144.206	13.079	63.496	(1%)	2.736	F-stat > F-table	Fixed Effect
			(5%)	2.049		
			(10%)	1.744		

The result of F test above shows that $F\text{-stat} > F\text{-table}$ with degree $\alpha = 0.01$, $\alpha = 0.05$ and $\alpha = 0.1$; so it can be concluded that the model has an individual effect and fixed effect is better to estimate the model.

5.2.2. The Result of Hausmann test

Based on the result F test and chow test, we find that fixed effect model better than common model, the process should be continued by hausmann test to examine where the model more properly to use, using Fix Effect or Random Effect Estimation.

Table 5.4
F-Test Result

Hausmann Test		X ² table		Result	Conclusion
		α	X ² table		
Chi-square (3 d.f.)	5.794	(1%)	11.345	X ² table > Hausmann	Random Effect
p-value	0.122	(5%)	7.815		
		(10%)	6.251		

Based on the table result above, We can see that the result of Hausmann test with degree $\alpha = 0.01$, $\alpha = 0.05$ and $\alpha = 0.1$, it shows that $X^2 \text{ table} > \text{Hausmann}$, so random effect is better to use in examine the model than fixed effect. Because the result from hausman test show that random is better, so, there is no need LM test more to examined the model.

5.2.3. Estimation Result

The estimation result of random effect model for the model of export of Indonesia to India is shown in the following table:

Table 5.5
The Regression Result of Export Model

Variables	Random Effect Method	
	Coefficient	Probability
C	6.951272	0.2425
LOG(GDP_IND?)	1.521975***	0.0016
LOG(ER?)	-0.992561	0.1814
TARIFF?	-0.036799***	0.0093
R-squared	0.9120	

Source: processed using Eviews

5.2.4. Interpretation and Analysis of the Model

The interpretation of the estimation result for that model can be explained as follow:

- a. The correlation between dependent and independent variables is shown by the value of R^2 of 0.912. It means that all explanatory variables can be explained by the model in the level of 91 per cent. So, it is relatively strong correlation between dependent and independent variables.
- b. GDP has significant influence to trade. As expected, the GDP elasticity is positive. This implies that Indonesia tends to trade more with larger economies, the increasing of the real value of the trading partner shows the power of the country to import more for domestic demand. In other word with a rise in GDP of India, the export of Indonesia will increase. The value is more than unity which means that it is in the elastic region, so that Indonesia's export is highly sensitive to India's growth. India's GDP give significant influence to Indonesia's trade, it is showed on probability = 0.0016. When India' GDP increases 1 percent, it will increase Indonesian export for those 10 commodities by 1.52 percent *ceteris paribus*.
- c. Variable of exchange rate give insignificant influence to Indonesian export for those commodities. In the case of the real exchange rate, the

coefficient is negative, meaning that a real depreciation of the Indonesia money decreases the export of Indonesia to India. The research by Ekananda (2002) concluded that the influence of depreciation exchange rate to trade in the beginning would give negative value because it is needed a certain time lag adjustment to the new price. But, in his case, the coefficient is insignificant, so it does not give influence to the dependent variable.

- d. Finally, tariff gives significant influence to Indonesia's trade. It is showed on probability = 0.0093 and it has expected sign (-). If the average Indian tariff for those commodities decreases, the total trades of Indonesia for the commodities increase. Based on the result of model, if tariff decrease 1%, it will cause increasing export for those commodities about 0.0368%. Based on elasticity, Indian tariff has value less than unity; it means that tariff is in the inelastic region, so that change of tariff will effect slowly to total Indonesian export, in other word, tariff is not major factor which be able to push Indonesian export to India.

From the equation result for each commodities, *ceteris paribus*, shows the individual effect is as following table:

Table 5.6

Individual Effect for 10 Selected Commodity Groups

HS Code	Description	Individual Effect
15	Fats, Oils And Waxes	4.1945
27	Mineral Fuels And Oils	1.5869
26	Ores, Slag And Ash	0.7942
08	Fruit And Nuts	0.1586
29	Organic Chemical	-0.4073
84	Machinery	-0.7339
47	Wood Pulp And Waste	-1.2371
85	Electrical Equipments	-1.3902

Table 5.7
F-Test Result of Import Model

SSR 1 (PLS)	SSR 2 (FEM)	F-stat	F-table		Result	Conclusion
			α	F-table		
46.112	18.894	7.523	(1%)	2.811	F-stat > F-table	Fixed Effect
			(5%)	2.086		
			(10%)	1.768		

Source: processed using Eviews

The result of F test above, it shows that F-stat > F-table with degree $\alpha = 0.01$, $\alpha = 0.05$ and $\alpha = 0.1$; based on that we can conclude that the model has an individual effect and fixed effect is better to estimate the model.

5.3.2. The Result of Hausmann test

Based on the result F test and chow test, we find that fixed effect model better than common model, next we need to hausmann test to examine where the model more properly to use.

Table 5.8
Hausman Test Result of Import Model

Hausmann Test		X ² table		Result	Conclusion
		α	X ² table		
Chi-square (3 d.f.)	0.163	(1%)	11.345	X ² table > Hausmann	Random Effect
p-value	0.983	(5%)	7.815		
		(10%)	6.251		

Source: processed using Eviews

We can see from the result of Hausmann test with degree $\alpha = 0.01$, $\alpha = 0.05$ and $\alpha = 0.1$, it shows that X² table > Hausmann, so random effect is better to use in examine the model than fixed effect. Because the result

HS Code	Description	Individual Effect
40	Rubber And Rubber Articles	-1.3984
72	Iron And Steel	-1.5673

Source: own processed using Eviews

From the table, it can be seen that commodities which have highest of average export is Fats, Oils and Waxes; followed by Mineral Fuels and Oils; Ores, Slag and Ash; and Fruit and Nuts. Otherwise, commodities which have smallest export is Iron and Steel.

Highest Individual effect in Fats, Oils and Waxes is possible, because it is top one commodity of Indonesian export to India, in addition Fats, Oils and Waxes is one of main commodity export of Indonesia to world. In addition, Crude Palm Oil as one of derived product from HS 15 is an important sector in the Indonesian economy as its is one of the country's major export earners. Beside that, Indonesia is the world second largest producer of palm oil after Malaysia.

Iron and Steel is the lowest individual effect to Indonesia export. It is possible if we see the value of comparative advantage for that product is less than one (0.42), it means that iron and steal is product which is not competitive in the other market.

5.3. Result of Import Equation

5.3.1. The Result of F and Chow test

Firstly, we need to do F test and Chow test from pooled least square with elaborate common intercept with no weighting. The F test and chow test is used to analyze whether the cross section have an individual effect or not to the model.

from hausman test show that random is better, same with export equation model, import model does not need LM test as well.

5.3.3. Estimation Result

The estimation result of random effect model for the model of Import of Indonesia from India is shown in the following table:

Table 5.9
The Regression Result of Import Model

Variables	Random Effect Method	
	Coefficient	Probability
C	7.398722	0.6035
LOG(GDP_INA?)	2.596781**	0.0280
LOG(ER?)	-1.837322	0.2912
TARIFF?	-0.144939*	0.0543
R-squared	0.5944661	

Source: processed using Eviews

5.3.4. Interpretation and Analysis of the Model

The interpretation of the estimation result for that model can be explained as follow:

- a. In this case, GDP not only has positive sign which again supports the H-O hypothesis and also give significant influence to Indonesia's Import, it is showed on probability = 0.02. An increase of 1% Indonesia's GDP leads to increase Indonesian Import for those commodities by 2.59 percent. It indicates that the Increasing of the value of real GDP, show the power of Indonesia to import the commodities for domestic demand.
- b. Imports of Indonesia are also negatively responsive with the exchange rate but it has insignificant influence to Indonesian Import for those commodities. If we look at figure 5.2 below, we can see that

depreciation or an appreciation of the Indonesia's currency did not give big influence not only to demand for imported goods but also for export. The trade balance tends to increase year by year, even though there is a depreciation or depreciation of the Indonesia's currency. Beside that, from the figure it can be seen that the Indonesia's currency in term of India currency during period 2002 until 2007 relatively stable. So, exchange rate gives insignificant to trade between Indonesia and India.

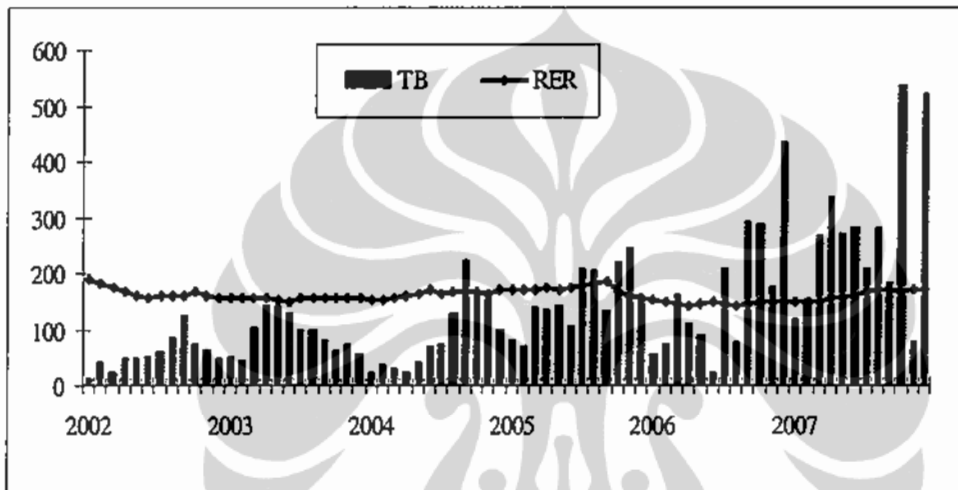


Figure 5.2
Comparison between RER and Import

Defined as units of foreign currency per unit of domestic currency, a domestic currency appreciation is represented by a rise in the (defined) real exchange rate. The effect of currency appreciation is twofold. Firstly, export would be instantaneously more expensive. However, this effect will be negated to the extent that imported raw materials would now be cheaper. Overall though, it seems sensible to assume that the former effect will dominate. Thus firstly, the exchange rate variable appears to be perversely signed, and secondly it appears insignificant. The insignificance of this variable is possibly suggesting that the two conflicting effect (supply and demand are canceling each other out) (Harris and Matyas, 1998).

Magee (1973) assumed the unfavorable effect of currency depreciation as the J-curve since the total time path (short and long-run) of the balance of trade resembles the letter of "J". Krueger (1983) pointed out that the existence of J-curve phenomenon can be attributed to the fact that at the time an exchange occurs, goods, which are already in transit and under contract, have been purchased, and the completion of those transactions dominates the short-term change in the trade balance. So, it can give indicate why the exchange rate give insignificant to the export and import for this case.

- c. Finally, tariff gives significant influence to Indonesia's trade on alpha 10 percent. It is showed on probability = 0.054 and it has expected sign (-). If the average Indonesian tariff for those commodities decreases, the total import of Indonesia for the commodities increases. Based on the result of model, if tariff decrease 1%, it will cause increasing import for those commodities about 0.145. The exchange rate elasticity of imports is - 0.145. The absolute value is less than unity which means that it is in the inelastic region, it indicate that change of tariff will affect slowly to total Indonesian import.

From the equation result for each commodities, *ceteris paribus*, shows the individual effect is as following table:

Table 5.10

Individual Effect for 10 Selected Commodity Groups

HS Code	Description	Individual Effect
29	Organic Chemical	0.7943
72	Iron And Steel	0.7194
27	Mineral Fuels And Oils	0.2695
39	Plastic & Plastic Articles	0.1435
23	Food Waste And Animal Fodder	0.1417
52	Cotton	0.0154
73	Articles Of Iron Or Steel	-0.0847

HS Code	Description	Individual Effect
12	Seeds And Grains	-0.2804
84	Machinery	-0.6402
74	Copper	-1.0785

Source: own processed using Eviews

From the table, it can be seen that commodities which have highest import is Organic Chemical; followed by Iron and Steel; Mineral Fuels and Oils; Plastic & Plastic Articles and Food Waste and Animal Fodder. Otherwise, commodities which have smallest import are Copper.

Highest Individual effect in Organic Chemical is possible, because it is the seventh largest of Indonesian main import.

5.4. Result of Simulation

Within simulation of import, there is one important thing that need to be attention, because of low R^2 , so we need to be careful on interpretation. The purpose of this section is to estimate what the potential impact of further reduction in tariff barriers on trade between the Indonesia and India for those selected commodities traded between the Indonesia and India. This would give some idea of the sort of how much increasing export and import that could result from an FTA with the India. The final simulation is the maximum benefit that could be gained. This would occur if all Indonesia and India tariffs were reduced to zero.

5.4.1. Simulation of Indonesian Export to India

Next, the analysis concern working out the impact of FTA on export of Indonesia to India. This simulation is a hypothetical scenario in which the countries start with elimination scheme of EHP, normal track, sensitive track and complete elimination of tariff in the final phase. The value and percentage terms of Indonesia's increasing in export to India under different scenarios are shown in table below:

Table. 5.11
Value and Percentage of Increasing Export According to all Scenarios

Description	Increase of Export (Value in '000 US\$)				Percentage Increase			
	EHP	NT	ST	FTA	EHP	NT	ST	FTA
Fats, Oils And Waxes (15)	47,945.0	33,183.8	38,171.3	69,272.5	2.09	1.45	1.67	3.03
Mineral Fuels And Oils (27)	4,247.7	3,533.8	4,581.0	5,105.8	0.49	0.41	0.53	0.59
Ores, Slag And Ash (26)	1,922.6	2,084.3	2,194.7	2,311.0	0.36	0.39	0.41	0.43
Rubber & Ruber Articles (40)	214.6	178.6	227.8	258.0	0.20	0.16	0.21	0.24
Organic Chemical (29)	578.2	481.0	619.0	695.0	0.57	0.48	0.61	0.69
Machinery (84)	417.1	347.0	449.1	501.4	0.49	0.41	0.53	0.59
Iron And Steel (72)	150.8	125.5	181.3	217.9	0.19	0.16	0.23	0.27
Fruit And Nuts (08)	465.9	642.8	1,018.3	1,224.0	0.67	0.93	1.47	1.76
Wood Pulp And Waste (47)	252.2	252.2	285.7	303.1	0.42	0.42	0.48	0.51
Electrical Equipments (85)	216.4	180.0	236.2	260.1	0.75	0.63	0.82	0.91
Total	56,410.5	41,009.1	47,964.3	80,148.8	1.34	0.97	1.14	1.90

Source: own calculation

The simulation result shows that the main beneficiaries of the tariff phase down are Indonesian exporter of Fats, Oils and Waxes (HS 15). Due to FTA, Indonesia's export of this item to India market will increase by 3.03 percent and has potential to expand their market in India with US\$ 62 million, followed by Fruit and Nuts (1.76 percent) in HS 08 with 1,2 million US\$; and Electrical Equipment (0.91 percent) in HS category 85. This shows that as trade barriers are reduced or removed, then trade will increase. For the Fats, Oils and Waxes (HS 15), the percentage of increasing export is the highest according to all scenarios. (figure 5.2)

According to all scenarios, the highest increasing value can be obtained if all tariff is zero, there is no longer tariff barrier. The lowest increasing occur if it provides normal track within tariff elimination.

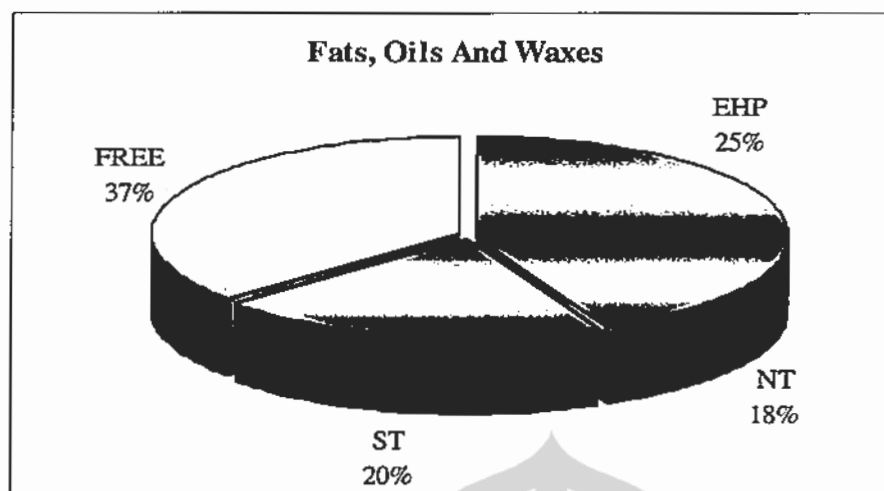


Figure 5.3

Percentage Increasing Export for HS 15 in All Tariff Elimination Scheme

5.4.2. Simulation of Indonesian Import from India

Impact of different levels of tariff cuts through FTA on India's exports to Indonesia (Indonesia's import) is shown in Table 5.13. In the hypothetical comparative analysis, it is shown that if Indonesia completely eliminates tariffs on its imports from India, total exports of the India for those commodities will increase by 1.13 percent or has potential to expand their market in India with US\$ 618, 7 million

Table. 5.12

Value and Percentage of Increasing Import According to all Scenarios

Description	Increase of Import (Value in '000 US\$)				Percentage Increase			
	EHP	NT	ST	FTA	EHP	NT	ST	FTA
Plastics & Plastic articles (39)	913.7	442.7	862.9	1,886.0	2.17	1.05	2.05	4.48
Iron and steel (72)	1,625.2	1,625.2	2,265.0	3,354.6	0.98	0.98	1.36	2.02
Cotton (52)	803.9	803.9	913.2	1,659.3	0.96	0.96	1.09	1.98
Articles of iron or steel (73)	727.3	352.3	725.7	1,501.2	0.95	0.46	0.95	1.96
Machinery (84)	861.3	625.3	733.9	861.3	1.76	1.28	1.50	1.76
Food Waste & Animal Fodder (23)	1,882.7	1,392.7	1,619.2	1,882.7	1.23	0.91	1.06	1.23

Description	Increase of Import (Value in '000 US\$)				Percentage Increase			
	EHP	NT	ST	FTA	EHP	NT	ST	FTA
Seed and Grains (12)	1,234.4	742.2	957.2	1,234.4	1.20	0.72	0.93	1.20
Organic chemicals (29)	3,615.8	2,212.1	2,828.2	3,615.8	1.01	0.62	0.79	1.01
Copper & articles thereof (74)	269.2	269.2	362.1	555.7	0.41	0.41	0.55	0.85
Mineral Fuels and Oils (27)	2,139.3	1,199.8	1,602.1	2,139.3	0.38	0.22	0.29	0.38
Total	14,072.8	9,665.4	12,869.4	18,690.2	0.85	0.58	0.78	1.13

Source: own calculation

Table 5.13 depict the simulation results under different scenarios. In this table there are major 10 commodities in order of trade coverage, whose combined share is more than 70 % of Indonesia's total imports from India during that period. In 2007, Indonesia's average MFN tariff was 7.93 %, which is taken from the BTBMI 2007.

Due to FTA, the simulation result show that the most significance increase in Indonesian import from India will be in HS category 39 i.e. Plastics and Plastic articles 4.48 percent; followed by Iron and steel in HS 72, then Cotton (HS 52). But the import of Copper & articles thereof (HS 74) and Mineral Fuels and Oils (HS 27) are relatively small due to liberalization.

Due to FTA, Indonesia's imports are very insignificant in two categories viz. Copper & articles thereof (HS74) and Mineral Fuels and Oils (HS27). The simulation results show that if Indonesia offers duty free treatment (FTA) to India, its imports of this category (i.e. HS 27) would increase only by 0.38%. Such very low level increase is because Indonesia has almost negligible tariff in this category, which was 3 percent in 2007. In most of the items of these categories, tariff levels are zero at the 9 digit levels. Tariff levels become high if the items are processed from primary to intermediary stage.

The commodities which is analyzed, there are four same item for export and also import. Those are Mineral Fuels and Oils (27); Organic

chemicals (29); Iron and steel (72) and Machinery (84). From the simulation can be seen that only Mineral Fuels and oil which is higher in increasing of export than import due to FTA. The others, HS 29, HS 72 and HS 84, the increasing of import are higher than export.

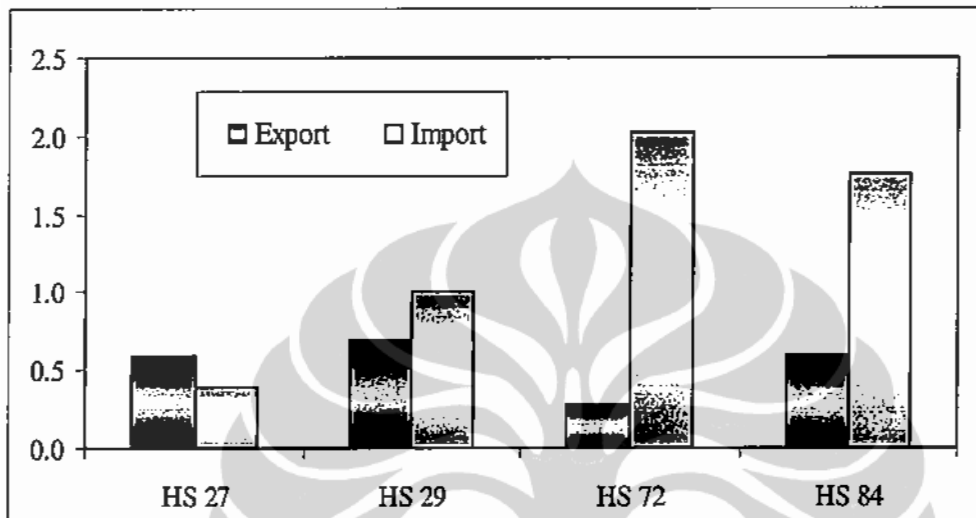


Figure 5.4

The Comparison of Increasing Export and Import for Same Product Due to FTA

Based on those scenarios, Iron and steel would be higher on import than export. The data show that Indonesian export of Iron and steel tend to decrease year by year. The steel industry has experienced a decline due to various factors such as the dependence on imported raw materials, lack of supply of energy, illegal imports, environmental problems and changes in the international market situation. Otherwise, the steel industry is one of the strategic industries that are important for the development of infrastructure and manufacturing industries. So, it is possible if free trade with India occurs, import of Iron and Steel will be higher than the others.

Overall, the simulation result show that gain from Indonesia-India FTA is substantially high in the case of Indonesia's export to India. This is simply because of the fact that Indian market is protected by much higher tariffs, probably India's average rate of tariffs is amongst the

highest in the world at present. Figure 5.4 following show the comparison of increasing the percentage export and import base on all scheme elimination.

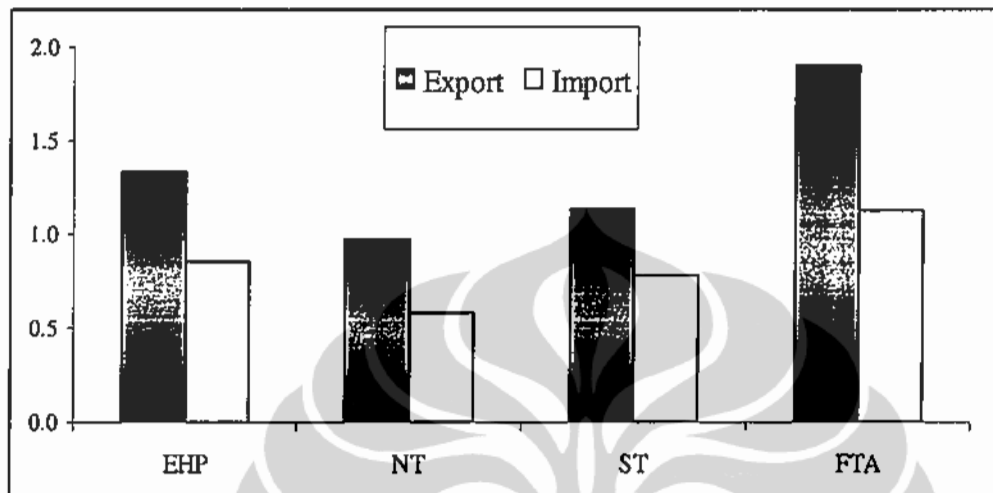


Figure 5.5
Percentage Export and Import

As it is mentioned earlier that due to FTA, the country will gain much whose initial tariff level is much lower than its competitors and vice-versa. Since India's average tariff level was 19.39% compared to Indonesia's 7.9%, Indonesia's increase in export to India will be much more than the former. This suggests that if all preferences were indeed realised, Indonesia was expected to gain more from the FTA than the India, at least for the first phase.

Finally, as a conclusion from the analysis section, it can be concluded that all the methodologies have a connection each other. The first methodology determines which commodities that have great potential to expand in Indian market, and then second methodology plot the relationship between the tariff reductions and increasing of exports and import between Indonesia and India for the selected commodities according to analysis before, and finally how much increasing value of export and import from those elimination through some scenarios simulation.

CHAPTER VI CONCLUSION & RECOMMENDATION

6.1. Conclusion

The Proposed India-Indonesia FTA is expected to provide a basic ground for strengthening and widening economic cooperation between two countries with high population of the Asian region. From the analysis trade flow and trade potential, this study can conclude that:

- India as potential country for Indonesia, but Indonesia has not still yet optimizes the market; it can be seen from the high indicative trade potential but export value of Indonesia to India still low. It suggests that there may be possible constraints that are restricting these commodities from realizing the potential in the Indian market. It can be referred from highest the initial tariff in India for most commodities.
- From a total of about 97 HS2 commodity groups, there are 44 which have potential to improve in Indian market, the highest potential are Mineral Fuel and Oils (27); Electrical Equipment (85); Ores, Slag and Ash (26); Machinery (84) and Fats, Oil and Waxes (15).
- There are two groups products which have high potential in India, but there is supply constrain of Indonesia. Those are Wood (HS 44) and Cotton (HS 52).

From the econometric model and simulation, this study can conclude that:

- GDP and tariff have significant impact to trade (export and import) between Indonesia and India. If real GDP increases, countries will export or import more. Otherwise, if tariff increase, it will reduce the value of trade. This shows that as trade barriers are reduced or removed, then trade will increase.

- Based on those scenarios, significant changes in Indonesian export to India would be apparent in Fat oil and waxes (HS 15), Fruit and Nuts (HS 08) and Electrical Equipment (HS 85). But the export Rubber and Rubber article (HS 40) and Iron and Steel (HS72) are stagnant due to liberalization.
- Based on those scenarios, significant changes in Indian export to Indonesia (Import of Indonesia) would be apparent in Plastics and Plastic articles (HS 39), Iron and Steel (HS 72) and Cotton (HS 52).
- Simulation result indicates that value export Indonesia to India will more be higher than India export to Indonesia (import of Indonesia). FTA between India and Indonesia goes in favor of Indonesia and it is disadvantageous to India at least in the short run. This is because of high tariff regime in India and low tariff regime in Indonesia. In other word, Indonesia will be gainer in this process because of its much less tariffs compared to India.
- Finally, this study concludes that the proposed FTA between Indonesia and India is feasible and mutually beneficial in expanding bilateral economic linkages.

6.2. Recommendations

6.2.1. Further Study Recommendations

- For further research, it is suggested to explore more specific the characteristic of each product which have competitive, for example use HS six or nine digit and also sensitive sector.
- Trade depends on many other factors other than tariff barriers, it is better for further study to focus on the impact of non tariff barrier to trade between Indonesia and India.
- The study should also consider the fluctuation of the importing countries currencies against the U.S. dollar instead of bilateral exchange rate.

6.2.2. Policy Recommendations

- There are many commodities groups (44 groups) which have potential to improve in Indian market, so the government should be careful within determine the product list to be requested and offered in negotiation with India.
- The highest growth of Indonesian export to India is HS 15 (Fats, Oil and Waxes), so it is better if the government includes those commodities and it's derived such as crude palm oil to product list which will be proposed in FTA.
- With regards to bilateral FTA, serious preparations need to be addressed when entering into negotiations with a partner country. Good preparation can be achieved by research and investigation. Improving coordination between the ministries involved and rigorous preparations are crucial. Equally important is capacity building for negotiators.

LIST OF REFERENCES

- Batra. A, 2004, *India's Global Trade Potential: The Gravity Model Approach*, ICRIER Working Paper 151, December
- Bhattacharya, Swapan K, and Bhattacharyay, Biswa N, 2007, *Gains And Losses Of India-China Trade Cooperation – A Gravity Model Impact Analysis*, CESIFO Working Paper No. 1970
- Blanchard, Olivier, 2006, *Macroeconomics* (4 ed.). New Jersey: Pearson Prentice Hall
- Brief on India-Indonesia Trade and Economic Relation, 2008, Embassy of India, Jakarta
- Ekananda, Mahyus, 2002. *Pengaruh Pengaruh Volatilitas Nilai Tukar Pada Perdagangan Internasional, Analisis Empiris Terhadap ekspor Non Migas Di Indonesia*, Tesis Magister Ekonomi, Universitas Indonesia
- Feenstra, C Robert, 2004, *Advance International Trade: Theory and Evidence*, Princeton University Press, New Jersey
- Francois, F Joseph; Reinert A Kenneth, 2007, *Applied Method for Trade Policy Analysis: a Handbook*, Cambridge University Press, New York
- Gujarati, D. N., 2003, *Basic Econometrics* (4th ed.). Boston: McGrawHill.
- Irwin, A Douglas, 2005, *Free Trade under Fire* (2 ed), Princeton University Press, New Jersey
- Joelyartini, Siti Tri, 2007, *Analisis Ekspor-Impor Indonesia-Korea Selatan dalam Kerangka Liberalisasi Perdagangan ASEAN-Korea Free Trade Area (FTA)*, Tesis Magister Ekonomi, Universitas Indonesia
- Kalaba, Mmatlou, Ron Sandrey and Dirk Ernst van Seventer, 2005, *Analysis of Trade between South Africa and the EU and a Preliminary Attempt to*

Examine the Impact of the EU-SA FTA on Trade, Trade & Industrial Policy Strategies (TIPS).

Kaliappa, Kalirajan and Swapan Bhattacharya, 2007, *Free Trade Arrangement between India and Japan: An Exploratory Analysis*, ASARC Working Paper

Kien, N.T; Hashimoto, Yoshizo, 2005, *Economic Analysis Of ASEAN Free Trade Area; By A Country Panel Data*, Discussion Papers In Economics And Business 05-12, Osaka University, Japan

Krugman, P. R., & Obstfeld, M., 1994. *International Economics: Theory and Policy* (3 ed.). New York: HarperCollins.

Nachrowi, ND and Hadius Usman, 2006, *Pendekatan Populer dan Praktis Ekonometrika untuk Analisis Ekonomi dan Keuangan*, Lembaga Penerbit Fakultas Ekonomi – Universitas Indonesia; Jakarta

Report of the Joint Study Group on the Feasibility of Establishing a Comprehensive Economic Cooperation Agreement between India and Malaysia, 2007, Kuala Lumpur

Salvatore, Dominick, 2007, *International Economics* (9 ed.). United States: Hohn Willey and Sons Inc.

Widarjono, Agus, 2005, *Ekonometrika Teori dan Aplikasi untuk Ekonomi dan Bisnis*, Penerbit Ekonisisa Fakultas Ekonomi-Universitas Islam Indonesia; Yogyakarta

Yihong, Tang; Weiwei, 2006, *An Analysis of Trade Potential between China and ASEAN within China-ASEAN FTA*, University of International Business and Economics (UIBE), China

www.depdag.go.id



ANNEXES

Annex 1: GLS, Random Effect for export model

Dependent Variable: LOG(RIIL_EKSPOR?)

Method: GLS (Variance Components)

Date: 10/13/08 Time: 18:46

Sample: 2001 2007

Included observations: 7

Number of cross-sections used: 10

Total panel (balanced) observations: 70

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.951272	5.894415	1.179298	0.2425
LOG(GDP_IND?)	1.521975	0.461633	3.296938	0.0016
LOG(ER?)	-0.992561	0.734769	-1.350848	0.1814
TARIFF?	-0.036799	0.013730	-2.680175	0.0093
Random Effects				
_HS15--C	4.194531			
_HS27--C	1.586857			
_HS26--C	0.794160			
_HS40--C	-1.398377			
_HS29--C	-0.407317			
_HS84--C	-0.733864			
_HS72--C	-1.567271			
_HS08--C	0.158597			
_HS47--C	-1.237096			
_HS85--C	-1.390220			

GLS Transformed Regression

R-squared	0.912069	Mean dependent var	10.63652
Adjusted R-squared	0.908072	S.D. dependent var	1.602582
S.E. of regression	0.485898	Sum squared resid	15.58239
Durbin-Watson stat	0.850589		

Unweighted Statistics including Random Effects

R-squared	0.925037	Mean dependent var	10.63652
Adjusted R-squared	0.921629	S.D. dependent var	1.602582
S.E. of regression	0.448639	Sum squared resid	13.28430
Durbin-Watson stat	0.997734		

Annex 2: GLS, Random Effect fro import model

Dependent Variable: LOG(RIIL_IMPOR?)

Method: GLS (Variance Components)

Date: 10/30/08 Time: 14:24

Sample: 2001 2007

Included observations: 7

Number of cross-sections used: 10

Total panel (balanced) observations: 70

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.398722	14.17533	0.521943	0.6035
LOG(GDP_INA?)	2.596781	1.155793	2.246752	0.0280
LOG(ER?)	-1.837322	1.726670	-1.064084	0.2912
TARIFF?	-0.144939	0.073983	-1.959086	0.0543
Random Effects				
_HS27--C	0.269497			
_HS29--C	0.794339			
_HS72--C	0.719376			
_HS23--C	0.141729			
_HS12--C	-0.280363			
_HS52--C	0.015424			
_HS73--C	-0.084721			
_HS74--C	-1.078525			
_HS84--C	-0.640228			
_HS39--C	0.143473			

GLS Transformed Regression

R-squared	0.594661	Mean dependent var	10.62388
Adjusted R-squared	0.576237	S.D. dependent var	1.173112
S.E. of regression	0.763662	Sum squared resid	38.48986
Durbin-Watson stat	1.497685		

Unweighted Statistics including Random Effects

R-squared	0.628015	Mean dependent var	10.62388
Adjusted R-squared	0.611106	S.D. dependent var	1.173112
S.E. of regression	0.731569	Sum squared resid	35.32272
Durbin-Watson stat	1.631972		

Annex 3: Calculation of Indicative Trade Potential

No.	HS2	Description	Supply Capacity Total Idn X	Market Absorption India Import	Indicative Trade Potential	Idn X to india	Idn exp to India	Idn total export	India Import	Category
1	01	Live Animals	20.9	3.1	3.1	0.0	-	+	+	5
2	02	Meat	17.5	0.3	0.3	0.0	-	-	+	2
3	03	Fish	1,642.9	24.1	24.1	0.2	+	+	+	4
4	04	Dairy Products	127.4	25.4	25.4	0.0	-	+	-	0
5	05	Non-Edible Animal Parts	6.2	17.7	6.2	0.0	+	+	+	4
6	06	Vegetable Products	15.5	6.5	6.5	0.0	+	-	+	3
7	07	Edible Vegetables	64.3	1,010.0	64.3	1.0	-	+	+	5
8	08	Fruit And Nuts	225.8	824.2	225.8	66.8	+	+	+	4
9	09	Coffee, Tea And Spices	920.6	176.8	176.8	36.5	+	+	+	4
10	10	Cereals	8.2	1,293.2	8.2	-	-	+	+	5
11	11	Flour	21.6	14.4	14.4	0.4	+	+	+	4
12	12	Seeds And Grains	102.3	94.7	94.7	3.9	+	+	+	4
13	13	Vegetable Saps And Extracts	38.6	70.5	38.6	8.8	+	+	+	4
14	14	Vegetable Plaiting Material (Bamboo, Rattan Etc)	39.5	4.8	4.8	7.3	-	+	+	5
15	15	Fats, Oils And Waxes	6,069.9	2,263.5	2,263.5	1,046.4	+	+	+	4
16	16	Prepared Meat Or Fish	317.2	1.4	1.4	-	-	+	+	5
17	17	Sugars And Sugar Confectionery	111.8	26.5	26.5	0.3	-	+	+	5
18	18	Cocoa And Cocoa Preparations	855.0	29.8	29.8	1.9	+	+	+	5
19	19	Food Prepared From Cereals, Starch Or Milk	199.2	26.5	26.5	1.2	+	+	+	4
20	20	Preserved Vegetables, Fruits And Nuts	171.9	31.0	31.0	0.9	+	+	+	4
21	21	Miscellaneous Foods	113.3	25.6	25.6	0.1	-	+	+	0
22	22	Beverages, Spirits And Vinegar	38.7	111.4	38.7	0.2	-	+	+	5
23	23	Food Waste And Animal Fodder	169.5	86.1	86.1	4.1	-	+	+	5
24	24	Tobacco And Substitutes	339.8	22.7	22.7	0.0	-	+	+	5
25	25	Salt, Sulphur, Earths And Stone, Plaster, Lime	325.3	857.5	325.3	3.2	+	+	+	4
26	26	Ores, Slag And Ash	4,994.1	5,729.6	4,994.1	701.4	+	+	+	4
27	27	Mineral Fuels And Oils	27,619.5	61,742.8	27,619.5	679.5	+	+	+	4
28	28	Chemicals And Allied Products	473.9	2,530.8	473.9	33.2	+	+	+	4
29	29	Organic Chemical	1,883.7	6,028.5	1,883.7	78.2	+	+	+	4

No.	HS2	Description	Supply Capacity Total Idn X	Market Absorption India Import	Indicative Trade Potential	Idn X to india	Idn exp to India	Idn total export	India Import	Category
30		Pharmaceutical Products	131.8	642.7	131.8	12.8	+	+	+	4
31		Fertilizers	19.5	2,673.1	19.5	0.0	-	-	+	2
32		Tans, Dyes, Pigments, Paints, Varnishes, Inks	218.8	600.1	218.8	20.2	+	+	+	4
33		Essential Oils And Resinoids, Perfumery	215.6	187.2	187.2	5.6	+	+	+	4
34		Soap, Washing Preparations, Lubricating Prep	376.8	225.2	225.2	9.2	+	+	+	4
35		Albuminoidal Substances, Modified Starches	31.8	104.2	31.8	0.6	+	+	+	4
36		Explosives	9.2	10.8	9.2	-	-	-	+	2
37		Photographic Or Cinematographic Goods	3.6	257.6	3.6	0.1	+	-	+	3
38		Miscellaneous Chemical Products	706.6	1,409.6	706.6	74.8	+	+	+	4
39		Plastic & Plastic Articles	1,738.0	2,952.9	1,738.0	40.5	+	+	+	4
40		Rubber And Rubber Articles	5,529.1	1,114.0	1,114.0	64.2	+	+	+	4
41		Raw Hides, Skins And Leathers	140.0	369.8	140.0	10.9	+	+	+	4
42		Leather Articles And Travel Goods	160.7	46.9	46.9	0.8	-	+	+	5
43		Furskins And Artificial Fur	2.1	5.2	2.1	-	-	+	+	5
44		Wood	3,355.6	1,068.8	1,068.8	10.0	+	-	+	3
45		Cork	0.1	3.6	0.1	-	-	-	+	2
46		Plaiting Materials And Articles	70.3	0.9	0.9	0.0	-	-	+	2
47		Wood Pulp And Waste	1,126.4	638.1	638.1	52.3	+	+	+	4
48		Paper	2,805.3	1,169.3	1,169.3	42.2	+	+	+	4
49		Printed Materials	51.5	567.4	51.5	0.4	+	+	+	4
50		Silk	1.0	349.8	1.0	-	-	-	+	2
51		Wool, Animal Hair And Woven Fabric	5.3	281.5	5.3	0.0	+	-	+	3
52		Cotton	777.9	464.2	464.2	8.5	+	-	+	3
53		Other Vegetable Textile Fibres And Paper Yarn	2.7	115.4	2.7	-	-	-	+	2
54		Man-Made Filaments	1,150.3	443.5	443.5	53.2	-	-	+	5
55		Man-Made Staple Fibres	1,357.7	207.8	207.8	10.5	+	+	+	4
56		Wadding, Felt And Non-Wovens, Special Yarns	93.6	85.0	85.0	0.5	-	+	+	5
57		Carpets	40.2	48.9	40.2	1.2	+	+	+	4
58		Special Woven Fabrics And Trimmings	44.0	88.3	44.0	0.9	+	+	+	4
59		Industrial Textile Fibres	127.5	390.4	127.5	8.1	+	+	+	4
60		Knitted Or Crocheted Fabrics	88.9	100.6	88.9	1.4	+	+	+	4