THE IMPACT OF THE IMPOSITION OF ANTIDUMPING DUTY TOWARDS INDONESIA'S EXPORTS ON PAPER PRODUCTS (CASE OF INDONESIA – KOREA, 1994 – 2008)

THESIS

Submitted in partial fulfillment of the requirements for the Degree of Master of Economics

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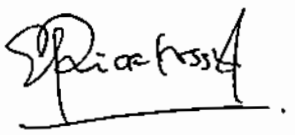

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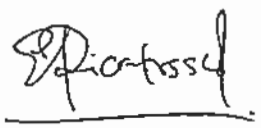

Eric Gokasi Nababan

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

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Eric Gokasi Nababan

ABSTRACT

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The establishment of World Trade Organization, obviously, has result in the alleviation of tariff barriers periodically, but it gives place on the rise of another type of barriers instead. Another type of barrier which often used is the imposition of anti dumping duties which also bear down upon exported products from Indonesia. One of Indonesia's exported products that often accused of dumping is paper products. One of dumping cases of Indonesia's export is the imposition of anti dumping duty on paper products by Korean Trade Commission. This study is going to observe the impact of anti dumping duties imposed by Korea on certain paper products toward the demand of exports from Indonesia, as well as its other determinants using OLS method with multiple regressions.

The result of this study shows that the imposition of anti dumping duties variable has a significant effect in generating a decline on demand of exports from Indonesia, even though the impact produce of this variable is smaller than other variables which used in this study. Moreover, all of control variables which used in this study are also statistically significant and have appropriate sign in affecting exports demand on paper products. In this study, real gross domestic product of Korea is shown as the most variable that affecting exports from Indonesia.

Keywords: Export demand, paper products, anti-dumping duty, Indonesia-Korea

ABSTRAK

Nama	:	Eric Gokasi Nababan
Program Studi	:	Magister Perencanaan dan Kebijakan Publik
Judul	:	Pengaruh Pengenaan Bea Masuk Anti Dumping Terhadap Ekspor Produk Kertas Indonesia (Studi Kasus Indonesia-Korea, 1994-2008)

Terbentuknya WTO secara perlahan-lahan telah mengurangi hambatan perdagangan dalam bentuk tarif, akan tetapi di lain sisi hal ini mendorong munculnya jenis hambatan perdagangan baru. Salah satu bentuk hambatan dalam perdagangan yang sering digunakan adalah pengenaan bea masuk anti dumping dan produk-produk Indonesia juga tidak terlepas dari tuduhan dumping ini. Produk Indonesia yang seringkali dituduh dumping atau dikenakan bea masuk anti dumping adalah produk kertas, salah satu contoh kasusnya adalah pengenaan bea masuk anti dumping terhadap eksport produk kertas Indonesia oleh komisi perdagangan Korea. Studi ini bertujuan untuk menganalisa pengaruh pengenaan bea masuk anti dumping terhadap ekspor kertas Indonesia ke Korea beserta pengaruh faktor-faktor utama lainnya terhadap ekspor produk kertas dari Korea.

Hasil penelitian ini menunjukan bahwa pengenaan bea masuk anti dumping akan menghasilkan pengaruh yang signifikan terhadap penurunan ekspor walaupun pengaruh yang dapat ditimbulkan lebih kecil dibandingkan faktor-faktor lain yang ada dalam penelitian ini. Sementara itu berdasarkan estimasi, faktor-faktor utama yang membentuk ekpor Indonesia seperti PDB rill, nilai tukar nominal dan harga relatif, juga memiliki pengaruh yang signifikan terhadap ekspor dengan hubungan yang sesuai dengan hipotesis. Hasil dari studi ini juga menunjukkan bahwa faktor yang paling mempengaruhi ekspor produk kertas Indonesia adalah *real gross domestic product* dari Korea.

Kata kunci : Permintaan Ekspor, produk kertas, bea masuk anti dumping, Indonesia-Korea.

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CHAPTER 1

INTRODUCTION

1.1. Research Background

Since the world's economic being more integrated, the role of trade has become more important. It magnifies the capacities of consumption in a country and creates possibilities for a country to provide scarce resources. Trade has played an important role as main source of economic growth for every economy in the world, including Indonesia[1]. It can be seen from the contribution of Indonesia's export as one of main element of trade to economic growth that incessantly increases. In 2007, the share of Indonesia's export in economic growth has increased to 47.4 % from 46.8% in 2006[2]. The raise of export is not only improving the growth of economy through the increase of gross domestic product but also creating work field that can reduce unemployment. It shows that export has a significant contribution to every nation; consequently, government of Indonesia should pay more attention in enhancing Indonesia's export.

Recently, the composition of components that builds Indonesia's export growth tends to shift. In 1980 era, the main components that build Indonesian export growth has been dominated by oil and gas sector especially natural oil, however in the recent year, the trend shows that Indonesia's export growth of oil and gas products is getting lower in line with the decrease of oil and gas production as it is unsustainable resources. In order to maintain our export growth, our government has implemented some policies to convert our main export commodity to non oil and gas commodity. For an instance, in 2006, the government of Indonesia has set a program that concern in developing the export of some main commodities, to improve Indonesia's non oil and gas export by determining ten main products, ten potential products and three services sectors known as 10+10+3 program[3].

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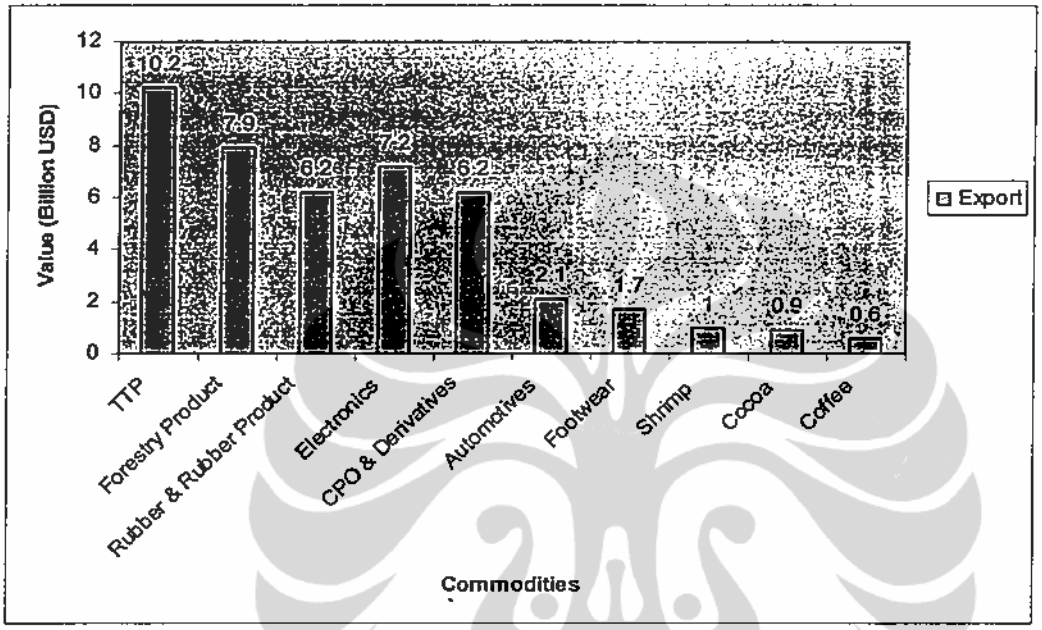
[1] Share of Indonesian total trade to GDP in 2007 was 85%

[2] Quoted from Indonesian Economic Lecture by Hatanto Reksodiputro, source of the data Central of Statistical Bureau

[3] Textile and textile products, Forestry Products, Rubber and Rubber Products, Electronics, CPO and Derivatives, Automotives, Footwear, Shirmp, Cocoa, Coffee.

One of the 10 main product is forestry products, which have a significant contribution for the total export of 10 main products with total export value US$ 7.9 billion in 2007.

Figure.1.1. Export of 10 Main Commodities (2007)



Source: Central Bureau of Statistic, Processed.

Indonesia's export of forestry products are determined by three main products which are wood and wood products, pulp and paper, and furniture. In 2007, pulp and paper sectors have the highest contribution of export among others with US$ 3,284 billion, followed by wood and wood products with total export US$ 2,646 billion and Furniture with US$ 2,008[4]. Thus pulp and paper sectors have played an important role in forestry product export and its role becomes stronger since the growth of wood and wood products export tend to decrease due to the decrease on supply which main sources rely on natural forest, the decline in competitiveness of the industry since it is still using outdated technology and the unwillingness of financial sectors to provide loan because of "sunset" perception in plywood industry.

[4] Central Bureau of Statistic, processed by MOT

Pulp and paper industry in Indonesia has a good prospect in the future considering the world consumption on pulp and paper is still increasing year by year. Besides that, Indonesian pulp and paper industry is also supported by the great number of raw material with extensive forestry area, to be converted as industrial plantation forest and suited tropical climate that make it possible to produce raw material in shorter period . Moreover, in recent years, the pulp and paper industries in some traditional exporting countries, especially Norscan (North America and Scandinavia) countries such as USA and Canada, have stopped their activities because of some problem related to high cost production and lack of raw material, which make their industries less competitive. This circumstance has generated an opportunity for the industries in other exporting countries, including Indonesia, to expand their markets and to increase the export of pulp and paper products. In addition, this situation attracts more investment in this industry. M. Lutfi, head of BKPM said that investment in pulp and paper industry raises US$ 7 billion every year and it is hoped to increase our export[5].

In Accordance with the conditions above, Indonesia's export on pulp and paper have a good opportunity to grow rapidly and it does increase. In the last five years, our export has increased incessantly. Unfortunately, this condition does not always mean that our export of pulp and paper are performing well without any barrier comes in to question. The recent trend of globalization has created borderless world which upgrading the level of competition among exporting countries. The expansive export from other exporting countries can threat our export; therefore, every country is strived to be more effective and efficient in order to have competitiveness on their products.

Besides that, our export of pulp and paper are often facing barriers from importing countries, especially for export on paper products. Since the establishment of World Trade Organization, actually, tariff barriers have been alleviated by member countries periodically. However, in the recent day, there are some tendencies to keep protecting domestic industry by using non tariff barriers. One of non tariff barrier instrument that is often used by a country in protecting their domestic industries is the imposition of Anti Dumping Duty to the imported

[5] Delivered in Indonesia-Korea Business Forum on 11th April 2008

product from other countries that accused to do dumping, selling at lower price at destination country than selling in origin country. Indonesia's export on paper also can not be excluded from the accusation of dumping by other countries; this accusation at last will obviously influence the performance of Indonesia's export on paper.

One of the up dated dumping accusation case on Indonesia paper products is the imposition of Anti Dumping Duty by Korean Trade Commission to Indonesia's export on paper products included in HS 4802. This imposition has lasted since 2003 and has been brought to Dispute Settlement Body (DSB) of WTO which decided that Korea has violated the basic rule of imposing anti dumping duty. However, until the period of this research, Korea still not comply with DSB's decisions and still imposing anti dumping duty. Furthermore, this case has become more important since Korea is one of main destination country of Indonesia's export on paper products which included in HS 4802. In the last three years before the imposition of anti dumping duty, Indonesia's export to Korea always reside on big five position in terms of volume of export[6].

1.2. Research Questions

Based on the overview above, a detailed study is needed to analyze Indonesia's export of paper, particularly in the relation with the accusation of dumping. There are two research questions to be proposed in this paper:

1. Does the imposition of anti dumping duty on Indonesia's paper products affect its export performance?
2. What are others determinant factors that affecting Indonesia's export of paper to Korea?

1.3. Research Objectives

Based on background of the study above, there are some objectives to be reached in this study, which are:

1. to analyze the effect of the imposition of anti dumping duty on Indonesia's export of paper products;

[6] See appendix 7

2. to analyze the factors that determine the demand on Indonesia's export of paper products to Korea

1.4. Research Coverage

This research is focused on analyzing the effect of the imposition of anti dumping duty toward the export of Indonesia's paper products to Korea. In this research, the paper products used are limited only on paper products that has been imposed anti dumping duty by the government of Korea which are included in HS 4802 (Paper and Paperboard, Uncoated, For Writing, Printing etc., In Rolls or Sheet; Handmade Paper and Paperboard) and will be shortly named as paper products in this study.

The study will use a secondary data and information regarding paper products and also consist of macroeconomic data such as gross domestic product of partner countries, nominal exchange rate, and relative price. The data used in this research is a time series data, which taken quarterly from period of 1994 until 2008.

1.5. Research Hypothesis

In this research, the demand of Indonesia's export is determined by several factors, which are gross domestic product of partner countries, nominal exchange rate, relative price, and anti dumping duty variable.

The imposition of antidumping duty is considered as another form of tariff that creates "extra expenses" and lowers the competitiveness of a product sold in importing country which in turn will decline export. Therefore, the imposition of anti dumping duty, hypothetically, is expected to have a negative impact on export.

In contrary with the imposition of antidumping duty, the gross domestic product of importing country is expected to have a positive relation with the amount of export volume. Gross domestic product is reflecting the size of market in the importing country, the larger the market size the larger possibility to export.

Another independent variable used in this research is nominal exchange rate, which expected to have a positive effect to export. An increase on the

exchange rate of importing country currency in terms of exporting country currency asserts depreciation in the exporting country currency. Depreciation on exporting country currency will make as if the product from exporting country became cheaper which in turn give importing country a possibility to purchase more which leads to the increase of export.

The last independent variable used in this research is relative price. This variable is expected to have negative relation with export. The higher of the price will guide export to the lower level.

1.6. Organization of The Thesis

In order to facilitate the understanding of this thesis, writer gives an early brief description about the content of each chapter of the thesis.

CHAPTER 1: INTRODUCTION

This part is an introduction chapter. It will discuss about background of the problem which explain about the recent condition of research object, problem statement which is the problem observed, objective of the research to answer the problem observed, research coverage which specify research's object, thesis hypothesis and the organization of thesis.

CHAPTER 2: LITERATURE STUDY

This chapter consists of several theories which underlie writer in completing this research. The theories used in this research include international trade theories, export demand theory, and theory related to dumping.

Moreover, this part also consists of several literature studies about the previous empirical research which related to the topics in this thesis.

CHAPTER 3: PAPER INDUSTRY PROFILE IN INDONESIA

This chapter contains of general descriptions about the condition of Indonesia's paper industry and another related industry (pulp industry). This part tries to make a highlight about the development of domestic industry especially which regards on production, consumption, domestic industry and trade.

Moreover, this part also describes about the recent condition or problems that faced by paper industry in Indonesia.

CHAPTER 4: RESEARCH METHODOLOGY

This chapter will describe about how the problem being analyzed. This chapter consists of specification of models, data source and description, and analysis method.

CHAPTER 5 : RESULTS AND ANALYSIS

In this chapter, writer not only analyze the data by using available method in Chapter 4 but also describe and discuss both result of regression and analysis of the result in order to achieve the objective of the research.

CHAPTER 6: CONCLUSION AND RECOMMENDATION

This chapter consists of the conclusion based on the analysis on Chapter 5, policy recommendation which can be used as an input for policy makers and also suggestion for other researchers in the future.

CHAPTER 2
LITERATURE STUDY

2.1. Theoretical Background

2.1.1. International Trade Theory

In the modern world today, every country will face difficulties to comply its needs by themselves, because of the lack of resources they have, so that trade is needed among all countries. Trade among countries or international trade has increased in the last decade because these countries realize that international trade is beneficial. With international trade, a country would reach gain from trade, that is, when countries sell goods and services to each other, this exchange is almost always to their mutual benefit. International trade also has caused the exchange of goods and services, the movement of resources and capital across the boundaries or territories.

International trade is a branch of economics, which together with international finance, forms the larger branch of international economics. In international economics, it is used the same fundamental methods of analysis as other branches of economic. International trade analysis focuses primarily on the real transaction in the international economy, that is, on those transactions that involve a physical movement of goods or a concrete commitment of economic resources.

Krugman And Obstfeld (2006) explain that there are two basic reason underlying international trade among countries, each of which directed to obtain gain from trade. First, countries trade because they are different one and another, each country can get advantage from the differences. Second, countries trade because of the existence of target to achieve economics of scale in production. That is, if each country specialize their production only in limited range of goods in which has comparative advantage , it can produce each of these goods at a larger scale and hence more efficiently than if it tried to produce everything. In Reality, most of the pattern of trade reflecting both of those reason above.

There are several important theories that explain how trade happen and how differences among countries give trade a place to rise and create gain for

each of them. Some of those theories, which become a basic theory of international trade theory, are absolute advantage theory by Adam Smith, comparative advantage theory by David Ricardo and factor-proportion Theory by Heckscher-Ohlin.

2.1.1.1 Absolute Advantage Theory

Mercantilist believed that one nation could gain on trade only at the expense of another nation (sum-zero game) and advocated strict government control of all economic activity and trade. On the contrary Adam Smith believed that all nations would gain from free trade.

According to him, free trade between two nations is based on absolute advantage. He had used the principle of absolute advantage to show how a country can benefit from trade if the country has the lowest absolute cost of production in a good. It means, when one nation is more efficient than (or has an advantage over) another in the production of one commodity but less efficient than (or has an absolute disadvantage with respect to) the other nation in producing a second commodity, then both nations can gain by each specializing in the production of the commodity of its absolute advantage and then traded its output with the other nations for the commodity of its absolute disadvantage (Salvatore, 2007). On the other words we can conclude that countries should specialize in and export those commodities in which they had an absolute advantage and should import those commodities in which the trading partner had an absolute advantage.

By this process, Smith argument has turned down Mercantilist's perception of trade, because the absolute advantage theory indicated that both countries could benefit from trade and that trade was not a zero-sum game as the Mercantilists had believed. In reality, trade was mutually beneficial and was a positive-sum game (Appleyard, 1998). Moreover, free trade would cause the world resources to be utilized in the most efficient way and would increase the output of both commodities which means maximize the world welfare.

However, in recent day, the use of absolute advantage is not quite relevant anymore and only can explain a very small part of world trade, because it almost

impossible to find two countries that each of them has exactly an absolute advantage between them to have trade.

2.1.1.2 Comparative Advantage Theory

David Ricardo came with his comparative advantage theory to answers the demerit of absolute advantage theory. The principle of comparative advantage shows that the important thing is not the absolute cost, but the opportunity cost of production. A country has a comparative advantage in producing a good if the opportunity cost of producing that good in terms of other goods is lower in that country than it is in other country. This difference in opportunity cost will create a possibility of mutually beneficial trade among countries. (Krugman, 2006)

The essence of Ricardo's argument is that international trade does not require different absolute advantages and that it is possible and desirable to trade when comparative advantages exist. A comparative advantage exists whenever the relative labor requirements differ between the two commodities. This means simply that, when the relative labor requirements are different, the internal opportunity cost of the two commodities is different in the two countries; that is, the internal price ratios are different between the two countries prior trade. This difference in opportunity cost will create a possibility of mutually beneficial trade among countries. (Appleyard and Field, 1998)

Comparative advantage theory is based on a several number of simplifying assumption, which are : (1) trade involved only two country and two commodities. (2) labors are completely mobile between alternative uses within a country but completely immobile between countries. (3) The level of technology is fixed for both countries. (4) Cost of production are constant (5) There are no internal and external transportation cost (6) Free trade condition, no trade barriers (7) Perfect competition economy (8) The labor theory of value.

The conclusion that can be made from the comparative advantage risen by David Ricardo is trade between two countries will could last although there is only one country that has absolute advantage as long as each country is different in cost comparative advantage (labor efficiency) and productivity comparative advantage (labor productivity).

2.1.1.3 Heckscher-Ohlin Theory

The assumption of classical theory which only consider labor productivity as the source of comparative advantage is not sufficient to explain recent condition of trade. because there are just part of trade activities which caused by the difference of labor productivity, there are still another part that caused by another factors of production owned by a country. Several modern theory of international trade emerge as the improvement of classical theory,

The first modern theory of international trade subject was proposed by Eli Heckscher and Bertil Ohlin, known as Heckscher - Ohlin Theorem (H-O Theory). Differ from the classical theory (absolute advantage and comparative advantage theorem) which expressing comparative advantage as the result of the difference in the productivity of labor, the H-O theory is more emphasizing on the relevancy between the difference of proportion of factors endowment in each country and difference of factors proportion used in producing good/commodity as the basic of comparative advantage, therefore this theory is also known as factor-endowment theory or factor-proportion theory. (Salvatore, 2006)

This Theory state that, factor endowment has an important role in determining the proportion of production factors which will be used in producing commodity, moreover, factor endowments are differ considerably across countries. Differences in factor endowment proportion will create different relative factor prices in each countries, the more abundance the factor the lower its relative price. Therefore, the proportion of factors used in producing a commodity will differ in each country although the kind of factors of production are the same, it is depend on factor endowment. With identical technology in both countries, constant return to scale and a given factor-intensity relationship between final products, the country with abundant capital will be able to produce and export relatively more of the capital-intensive goods, while the country with abundant labor will be able to produce and export relatively more of the labor-intensive good.

Differences in relative prices of factors and the proportion of factors used, will deliver different set of opportunity cost in each country and it will generate

pre trade. Moreover, differences in relative commodity prices as the immediate cause or main determinant of comparative advantage, consequently, there is a basis for trade, and each country will export the product it can produce less expensively. (Appleyard,1998)

The conclusion of Heckscher-Ohlin theorem can be stated as follows: A nation will specialized of and export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor. In short, the relatively labor-rich nation export the relatively labor-intensive commodity and imports the relatively capital-intensive commodity. (Salvatore, 2006) In Indonesia case, Indonesia will export labor-intensive products (the unskilled workers category) or from raw materials that were abundant in the country, like oil, coal, forestry products and agricultural commodities, while importing capital-intensive commodity like cars, machine, etc.

2.1.1.4 Export Theory

Vent for surplus theory said if a Country would export products that were made if excess supply (the stock surplus) happened in the domestic market. As it known that the stock surplus could happen because of various matters, for example domestic consumption decreased as a result of the income of the community descended or because of the kinds of thing was not relevant to the community in this Country, or was banned by the government because anything; while the volume of the production still same. The stock surplus could also happen resulting from the big harvest (for agricultural commodities), whereas domestic request did not improve.

In market economic system demand and supply has an important roles, even in export and import. Theoretically, factors that affect export can be seen from two different angles which are demand side and supply side.

It is in line with the research by Malian (2004) which stated that the main determinants of agricultural export can be viewed from the demand and supply side. From the demand side, export are mainly affected by the market price of the

exported product and real exchange rates, while from the supply side it is affected by the market price of the exported product, domestic price, real exchange rates, production capacity, and domestic policy.

While according to Blanchard (2006), export is the part of foreign demand that falls on domestic goods. Export depends on two main factors which are foreign (importing countries) income and real exchange rate. Higher foreign income means higher foreign demand for all goods, both foreign and domestic. So, higher foreign income leads to higher export. The higher the price of domestic goods in terms of foreign goods, the lower the foreign demand for domestic goods. In other words, the higher the real exchange rate, the lower export.

2.1.2. Dumping Theory

One of the most impressive and persistent trends of the last several decades is the rapid expansion of international trade, largely enabled by the sharp decrease in many traditional forms of barriers to trade, most importantly tariffs and quotas over the past half-century.

In contrast with the reduction of tariffs and quotas, another type of protectionism which is known as Non-Tariff Barrier (NTB) have been growing matter for international trade and neutralized the reduction in tariff. These include contingent protection measures such as safeguards, antidumping and countervailing measures. An additional set of protectionism measures (which we may call non traditional) include administrative measures, invasive inspection of containers, the misuse of phitosanitary and other standards for protection, etc. (Ronald Fischer, 2006, p. 51)

This part will described more about theories related to dumping and antidumping as one of non tariff barrier of trade, including the definition of dumping, the definition of antidumping measures, the reason for dumping, the effect of dumping, determination of dumping and determination of injury.

2.1.2.1. The Nature of Dumping

Dumping is a kind of price discrimination practice, which usually happened in imperfect competitive market. It is a pricing practice in which a firm

charges a lower price for exported goods than domestic goods sold in domestic market. Since international markets are also imperfectly integrated due to both protectionist trade barriers and transportation cost, dumping has became the most common form of price discrimination in international trade.

Based on description above, it can be concluded that dumping could happen only if two conditions met. First, there exists an imperfect competitive industry, in which firms act likely as a price setters. Second, markets must be segmented, in which domestic consumers can not easily buy goods intended for export.

By doing dumping, firms could still get a profit, even though they sell goods in foreign market with lower price and even sometimes dumping can be seen as profit-maximizing strategy. Profit still can be gain due to the difference on marginal revenue from the extra unit sold at domestic market and foreign market. This thing occurs as a result of the difference in the responsiveness of sales to price in foreign and domestic markets.

Figure 2.1. Dumping

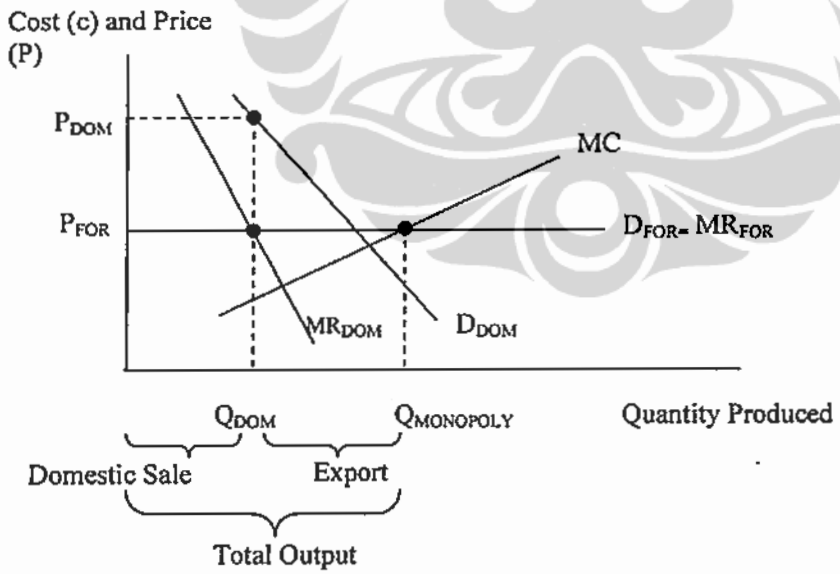


Figure 2.1. shows a monopolist that faces a demand curve D_{Dom} for domestic sales, but which can also sell as much as it likes at the exort price P_{for}. Since an additional unit can always be sold at P_{for}, the firm increases output until the marginal cost equals P_{for}; this profit-maximizing output is shown as $Q_{Monopoly}$. Since the firm's marginal cost at $Q_{Monopoly}$ is Q_{for}, it sells output on the domestic market up to the point where marginal revenue equals to P_{for}; this profit-maximizing level of domestic sales is shown as Q_{Dom}. The rest of its output, $Q_{Monopoly}$-Q_{Dom}, is exported.

The price at which domestic consumer demand Q_{Dom} is P_{Dom}. Since $P_{Dom} > P_{for}$, the firm sells at dumping price (Krugman and Obstfeld, 2006).

2.1.2.2. Definition of Dumping

There are numbers of practices of international trade to influence trade flows which are considered as unfair practices, and one of them is dumping. Dumping is considered as an "unfair" trading practice because it distorts free market economy principles and can cause material injury to industries and put employment at risk by applying a discriminatory price. It is happened when the exporters are selling products in importing country at a price below the price at which the same product is sold in exporting country. By implementing dumping practice the exporter is deemed to get counterfeit rather than a genuine comparative advantage over the industry in importing country.

For deeper understanding, some definition of dumping are presented below:

a. Definition by John H. Jackson (2002, p.681)

   Dumping is broadly defined as exporting at prices below those charged on the domestic market (or, if none, on a third-country market) or at prices insufficient to cover the cost of good sold.

b. Definition on Article VI GATT

   Dumping is defined in the Agreement on Implementation of Article 6 of the GATT 1994 (The Anti-Dumping Agreement) as the introduction of a product into the commerce of another country at less than its normal value, if the export price of the product exported from one country to another is less than

the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the exporting country

c. Definition by Krugman and Obstfeld (2006)

According to Krugman, the most common form of price discrimination in international trade is dumping.

Dumping is a pricing practice in which a firm charges a lower price for exported goods than it does for the same goods sold domestically, dumping is usually considered as an unfair practice.

Dumping can occur only if it complies with two condition. First, the industry must be imperfectly competitive, so that the price is set by firm not by market price. Second, market must be segmented, so that domestic consumer can not easily change to buy goods intended for export.

2.1.2.3. Reason Of Dumping Practices

There are many reasons why an exporter would dump. First, exporter may want to get rid of surplus stock. Second, exporter wishes to enter new market or to gain market share. Third, to avoid a greater losses and, fourth, producer try to established itself as a monopoly and decide to do predatory dumping which is usually done to drive competitors off the market and to secure a foothold in a foreign market, or to hinder foreign competition

2.1.2.4. The Effect of Dumping

a. Position of the dumper and the exporting country

For the exporting country, dumping can generate high economic growth and high production level because by doing dumping domestic industries may develop greater capacities than the size of national market. Moreover, dumping can be used as tool to achieve a high trade surplus and possibly dominant positions in the industrial sectors concerned.

Dumping can neutralized the discrimination of price between export price and home price and generates advantages for individual exporter which create profitable home market. A profitable home market can provide standard of operation which may be used to generate lower prices of export without

market segregation. The low export price will direct to sustainable sales in the future which in turn lower the costs of production as an advantage which beneficial for both export and home sales. (Jackson and Sykes, 2002)

b. Effects for the importing country

A domestic industry facing dumped import will suffer more, it could lose its market share, and consequently, it has to reduce its domestic prices to equal level with dumped import prices which in turn will increase the cost and looses to the industry in importing country.

The impact of dumping in the importing country will be the inverse of the effects in exporting country. There may be short time advantage through lower price of imports but it can create more injury to domestic industry through the lost of capacities, lost in investments, the loss of technology especially in strategic sector, decline on market share and other social cost of unemployment and the elimination of industries. (Jackson and Sykes, 2002)

2.1.2.5. Anti Dumping Duty

Since dumping practices have possibility generates genuine (material) injury for industry in the importing country, the government of importing country can take action against dumping in order to protect their domestic industries. The action against dumping has been "legalized" by World Trade Organization (WTO) through the article 3 in paragraph 8 of Anti-Dumping Agreement (ADA) which recommended the government of importing country to impose anti-dumping duty when injury is threatened by dumped imports. Actually, the imposition of this duty would normally break the GATT principles on binding a tariff and not discrimination among trading partners because essentially anti-dumping duty is a defensive instrument in form of extra tariff/import duty on the particular product from the particular exporting country which design to counter the effect of other nations' unfair trade practices.

Based on Article 6 of GATT, dumping is to be condemned if it causes or threatens material injury to an established industry in importing country or materially retards the establishment of a domestic industry. It means that Anti-dumping powers should never be used as a means of protection. They should be

limited to such exceptional situations where they are absolutely necessary to prevent injurious dumping. Consequently, in interest to impose anti-dumping duty, the government of importing country not only has to be able to prove that dumping is exist (Determination of Dumping) but also has to show that dumping is generate injury to domestic industry (Determination of Injury) and there must be a causal link between the two.

In proving whether dumping occur or not, there should be a calculation on the basis of a "**fair comparison**" between ***normal value*** which is the price of the imported product in the "ordinary course of trade" in the country of origin or export and ***export price*** which is the price of the like product in the country of import. A product is considered to be dumped if the price of the product exported is less than the normal price.

The calculation of normal value of the product can be based on several methods. The main base is the using the comparable price, in the ordinary course of trade, for the like product in the exporter's domestic market. When domestic price is not available, we can use the highest price charged by the exporter in any third country, or the calculation can be based on the combination of the cost of production, reasonable additional selling expenses and normal profit margins.

In calculating the export price to compare with the normal value, we should consider several conditions when there is no original export price. First is the case where export price unreliable because of the existence of compensatory arrangement. In this case, export price can be constructed based on the product's price of first resold to an independent buyer. Second is the case where products are not imported directly from the country of origin but are exported from an intermediate country. In this case, determination of export price can be based on the price at which the products are sold from exporting country to importing country.

The comparison between normal value and export price should be done fairly. The basic requirements for a fair comparison are that the prices being compared are those of sales made at the same level of trade, normally the ex-factory level, and of sales made at as nearly as possible the same time.

One important condition, that has to be fulfilled, to determine dumping and material injury is the "like product" condition. Like product is defined in the Agreement as "a product which is identical, i.e. alike in all respects to the product under consideration or, in the absence of such a product, another product which, although not alike in all respects, has characteristics closely resembling those of the product under consideration". The decision regarding the like product is important because it is the basis of determining which companies constitute the domestic industry, and that determination in turn governs the scope of the investigation and determination of injury and causal link.

Proving the extent of dumping on a product is not enough. Anti-dumping measures can only be imposed if the dumping is causing injury to the industry in the importing country. Therefore, a detailed investigation is needed to find out the determination of injury. Based on The Anti-Dumping Agreement the term "injury" defined as (i) material injury to a domestic industry, (ii) threat of material injury to a domestic industry, or (iii) material retardation of the establishment of a domestic industry.

A determination of injury must be based on positive evidence and involve an objective examination of (i) the volume of dumped imports and the effect of the dumped imports on prices in the domestic market for like products, and (ii) the consequent impact of the dumped imports on domestic producers of the like product.

In case of the volume of dumped imports, a significant increase in the dumped imports must be considered by investigating authorities, either in absolute terms or relative to production or consumption in the domestic industry. While in the relation with the prices of like products, investigating authorities should consider whether there has been significant price undercutting by the dumped imports compared to the price of a like product of the importing Member. Moreover it is also required to consider whether the effect of dumped imports is "otherwise" to depress prices to a significant degree, or to prevent price increases.

In examining injury, as the impact of the dumped imports, suffered by domestic industry concerned, evaluation of all relevant economic factors and indices should be conducted. These evaluation including actual or potential

declines in sales, profits, output, market share, productivity, return on investments, utilization of capacity, actual or potential effects on cash flow, inventories, employment, wages, growth, ability to raise capital or investments, and the magnitude of the margin of dumping.

As have said above, the imposition of anti-dumping duties requires the existence of causal relationship between the dumped imports and the injury to domestic industry. It must involved the examination of all relevant evidence including other factors beside dumped imports which may causing injury, such as changes in demand pattern and development in technology.

At last, a determination of injury shall be based on facts and not merely on allegation and conjecture. Any changes of situation which would cause injury must be foreseen and imminent clearly. Moreover, the application of anti-dumping measures shall be considered and decided with special care to avoid the misuse of anti-dumping duty as a tool to impede trade flow.

2.2. Previous Empirical Study

In this study, author has doing some literature study on previous researches regarding to analysis on demand of export which conducted by some researchers and use it as references. This literature study includes the study conducted by Khumar and Dhawan, Malik, Christian Moran and Thomas J. Prusa:

2.2.1. Christian Moran (1988)

Christian Moran has researched export of manufacture industry in 15 developing countries as follows : Brazil, Argentina, Chile, Cote d'Ivore, Indonesia, India, South Korea, Mexico, Peru, Portugal, Senegal, Thailand, Turkey and Yugoslavia between 1965-1983.The equation for long term equilibrium are:

Export supply equation:

$$\log X_s^t = \alpha_0 + \alpha_1 \log(Px/Pt)_t + \alpha_2 \log(Ph/Pt)_t + \alpha_3 \log Y_t^y + v_{1t} \quad \ldots\ldots (2.1)$$

Export demand equation:

$$\log X_t^d = \beta_0 + \beta_1 \log(PX/PX^w)_t + \beta_2 \log Y_t^w + v_{2t} \quad \ldots\ldots (2.2)$$

It hypothesized that : a1>0, a2<0, a3>0, B1<0, B2>0

Where:

X_t^s : Export Supply of Manufacture Industry

X_t^d : Export Demand of Manufacture Industry

PX : Export Price Index of Manufacture Industry

PT : Domestic Price of Tradable Goods

PH : Price of Non-Tradable Goods

Y^* : Domestic Production Capacity Index

PX^W : World Price Index of Manufacture Industry

Y^W : World Demand Index on Export Goods

In short term equilibrium model, Moran used two models. In model A, function of supply and demand has included short term equilibrium. While model B was assumed that if there is a change, demand will adjust to all these changes and will be finish in one period of time. Producer in one period could only adjust partly of all these change. Hence, buyer could change their purchasing from a state easily, while producer is not aware on the changing of exogenous variable due to the mobile factor from/to manufacture sector. In other word, in model B, demand function was not including short term equilibrium, while supply function did.

The result of those regressions are: For the supply function the result shows that both in long term and short term, price has a significant effect to export supply and domestic production capacity also has a similar effect on supply of manufacture industry. In the demand function all variables have a significant effect to export demand and the expectation sign were also proper. The research concluded that that demand of export are significantly affected by relative price and economic activity in global perspective.

2.2.2. Khumar and Dhawan (1994)

The objective of this research is to analyze the impacts of fluctuation of exchange rate towards the Pakistan's trade to several partner countries which are

United States, West Germany, United Kingdom, and Japan. This research is using panel data method to analyze the data which taken from 1974 to 1985. The model used in this research is stated as follows:

$$X_i(t) = \alpha_{i0} + \alpha_{i1}Y(t) + \alpha_{i2}[PX_i(t)/PD_i(t)] + \alpha_{i3}E_i(t) + \alpha_{i4}R(t) + \mu_i(t) \ldots\ldots\ldots\ldots (2.3)$$

where:

$X_i(t)$: Export Volume to Partner Countries

$Y_i(t)$: Real Income of Partner Countries

$PX_i(t)$: Export Price

$PD_i(t)$: Domestic Wholesale Price Index

$E_i(t)$: Nominal Exchange Rate (domestic currency in terms of foreign countries)

$R_i(t)$: Risk of Exchange Rate

$\mu(t)$: Error Term

In this research, the estimation is done separately for each trade partner country, to find out the effect of exchange rate fluctuation and the effect of other determinant variables on the export demand to each trade partner countries without *"The Rest of the World Effect"*. Conclusion of Khumar and Dhawan research (1991) that is:

a. Model specification using log linear generates better result rather than linear model.
b. There are significant result of the fluctuation of bilateral exchange rate which shows that fluctuation of bilateral exchange influence export volume to all partner countries except United Kingdom.
c. Fluctuation of real exchange rate is more significant compare to nominal exchange rate.

2.2.3. Malik (2004)

The research done by Malik is aimed to observe the export of Pakistan's textiles and clothing in international market after the establishment of WTO, both the export from demand and supply side by using simultaneous model. The model used by Malik in his research are stated as follows:

$$\log X_t^d = \alpha_0 + \alpha_1 \log PX_t + \alpha_2 \log REER_t + \alpha_3 \log WY_t + \mu_t \quad \text{.....(2.4)}$$

$$\log X_t^s = \beta_0 + \beta_1 \log PX_t + \beta_2 \log PD_t + \beta_3 \log NER_t + \beta_4 T + \mu_t \quad \text{.....(2.5)}$$

Where:

X_t^D : Number of Export Demand on Textile

PX_t : Export Price of Textile

$REER_t$: Real Effective of Exchange Rate

WY_t : World Income

X_t^S : Number of Export Supply on Textile

PD_t : Price of Domestic Textile

NER_t : Nominal Exchange Rate

T : Time Trend

There are several points that can be taken as conclusion from this research, which are:

From the demand side, it is conclude that there exists a stable long run relationship between export demand and its price, real effective exchange rate and world economic conditions. Moreover, export price is the only variable that significantly affects the export demand in 90% level of significant, while the other variables which are world income and real exchange rate were found not significant in affecting export demand.

From the supply side, all of the variables including export price, nominal exchange rate and domestic price have no significant effects to export supply. Moreover, all variables have positive relation with export supply except the domestic price.

2.2.4. Kusumadewi (2007)

The objective of the research done by Kusumadewi is to analyze several variables that determining Indonesia's export demand on textile and textile products to several partner countries. In analyzing Indonesia's export of textile and textile product, including final goods and intermediate goods, this research used panel data method with quarterly data from 2000-2005. The model used in this research is stated as follow:

$$\log X_{it} = \alpha_0 + \alpha_1 \log RER_{it} + \alpha_2 \log[PX_{it} / WPI_{it}] + \alpha_3 \log GDP_{it} + \mu_{it} \quad \text{..... (2.6)}$$

Where:

X_{it} : Export Volume

RER_{it} : Riil exchange rate of partner countries

PX_{it} : Export Price in partner countries

WPI_{it} : *Wholesale price index* (base year 2000)

GDP_{it} : Real Gross Domestic Product of partner countries

μ_{it} : Error term

The estimation result shows that for all of independent variables (i.e. gross domestic product of partner countries, real exchange rate and export price) have significant effect in determining Indonesia's export. GDP and real exchange rate variables positively affect export, while relative price variable has negative effect to export of final goods.

2.2.5. Prusa (2001)

This research is focused in observing the spread of the use of anti-dumping measures by countries and the impact of Anti-Dumping (AD). In estimating the effect of AD, this research used panel data method with data taken from United States since it has filed more AD cases than any other user with 700 AD petitions between 1980 and 1994. Moreover, the impact of AD was directed to United States imports from named country (countries named in the AD petition) and non-named country (countries not named in the AD petition).

The result of this research shows some conclusion:

1. Over the past decade the number of countries using AD has dramatically increased. It is now the case that new users more actively pursue AD investigations than traditional users such as the United States and the European Community.
2. AD has a significant impact on import trade from named-country. An affirmative AD determination reduces the value of imports around 50% in the first three years, while the settlement agreement will generates imports falls about 60%. Furthermore, even though the AD case was rejected, it still causing on imports fall by 15-20%. It is also found that, AD has a larger impact on quantities than on prices
3. AD case will also generate effects for non-named countries. It is found that non-named countries respond to the reduction in trade by named countries by increasing their sales to the U.S. market which obviously will rise the imports from non named country

Table 2.1. Previous Study

No.	Author	Title	Analysis Method	Result
1.	Christian Moran	"A Structural Model for Developing Countries' Manufactured Export"	Simultaneous Model	This research observed the export of manufactured industry in 15 developing countries from both demand and supply side. The result is stated as follow: • For the supply function the result shows that both in long term and short term, price has a significant effect to export supply and domestic production capacity also has a similar effect on supply of manufacture industry. • In the demand function all variables have a significant effect to export demand and the expectation sign were also proper. The research concluded that that demand of export are significantly affected by relative price and economic activity in global perspective.
2.	Khumar and Dhawan	*"Exchange Rate Volatility and Pakistan's Export to The Developed World*, 1974-1985"	PanelData Method	Conclusion of Khumar and Dhawan research (1991) that is: • Model specification using log linear generates better result rather than linear model. • There are significant result of the fluctuation of bilateral exchange rate which shows that fluctuation of bilateral exchange influence export volume to all partner countries except United Kingdom. • Fluctuation of real exchange rate is more significant compare to nominal exchange rate.
3.	Afia Malik	"Demand for Textile and Clothing Export of Pakistan"	Simultaneous Model	The conclusion can be taken from the research are: • From the demand side, it is conclude that there exists a stable long run relationship between export demand and its price, real effective exchange rate and world economic conditions. Moreover, export price is the only variable that significantly affects the export demand in 90% level of significant, while world income and real exchange rate were found not significant in affecting export demand. • From the supply side, all of the variables including export price, nominal exchange rate and domestic

				price have no significant effects to export supply. Moreover, all variables have positive relation with export supply except the domestic price.
4.	Kusumadewi I R,	"Factors that Affecting Indonesia's Export Demand on Textile and Textile Product (2000-2005)	Panel Data Method	The estimation result shows that all of independent variables (i.e. gross domestic product of partner countries, real exchange rate and export price) have significant effect in determining Indonesia's export. GDP and real exchange rate variables positively affect export, while relative price variable has negative effect to export of final goods.
5.	Thomas J. Prusa	"On the Spread and Impact of Anti-Dumping"	Panel Data Method	The research conclude that: the number of countries using AD has dramatically increased. AD has a significant impact on import trade from named-country, the settlement agreement will generates imports falls about 60%. AD case will also generate effects for non-named countries, will rise the imports from non named country.

CHAPTER 3
PAPER INDUSTRY PROFILE IN INDONESIA

3.1. Paper Industry Profile

The history of paper industry in Indonesia is about to begin in 1923 when the first paper mills was established in Padalarang, and followed by the second mills in Probolinggo. Nowadays, there have been great technological developments in the paper industry, which have accelerated in recent years. The mills have been continuously modernized, and sophisticated new technology has been applied, it has delivered paper industry as one of the most prospective industries in the country over the last decade. This industry always shows significant progress either on export or productions year on year and become one of main contributor of non oil and gas export. Besides development in technological, actually, the most important assets of Indonesia's pulp and paper industry is the abundant resources of raw material in producing pulp and paper which is woods. Indonesia is well known as a country with huge areas of tropical rain forests, which approximately 84 million HA or 60 %[7] of Indonesia land mass that is very important in providing raw material abundantly for pulp and paper industry. It makes the industry of paper considered as a potential industry to be developed in the future.

Furthermore, the incessant progress of this industry peculiarly also comes as a result of several factors which are the increment of world price and the rise on demand of paper both in domestic and world market.

Based on the condition above, the Government of Indonesia has specified this industry as one of the strategic industry for state income acquirement and has been set as one of 10 main export commodities.

3.1.1. Paper Production

Paper industry in Indonesia continues experience an improvement from year to year, this condition reflected from the incessant accretion of domestic production on paper production.

[7] Source: Department of Forestry, 2003

In the last 5 years, paper production in Indonesia has been growth significantly. During 2002 to 2006 there has been 22.7% rise in production of paper or 1.5 million ton from 7.2 million ton in 2002 to 8.8 million ton in 2006 with positive production trend with average of 4 % production growth each year. Meanwhile, average yearly production is 7.8 million ton. With this amount of production, domestic production can still satisfy domestic consumption yearly.

The increased of production is stimulated by some factors (which came from) both demand and supply side. The increased of demand on paper both in domestic market and world market is the main factor from demand side. While from the supply side, there are some important factors. First, the utilization of installed capacity in these industries which is still has not yet reached its maximum capacity; there are gap between installed capacity and total production that make it still possible for industries to improve their production. As shown on the table, paper production from 2002 until 2004 still experiencing an increase, even though there is no additional installed capacity in paper industry at that time, which is stagnant at 10.013 million MT. It shows that the production still not reach maximum capacity and it has a possibility to be increased more. The average of utilization of installed capacity is around 74% in the last 10 years. The utilization of installed capacity improved every year with the highest level of utilization happened in 2006 with 84.27%.

Second, the production of paper is affected by the availability of its raw materials. The raw materials for paper mills are pulp from their own pulp mills (integrated), imported pulp and waste paper from local recovery as well as imports. In the last decade, the government policy regarding the development of forest area that allowed to be converted become forest plantation (HTI) also result in the increase of domestic production, since HTI is needed to provide woods as raw material in making pulp which is the main source for paper industry. The total amount of forest plantation has reached 9 million Ha in 2007 and will be increased to 15 million Ha in 2013. From that amount, forest plantation for pulp has reach 1.5 million Ha in 2004[8].

[8] Source: Department of Forestry, 2007

Third, the increase of domestic production has also benefited from the increased of foreign direct investment in recent years.

Furthermore, in annual review released by Pulp and Paper International Magazine (Juli 2003), Indonesia is at 12th rank in pulp production. The outlook of paper production in Indonesia from 1997 until 2006 can be shown on the table as follows:

Table.3.1. Indonesia's Paper Production (2006)

Year	Paper		
	Capacity	Production	Utilization (%)
1997	7,159,290	4,821,600	67.35
1998	7,479,530	5,487,260	73.36
1999	9,077,180	6,720,560	74.04
2000	9,096,180	6,849,000	75.30
2001	9,851,680	6,951,240	70.56
2002	10,013,180	7,212,970	72.03
2003	10,013,180	7,267,880	72.58
2004	10,013,180	7,679,820	76.70
2005	10,019,180	8,207,620	81.92
2006	10,506,180	8,853,280	84.27

Source: Indonesian Pulp and Paper Association, processed.

The above figures cover Newsprint, Writing & Printing, Sack Kraft, Kraft Liner & Fluting, Boards, Cigarette Paper, Wrapping Paper, Tissue paper, and Other Paper.

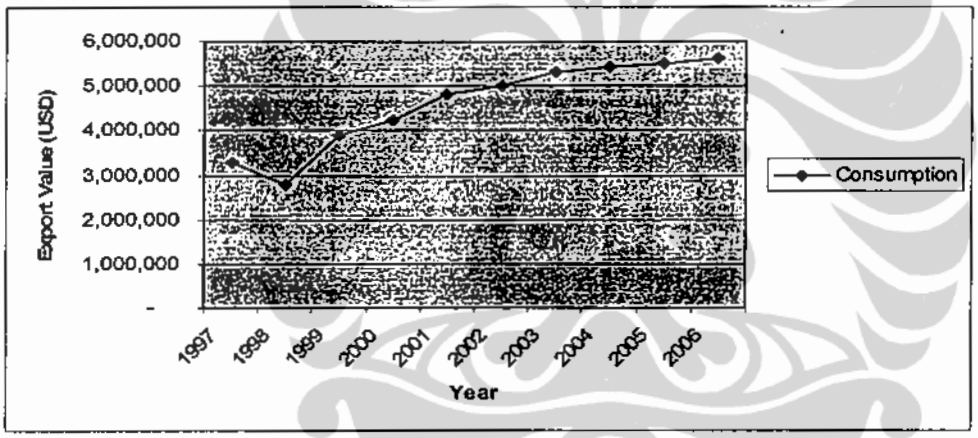
3.1.2. Paper Consumption

In line with the incessant increase of domestic production, the demand of paper for domestic consumption grows continually. In 2006 domestic consumption was 5.603 million ton, rose about 12% from 5.015 million ton in 2002. Meanwhile, paper consumption growth during 2002-2006 was 2.3 % per year in average, still slower than production growth. Domestic paper consumption per capita is also experiencing increased, from 24 Kgs/cap in 2002 to 25.4 Kgs/cap in 2006. Unfortunately, Indonesia's domestic consumption is much lower

compare with other countries. For an instances, in 1996, paper consumption per capita in Malaysia has reached 87.4 kg each year, compare with Indonesia in 2006 which only reach 25.4 kg. As the per capita paper consumption of Indonesia's 200 million people was only 25.4 kg/capita in 2006, domestic market still has much room for expansion and domestic consumption is predicted to grow more.

The increase of paper consumption in Indonesia is mainly reasoned by the grew of industries in sector of mass media and printing office, the increasing of requirement of industrial paper, progress of information technology which requiring media of output in the form of paper and the attempt that diversified the use of paper which wider progressively. It is also well supported by the increase of income per capita and the higher level of education of Indonesian people.

Figure 3.1. Indonesia's Paper Consumption (2006)



Source: Indonesian Pulp and Paper Association, processed.

3.1.3. Paper Industry

The data came from Indonesian Pulp and Paper Association presents that in 2007, there are 84 mills of pulp and paper, which is consist of integrated mills (produce pulp and paper), 71 paper mills and 3 pulp mills with total installed capacity each year for this industry is 11.03 million ton for paper industry and 6.48 million ton for pulp industry.

Based on the ownership of the company, pulp and paper mills can be classified as state enterprise, private company domestic investment, and private company foreign investment. In 2007, the ownership of company is mostly

dominated by domestic private company which control 69 mills and foreign private company with 12 mills, while the rest of pulp and paper mills is owned by state enterprises. The pulp and paper mills only existed at Java, Sumatera and Kalimantan. Most of those mills are concentrated at Java (66 mills), which most of them produce paper more than pulp. While mills in Sumatera and Kalimantan are projected to produce pulp more than paper, moreover, all of mills in Kalimantan specialized only on producing pulp.

Substantively, the characteristic of pulp and paper industry is more capital intensive, consequently, this industry is not absorb many man power, nevertheless the number of man power in this industry is increase each year. During 2002 and 2007 total amount of worker in this field increasingly about 21,464 worker from 98,536 worker in 2002 to 120,000 worker in 2007, or rose 21.7 %.

Table.3.2. Indonesia's Paper Industry (2006)

STATUS AND LOCATION	No. of Mills	Insatalled Capacity (TPA)	
		Pulp	Paper
Status:			
- State Enterprises	3	240000	337900
- Private Company Domestic Investment	69	3048100	7479380
- Private Company Foreign Investment	12	3195000	3207800
Total	84	6843100	11025080
Kind of Mills:			
- Integrated (pulp and paper)	10	5268100	2697000
- Non Integrated			
1. Paper	71		8328080
2. Pulp	3	1215000	
Total	84	6843100	11025080
Location:			
- Java	66	340500	9345440
- Sumatera	16	5578000	1679640
- Kalimantan	2	564600	
Total	84	6483100	11025080

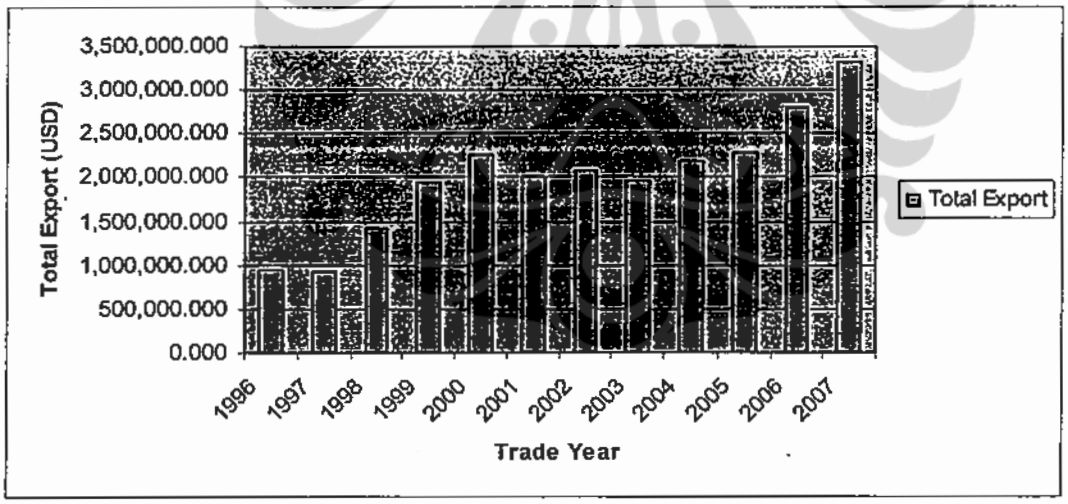
Source: Indonesian Pulp and Paper Association, processed.

3.1.4. Export of Paper

Since the last decade, Indonesia has been well known as a net exporter country in paper products, which means the export of Indonesia's paper products is greater than the import of paper products. With all of the comparative advantage, Indonesia's paper product can compete well in world market and result in the rise of export. Indonesia ranks 12th in the world paper exporting country list with yearly average export of 2.8 million ton per year during 2005-2007.

In general Indonesia's export on paper products grew significantly in the last 3 years, after facing a negative growth in 2003. In 2005, total value of Indonesia's export has back on the track and reached USD 2, 282 million or 4% higher than last year. During 2006 and 2007, Indonesia export figures keeps increasing with total value of export USD 2,805 million in 2006 and keep moving forward until 2007 with total export USD 3,328 million. Those figures mean that in the last 3 years Indonesia's export of paper products has grown 46% or about 15% each year.

Figure.3.2. Indonesia's Export of Paper (2007)



Source: Central Bureau of Statistic, Processed.

The increased of export is mainly caused by the ability of domestic industries to produce paper product more efficient compare with other exporting countries as the result of all comparative advantage owned by paper industry in Indonesia, it is also supported by the rise on paper demand both in domestic and world market. Moreover, on recent years, there are several countries, which are used to be well known as main producer of pulp, reduce their production capacity as the result of lack of raw material. Actually, pulp and paper industry in Indonesia also face same problem, which is the lack of raw material, as a result of illegal logging case. Indonesia's export on paper have been decline 25% in the last two months in 2007, but overall export in 2007 still higher than the previous year.

As a net exporter country, our paper product has been exported all over the world. In exporting our paper product, traditionally we have several main export destination countries for paper products and there are not much changes in 2003. Based on the total amount of export value (US$) in the last 5 years for paper included on HS 48, Japan has become the primary market for Indonesian paper products export, taking on an average share about 12.51% of its total export to this country during 2003-2007 period. Malaysia comes as the second largest market for Indonesian paper products export with an average share of 8.79 % from its annual share. While Korea resides on the tenth position of main destination country of our exports on paper with an average share of 3.08%, it makes Korea considered also as an important market for Indonesia's paper products.

In general the sequence of 10 largest markets for Indonesian paper product, following Japan and Malaysia, with each of their average share is China (7.69%), USA (6.78%), Australia (6.43%), Singapore (4.13%), Hong Kong (4.12%), Vietnam (3.6%), Taiwan (3.52%), and Korea (3.08%). All these detailed data is shown in Table 3.3 below.

Table.3.3. Main Export Destination Country on HS 48 (2007)

Destination Countries	2003	2004	2005	2006	2007	Average in 5 Years	Share
JAPAN	311,984,310	341,384,402	318,369,088	320,245,698	280,685,004	314,533,700	0.1251
MALAYSIA	159,856,272	194,082,276	208,546,948	257,037,201	286,137,625	221,132,064	0.0879
CHINA	197,276,975	200,039,328	173,778,090	200,857,347	194,938,633	193,378,075	0.0769
USA	105,351,595	111,548,022	115,821,163	226,623,387	292,994,744	170,467,782	0.0678
AUSTRALIA	135,216,392	179,246,751	146,943,698	166,535,565	180,220,343	161,632,550	0.0643
SINGAPORE	83,969,185	89,217,293	96,752,440	124,934,787	124,516,781	103,878,097	0.0413
HONG KONG	100,527,718	103,842,494	104,647,326	108,715,421	100,361,263	103,618,844	0.0412
TAIWAN	96,135,207	93,894,654	76,795,051	98,158,596	77,614,342	88,519,570	0.0352
VIET NAM	39,818,441	64,546,832	68,089,495	98,876,280	135,246,782	81,315,566	0.0323
KOREA, REPUBLIC OF	103,041,992	64,303,984	64,570,134	76,530,220	78,584,627	77,406,191	0.0308

Source: Central Bureau of Statistic, processed.

However, on the last 5 years, Indonesia's export to Japan shows a negative growth, it decrease from USD 311.98 million in 2005 to USD 280.69 million in 2007. On the contrary, Indonesia's export to several countries experience significant growth, for an instance United States, Malaysia, Australia and Vietnam. Export to US shows the highest trend which increased consecutively in the last three years, the growth of export reach 152% from 115.82 million USD in 2005 to 292.99 million USD in 2007.

Table.3.4. presents the total value of paper products exported and it shows that HS 4802 (Paper and Paperboard, Uncoated, for Writing, Printing, etc. In Rolls or Sheets; Handmade paper and Paperboard) has been the largest export of Indonesian paper products with an average share of 49.86% in value during 2005-2007, giving contribution US$ 1,754 million in year 2007, while the volume exported is 2,196 million kg.

Table.3.4. Indonesia Export Value of Based on HS 4 Digit (2007)

HS Code	2005	2006	2007	Total	Share	Average
4801	134,591,769	154,867,796	165,380,861	454,840,426	0.0540	151,613,475
4802	1,049,909,512	1,392,131,042	1,754,449,618	4,196,490,172	0.4986	1,398,830,057
4803	46,068,876	88,098,254	123,351,153	257,518,283	0.0306	85,839,428
4804	28,454,228	44,203,852	33,130,827	105,788,907	0.0126	35,262,969
4805	28,900,866	36,335,752	71,350,203	136,586,821	0.0162	45,528,940
4806	4,354,278	5,923,308	12,574,892	22,852,478	0.0027	7,617,493
4807	19,657,275	13,521,395	14,212,561	47,391,231	0.0056	15,797,077
4808	2,798,949	2,468,995	2,363,870	7,631,814	0.0009	2,543,938
4809	93,947,802	101,770,037	120,679,663	316,397,502	0.0376	105,465,834
4810	552,704,927	630,275,539	648,240,119	1,831,220,585	0.2176	610,406,862
4811	8,766,561	10,363,014	30,202,963	49,332,538	0.0059	16,444,179
4812	70,352	536,386	8,022	614,760	0.0001	204,920
4813	14,371,623	15,925,428	27,328,069	57,625,120	0.0068	19,208,373
4814	65,658	1,308,336	49,494	1,423,488	0.0002	474,496
4815	-	3,708	8,338,724	8,342,432	0.0010	2,780,811
4816	204,762	407,945	144,025	756,732	0.0001	252,244
4817	11,100,375	11,004,400	14,361,123	36,465,898	0.0043	12,155,299
4818	33,138,388	46,813,632	61,550,821	141,502,841	0.0168	47,167,614
4819	64,027,215	77,188,629	81,305,054	222,520,898	0.0264	74,173,633
4820	130,923,899	110,165,180	118,811,251	359,900,330	0.0428	119,966,777
4821	4,744,423	3,587,696	2,572,690	10,904,809	0.0013	3,634,936
4822	7,776,759	9,013,041	9,477,569	26,267,369	0.0031	8,755,790
4823	45,821,084	49,425,210	28,133,621	123,379,915	0.0147	41,126,638
Total	2,282,399,581	2,805,338,575	3,328,017,193	8,415,755,349	1.0000	2,805,251,783

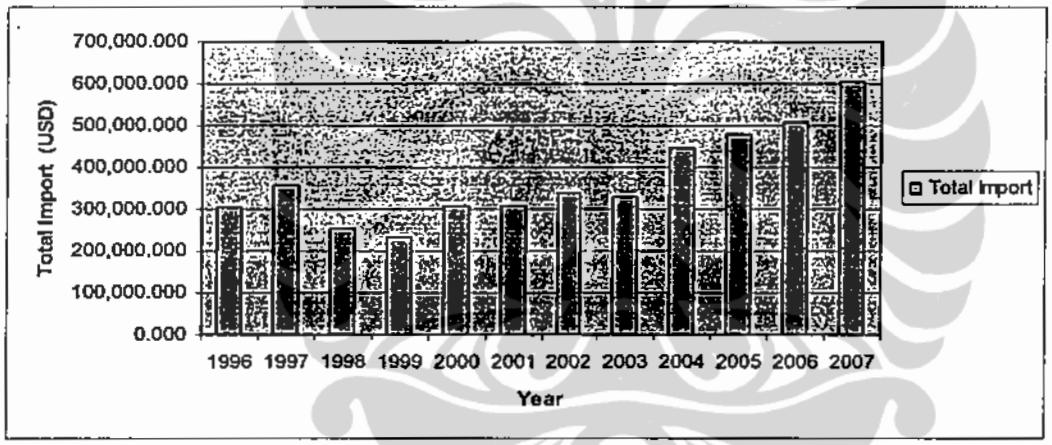
Source: Central Bureau of Statistic, processed.

3.1.5. Import of Paper

Even though Indonesia has been well known as one of exporting country on paper products, Indonesia still also act as an importer of paper. Something that might not recognized by public is that although there are many paper mills in Indonesia, Indonesia still need to import certain kind of paper which can not be produced domestically. In 2006, Indonesia's import reach 0.4 % of world import, with total import US$ 507.315 million in value.

In general Indonesia's import of paper products has grown in the last 3 years, during 2005 and 2007 there has been 25 % rise in import of paper or 120 Million USD from 478.246 million USD in 2005 to 602.579 million in 2007 with average of 8 % import growth each year.

Figure.3.3. Indonesia's Import of Paper (2007)



Source: Central Bureau of Statistic, processed.

The increased of import in recent year is mainly caused by inability of domestic industries to produce paper product sufficiently for domestic consumption which tend to rise in recent year. This is happened because of the lack of raw material to produce paper, which is pulp. In recent years, domestic pulp industry stubbed by some problems, the issue of illegal logging and eco labeling has impede production of pulp as the main source of paper production. Moreover, the rise of import is also supported by the increase of demand on several kind of paper which not produced by domestic industry.

In the last 3 years, the biggest share of Indonesia's import of paper is dominated by China with total value USD 160.460 million or reach 10.1 % of our total import. Import from China just increase rapidly in 2007, with USD 73.616 million from USD 46.802 million in 2006, before 2007 imports from China was lower than Singapore and Japan. Singapore and Japan sat on the second and the third place as largest exporting countries to Indonesia in terms of total value, with total share of import 9.6 % for Singapore and 9.3 % for Japan.

Table.3.5. Main Import Origin Countries (2007)

Country	2005	2006	2007	Total	Share
CHINA	40,041,082	46,802,295	73,616,665	160,460,042	0.101036
SINGAPORE	46,776,686	51,571,044	53,501,957	151,849,687	0.095615
JAPAN	40,524,981	49,631,121	57,389,834	147,545,936	0.092905
THAILAND	36,259,617	48,723,979	59,768,558	144,752,154	0.091146
UNITED STATES	37,863,864	29,426,766	36,040,518	103,331,148	0.065064
KOREA, REPUBLIC OF	29,131,247	27,965,130	34,629,252	91,725,629	0.057757
GERMANY	24,803,195	30,893,161	34,953,681	90,650,037	0.057079
SWEDEN	26,510,769	28,396,947	27,796,684	82,704,400	0.052076
TAIWAN	23,455,638	22,349,982	31,575,954	77,381,574	0.048725
MALAYSIA	17,996,130	19,054,291	32,609,066	69,659,487	0.043862

Source: Central Bureau of Statistic, processed.

3.2. Related Industry Profile (Pulp Industry)

Generally, pulp industry has dual purposes in producing pulp which are not only directly aimed as export commodities but also needed as one of raw materials for downstream industries like paper industry and rayon industry. Moreover, since pulp mills are often part of large scale and integrated pulp and paper operations, pulp output is supplied to the paper manufacturing operations. It

explains that Pulp industry, obviously, has a close relationship with paper industry since most of paper industry using pulp as raw material in producing paper.

Therefore, the continuity improvement of pulp production should be well maintained because it's not only affects pulp industry but also very important to ensure the continuity of paper industry.

3.2.1. Pulp Production

Basically, there are two kind of pulp produced by pulp industry, which are paper grade pulp (use in producing paper) and dissolving pulp-rayon (use in producing rayon for textile), therefore, as has been mention above, pulp is very important for paper industry and textile industry. Actually, pulp industry in Indonesia can produce both paper grade pulp and dissolving pulp. But in the last ten years all of pulp mills in Indonesia produce only paper grade pulp, consequently, the production of pulp is aimed only for export and for domestic paper industry.

In the last 10 years, pulp production in Indonesia has been growth significantly. In 1997, total production of pulp in domestic industry has 3,1 million M.Tonnes, while ten years later in 2006, total production of pulp has reached 5,7 million MTonnes. It means, if we compare the total production since 1997 until 2006, production of pulp has been increase around 63% or about 6% each year. Most of productions are being used to fulfill the needs of domestic industries, especially for paper industry. The rise of demand on pulp, both for domestic and international market, is one of the main reason that make the level of production keep increasing besides the price factor. Furthermore, pulp production in Indonesia still has an opportunity to be improved, consider on the installed capacity of pulp production that not have been utilize maximally. The average of utilization in pulp production is only around 81 % in the last 10 years with the highest level of utilization happened in 2006 with 87.98 %, it shows that there are still some spaces to maximize the production. In annual review released by Pulp and Paper International Magazine (Juli 2003), Indonesia resided at ninth position of pulp production.

Table.3.6. Pulp Production and Utilization (2006)

Year	Pulp			
	Capacity	Production	Utilization (%)	Growth of Production
1997	4,266,600	3,058,450	71.68	12.1%
1998	4,323,600	3,430,000	79.33	7.7%
1999	4,543,600	3,694,630	81.32	10.7%
2000	5,228,100	4,089,550	78.22	14.1%
2001	5,587,100	4,665,920	83.51	6.5%
2002	6,087,100	4,969,000	81.63	4.5%
2003	6,287,100	5,194,310	82.62	0.3%
2004	6,287,100	5,208,680	82.85	5.0%
2005	6,477,100	5,467,450	84.41	3.7%
2006	6,447,100	5,672,210	87.98	-

Source: Indonesian Pulp and Paper Association, processed.

3.2.2. Pulp Consumption

As has been mention above, pulp production is getting higher every year, as a result of the increase on demand of pulp either for export or domestic consumption. Domestic consumption on pulp is tend to increase in line with the increase of demand on pulp for its downstream industry, which is paper mills, it is came as a result of demand on paper and production capacity of paper mills which experience incessant increase in recent years. This positive relationship between pulp consumption and paper production can be accept as we know that except for export, most of pulp production is only aimed as raw material in producing paper.

Table.3.7. Pulp Consumption (2006)

Year	Pulp Consumption	Paper	
		Capacity	Production
1997	2,816,400	7,159,290	4,821,600
1998	2,612,770	7,479,530	5,487,260
1999	3,472,190	9,077,180	6,720,560
2000	3,528,680	9,096,180	6,849,000
2001	3,531,470	9,851,680	6,951,240
2002	3,549,500	10,013,180	7,212,970
2003	3,554,620	10,013,180	7,267,880
2004	3,630,770	10,013,180	7,679,820
2005	3,790,150	10,019,180	8,207,620
2006	3,794,050	10,506,180	8,853,280

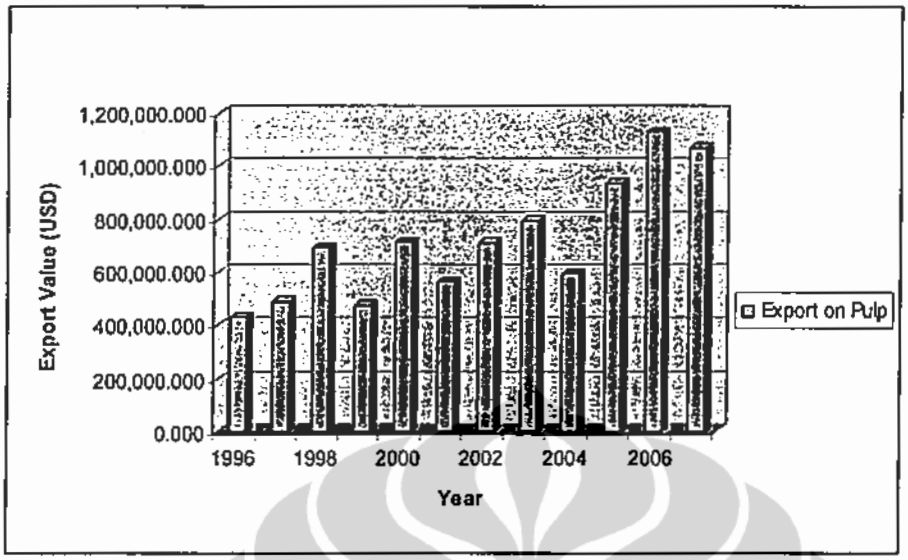
Source: Indonesian Pulp and Paper Association, processed.

Actually, domestic consumption of pulp increase in the last ten years with 35% of growth or 977,650 M.Tonnes from 2,816,400 M.Tonnes in 1997 to 3,794,050 M.Tonnes in 2006. But this is still much lower compare with the growth of pulp production. This excess of production, which can not be absorbed by domestic industry, is aimed for export and at last push our export higher.

3.2.3. Pulp Export

With the increase in production, Indonesia's export on pulp also experiences a growth. As a description, growth of export value on pulp has reached 35% in the last 5 year or USD 274 million from USD 793.64 million in 2003 rose to USD 1,068 million in 2007. The reason of incessant increase on Indonesia's export is the increase of world demand which is basically caused by the rise of needs on pulp and policy that imposed by several producer countries to cease their production.

Figure 3.4. Indonesia's Export of Pulp (2007)



Source: Central Bureau of Statistic, Processed.

In exporting our pulp, traditionally there are several main export destination countries which dominated the market share for our export. Based on the total amount of export value (US$) in the last 3 years, China has become the primary market for Indonesian pulp products export, with the biggest average share about 46% during 2005-2007 period. Republic of Korea comes as the second largest market for Indonesian paper products export with an average share of 22% from total export of Indonesia. In general, the sequence of 5 largest markets for Indonesian pulp export, following Japan and Malaysia, with each of their average share is Japan (6 %), Italy (5 %), India (5%).

Tabel 3.8. Main Export Destination Countries (2007)

Destination Countries	2005	2006	2007	Total in Last 3Years	Average	Share
CHINA	380,487,327	553,039,042	510,991,434	1,444,517,803	481,505,934	0.46
KOREA, REP. OF	253,295,353	232,787,682	187,629,085	673,712,120	224,570,706	0.22
JAPAN	56,738,060	72,789,939	66,048,109	195,576,108	65,192,036	0.06
ITALY	49,549,640	58,261,692	61,754,009	169,565,341	56,521,780	0.05
INDIA	47,390,260	52,338,205	59,456,389	159,184,854	53,061,618	0.05
TAIWAN	44,554,296	46,679,738	59,783,991	151,018,025	50,339,341	0.05
FRANCE	23,556,277	35,059,554	21,810,946	80,426,777	26,808,925	0.03
NETHERLANDS	19,386,574	16,439,824	27,026,618	62,853,016	20,951,005	0.02
UNITED STATES	7,285,833	14,964,099	24,257,204	46,507,136	15,502,378	0.01
VIET NAM	15,109,268	14,602,373	8,533,860	38,245,501	12,748,500	0.01

Source: Central Bureau of Statistic, processed.

3.2.4. Pulp Import

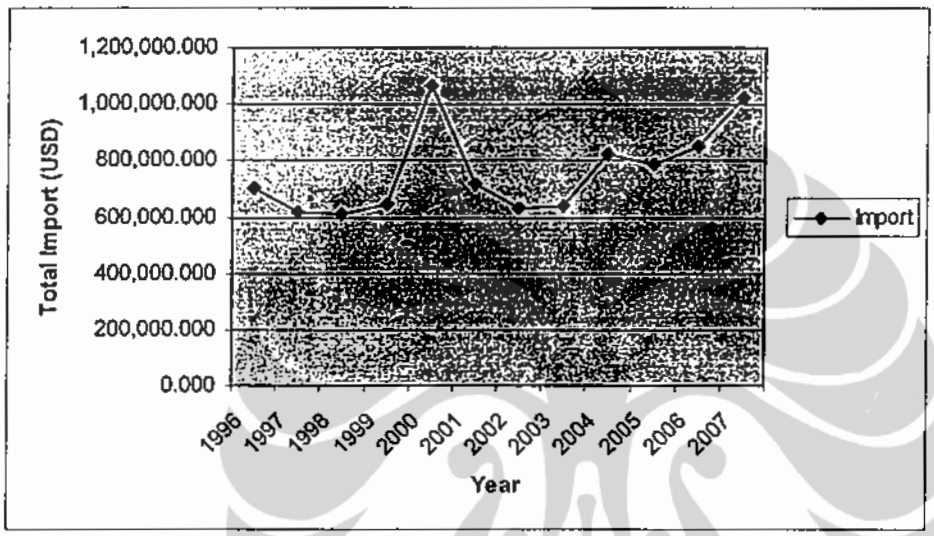
Even though the achievement of Indonesia's export on pulp shows consistent improvement every year, import figure on pulp is quite high. Import of pulp shows a fluctuation and achieved its highest figures in 2000 when total value of import came out at USD 1,064 million, it increased about 64% compare with import in 1999 which only get USD 647.42 million. But after 2000, import of pulp decreased significantly until 2002 with total import USD 629.308. During 2003 to 2007 Indonesia's import of pulp tend to increase, Indonesia imports USD 824.31 million of pulp in average yearly from other countries. In this period import of pulp rise about 61% from USD 636.44 million in 2003 to USD 1,022 million in 2007.

The increase on import caused by the inability of domestic industry to produce certain kind of pulp sufficiently in order to fulfill domestic consumption, especially for long fiber pulp.

Actually, pulp mills in indonesia can produce both short and long fiber, but in the recent year it is mostly dominated by short fiber pulp as a result of

available raw material, most of raw material that available for pulp production in Indonesia is indigenous to short fiber plant, like Accacia. Moreover, according to the Indonesian Pulp & Paper Association, in 2006 the supply of long fiber and scrap paper for the paper industry is entirely imported.

Figure.3.5. Indonesia's Import of Pulp (2007)



Source: Central Bureau of Statistic, Processed.

3.3. Obstacles on Indonesia's Export of Paper

1. Indonesia's export on paper (HS 48) have been decline during the last 2 month in 2007. Based on the data from National Statistic Bureau, at November 2007, export on paper noted by USD 327,9 million. That amount is decrease about 8% at December become USD 302,8 million. The trend of export degradation is apprehensive about to continue in the next period, even though, totally, Indonesia's export on paper in 2007 is still took an escalation compared to export in 2006. The decline of paper export come as an impact of diminishing production due to the lack of raw material, domestic industries face difficulties to obtain raw material domestically. This matter is related to illegal logging cases, accused to paper industries in obtaining raw material, that its process in court has not been judged yet.

This condition can harm the continuity of paper industry, for the shortage of raw material will cause descent of production capacities and weakening our product competitiveness compare to product from other country. Moreover, the rise of import can affect domestic market, with very low import duty imported products will inundate domestic market.

2. Beside the availability of raw material problem which is related with the case of illegal logging, the performance of domestic pulp and paper industry is also muddied by dumping indictment from several export destination countries. Based on the data from Ministry of Trade, Indonesian paper product is one of the most products that often had dumping indictment compared with other export commodities, from 143 dumping cases, 19 of which are dumping indictments for paper product. Some countries which ever accuse dumping to Indonesian paper product are USA, Malaysia, South Africa, Korea, Taiwan, etc.

   One of the dumping accusations that still on its process nowadays and now become the object of this thesis, is dumping accusation by South Korea. Through that accusation, Korea Trade Commission (KTC) had imposed anti-dumping duties for Indonesian export in certain kind of paper which included in HS 4802. The imposition of anti-dumping duties is still being in effect until today. Actually, Indonesia has taken this case to Dispute Settlement Body of WTO and won this case but KTC still levy the duties. For more details, the part below will describe the chronological of dumping accusation on Indonesia's paper products by Korea.

3.4. Chronological of Dumping Accusation By Korea

The early accusation of dumping on certain kind of paper products, which included in HS 4802, from Indonesia, was revealed on 30 September 2002. The petitioners are several Korean paper producer (Donga Paper Co. Ltd., Samil Paper Co. Ltd., Jun Won Joo, Hankuk Paper Manufacturing Col Ltd., dan Hansol Paper) which represented by the Korean Trade Commissions (KTC). The accusation of dumping was delivered to Indonesian exporters which are PT.

Pabrik Kertas Tjiwi Kimia Tbk. (TK), PT. Pindo Deli Pulp & Paper Mills. (PD), PT. Indah Kiat Pulp & Paper Mills (IK), PT. April Fine.

The original anti-dumping investigation was initiated on 14 November 2002 and completed on 24 September 2003. The final measures is applied in 7 November 2003 with the imposition of anti-dumping duties of 8.22 per cent for Indah Kiat, Pindo Deli and Tjiwi Kimia, three paper producers in the Sinar Mas Group from Indonesia, and 2.80 percent for another Indonesian exporter, April Fine. The Korean Trade Commission ("KTC") also imposed an "all others" rate of 2.80 percent.

On 4 June 2004, Indonesia requested consultations with Korea concerning the imposition of definitive anti-dumping duties by Korea on imports of paper products from Indonesia and certain aspects of the investigation leading to the imposition of such duties. But the consultation did not yield satisfactory conclusion.

According to the request for consultations from Indonesia, Korea violates its WTO obligations in respect of the following aspects:

- Korea's initiation of investigation, notwithstanding several deficiencies such as the applicants' failure to include in the application sufficient and adequate evidence of dumping, injury and causal link;
- Korea's failure to provide in the Notice of Initiation any information regarding the factors on which the allegation of injury was based,
- the way Korea granted confidential treatment to information contained in the application,
- Korea's making of a request for information from a firm not subject to investigation, without having obtained the agreement of that firm and having notified the Indonesian Government of such request,
- Korea's rejection of information related to the sales of a certain firm, without explaining the reason.
- Korea's preliminary determination, in such respects as: like products, constructed value, best information available, denial of access to information, and the refusal to provide an opportunity to the exporters to present their views;

- Korea's final determination, in such respects as: like products, individual dumping margins, constructed value, treating a certain firm and other firms as a single economic unit; the impact and effect of the dumped imports on the domestic industry and prices in the domestic market, failure to evaluate all relevant economic factors and indices, and denial of access to information.

On 16 August 2004, Indonesia requested the establishment of a panel. At its meeting on 31 August 2004, the DSB deferred the establishment of a panel. Further to a second request to establish a panel by Indonesia, the DSB established a panel at its meeting on 27 September 2004. Canada, China, the European Communities, Japan and the United States reserved their third-party rights. On 18 October 2004, Indonesia requested the Director-General to compose the panel. On 25 October 2004, the Director-General composed the panel.

On 25 April 2005, the Chairman of the Panel informed the DSB that it would not be possible for the Panel to complete its work in six months in light of scheduling conflicts, and that it expected to complete its work in July 2005.

On 28 October 2005, the Panel Report was circulated to Members. In its Report:

- The Panel found that the Korea Trade Commission ("the KTC") acted inconsistently with relevant provisions of the Anti-dumping Agreement ("the Agreement") in determining the margin of dumping for one Indonesian company, in failing to provide a proper disclosure of the verification results and the details of the calculations of the constructed normal values for two Indonesian companies, and in also failing to exercise special circumspection in the use of information from secondary sources instead of domestic sales data provided by these two Indonesian companies. With respect to the KTC's injury determination, the Panel found that the KTC erred in its assessment of the impact of dumped imports on the domestic industry and in not requiring that good cause for confidential treatment be shown regarding the information submitted in the application which was by nature confidential.

- The Panel concluded that the KTC did not act inconsistently with the relevant Articles of the Agreement in resorting to facts available with respect to two Indonesian companies, in rejecting the domestic sales data submitted by these two companies, in using constructed normal values for them, in treating three Indonesian companies belonging to the same Group as a single exporter and assigning a single margin of dumping to them. With respect to the KTC's injury determination, the Panel also concluded that the KTC did not err in its price analysis, in its treatment of the dumped imports made by the Korean producers from the subject countries and in disclosing its determination concerning the effect of the prices of dumped imports on the Korean industry.
- The Panel exercised judicial economy regarding the consequential claims raised by Indonesia, and did not address other claims withdrawn by Indonesia.
- The Panel rejected Indonesia's request that the Panel suggest that Korea bring its measures into conformity with its WTO obligations by revoking the anti-dumping measure at issue.

At its meeting on 28 November 2005, the DSB adopted the Report of the Panel and ask Korea to re-observe their antidumping policy.

At the DSB meeting on 20 December 2005, Korea stated that they would need a reasonable period of time to implement the DSB recommendations and rulings and that they were ready to consult with Indonesia. On 10 February 2006, the parties informed the DSB that they had agreed that the reasonable period of time shall be eight months, expiring on 28 July 2006. Due to the DSB recommendation, KTC made a re-determination of dumping and injury. The KTC's Implementation Report which contained its final dumping and injury re-determinations was published in the Korean Official Gazette dated 27 July 2006.

On 17 August 2006, Korea and Indonesia notified the DSB of an Understanding regarding procedures under Articles 21 and 22 of the DSU. On 26 October 2006, because not persuaded about the consistency with Korea's WTO obligations of the KTC's Redetermination, under Article 21.5 of the DSU,

Indonesia requested to hold consultations with Korea. Consultations were held on 15 November 2006 but did not yield a mutually-satisfactory solution. Indonesia requested the establishment of a panel to review the consistency with the Agreement of the measure taken by Korea to implement the DSB recommendations and rulings. At its meeting on 23 January 2007, the DSB agreed, if possible, to refer the matter raised by Indonesia to the original panel. China, the European Communities, Japan and the United States reserved their third party rights. Subsequently, Chinese Taipei reserved its third party rights.

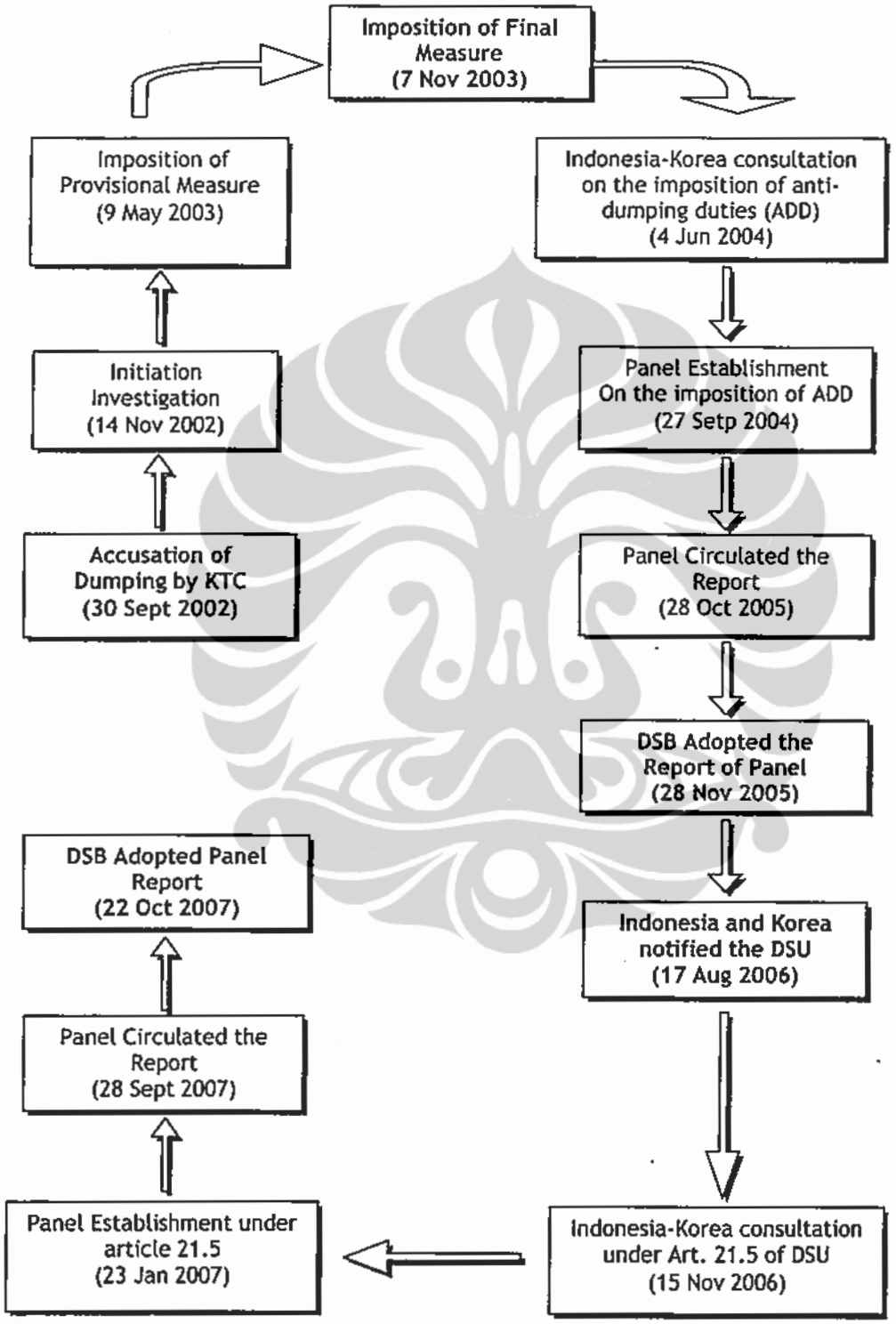
On 2 April 2007, the Chairman of the Panel informed the DSB that it would not be possible for the Panel to complete its work in 90 days due to scheduling conflicts. The Panel expects to complete its work in June 2007.

On 28 September 2007, the Article 21.5 Panel report was circulated to Members. The Panel concluded that:

- The KTC acted inconsistently with Article 6.8 of the Anti-Dumping Agreement and paragraph 7 of Annex II by failing to exercise special circumspection in the use of information from secondary sources in its effort to base its determination of CMI's interest expenses on the best information available;
- The KTC acted inconsistently with its obligation under Article 6.2 of the Anti-Dumping Agreement by declining to provide the Sinar Mas Group with an opportunity to make comments on the evaluation of the injury factors under Article 3.4.

On 22 October 2007, the DSB adopted the Article 21.5 Panel report. (source: www.wto.org)

THE CHRONOLOGICAL OF DUMPING CASE ON PAPER PRODUCT



University of Indonesia

CHAPTER 4
RESEARCH METHODOLOGY

4.1. Model Specification

In this research, the model used by author is referring to a export demand model. The model employed some variables that have been commonly used in previous studies as determinant factors of export demand with addition on relevant variables related to the imposition of anti dumping duty, since the export demand model which adopted in this research is ultimately performed to analyze the relationship between the imposition of anti dumping duty and Indonesia's export of paper products.

The model used in this research set the export of Indonesia's paper products as dependent variable and several explanatory variables (i.e. gross domestic product of foreign country, exchange rate, and relative price) including anti dumping duty as independent variables. Thus, the function of export demand which used in this research can be presented as follows:

$$EXP_t = f(GDP_t, ER_t, PR_t, Add_t) \quad \text{.....(4.1)}$$

Double logarithms will also use on both dependent and independent variables in order to measure the elasticity of dependent variable to each independent variable except for the anti dumping duty (Add) variable. Related to this, the model used in this research can be stated as follow:

$$\log EXP_t = \alpha_0 + \alpha_1 \log GDP_t + \alpha_3 \log ER_t - \alpha_2 \log PR_t - \alpha_4 \text{Add} + \mu_t \quad \text{.....(4.2)}$$

Where:

- Log EXP_t denotes the logarithm of export volume of paper products to Korea in time t;
- Log GDP denotes the logarithm of Korea's Real Gross Domestic Product in time t;
- Log ER_t denotes the logarithm of nominal exchange rate of foreign in term of domestic currency (Rp/Won) in time t;
- Log PR_t denotes the logarithm of export's relative price of paper products in time t;

- Add denotes independent variables of the imposition of antidumping duty for Indonesia's paper products in Korea.

While the Greek symbol of α_0 - α_4 denote the coefficient of each variable and μ_t denotes the residuals or error of the model. The dependent variable in this model is represented by Log EXP_t and independent variables are represented by the rest of the variables.

The relation between dependent variable and independent variables is shown by the sign of each coefficient of the independent variables as presented on the table below. If the coefficient has a positive sign, it means there is a positive relation between the dependent variable with the independent variable, while negative sign shows the negative relation between dependent variable and independent variable.

Tables.4.1. Expected Signs

No.	Independent Variables	Expected Signs
1.	Real Gross Domestic Product (GDP)	Positive (+)
2.	Nominal Exchange Rate (ER)	Positive (+)
3.	Relative Price (RP)	Negative (-)
4.	Anti Dumping Duties (Add)	Negative (-)

The imposition of antidumping duty is considered as another form of tariff that creates "extra expenses" and lowering the competitiveness of a product sold in importing country which in turn will decline export because the demand on the product in importing countries would obviously decline. So that, the imposition of anti dumping duty, hypothetically, is expected to have a negative impact on export.

In contrary with the imposition of antidumping duty, the gross domestic product of importing country is expected to have a positive relation with the amount of export volume. Gross domestic product is reflecting the size of market in the importing country, the larger the market size the larger possibility to export. The positive impact of gross domestic products also justified in a literature by Blanchard (2006), which conclude that higher foreign income leads to higher export.

Another independent variable used in this research is nominal exchange rate, which expected to have a positive effect to export. An increase on the exchange rate of importing country currency in terms of exporting country currency asserts depreciation in the exporting country currency. Depreciation on exporting country currency will made as if the product from exporting country become cheaper which in turn give importing country a possibility to purchase more and leads to the increase of export.

The last independent variable used in this research is relative price. This variable is expected to have negative relation with export. A higher price would drive the demand of paper products to lower level. This negative relation is justified by Blanchard on his book Macroeconomics (2006) which said that the higher the price of domestic goods in terms of foreign goods, the lower the foreign demand for domestic goods.

4.2. Data and Data Source

The study will use a secondary data and information regarding paper products and also consist of macroeconomic data such as gross domestic product of partner countries, nominal exchange rate, and relative price. The data used in this research is a time series data which use quarterly data taken from period of 1994 until 2008 and obtained from several sources as presented below.

Tables.4.2. Source of Data

No.	Variable	Explanation	Source of Data
1.	EXP	Export Volume	National Statistic Agency, Ministry of Trade
2.	GDP	Real Gross Domestic Product of Korea	International Financial Statistics (IFS)
3.	ER	Nominal Exchange Rate	International Financial Statistics (IFS)
4.	PR	Relative Price	Ministry of Trade, National Statistic Agency
5.	Add	Anti dumping duty	Ministry of Trade

As the equation model has been proposed above, the operational definition of both variables (i.e. dependent and independent variables) are as follows:

a. **Export of Paper Product (EXP)**

Export of paper product is the dependent variables in the model. It is representing the quantity of export on paper products from Indonesia to Korea within the given period (t). The unit measurement is in Kilograms (Kg).

b. **Real Gross Domestic Products (GDP)**

Real gross domestic products measures the changes in physical output in the economy between different time periods by valuing all goods produced in the two periods at the same prices. Real GDP is computed by dividing nominal GDP with GDP deflator[9]. Since the nominal GDP used in this study transformed in US dollar, thus, the value of real gross domestic product being calculated as follows:

$$RGDP_t = \frac{NGDP_t}{ER_t} \times \frac{1}{GDPdeflator(2000=100)} \times 100 \quad \text{.....(4.3)}$$

c. **Nominal Exchange Rate (ER)**

Nominal exchange rate is an independent variable which representing the ratio of foreign to domestic prices, measured in the same currency in country i within a given period (t). The nominal exchange rate used in this model is value of foreign in terms of domestic currency (Rp. / Won).

d. **The relative price (PR)**

This variable is representing the price of export of paper products which include in HS 4802 from Indonesia to Korea within a given period (t). In this regard, the relative price is obtained by dividing the value of export with its volume and the result will be divided by wholesale price index of Korea.

$$PR_t = \frac{ExpValue_t}{ExpVolume_t} \times \frac{1}{WPI_t} \quad \text{..... (4.4)}$$

[9] The GDP deflator is the ratio of nominal GDP in a given year to real GDP of that year. This study uses GDP deflator (2000=100), using 2000 as a base year.

e. **Anti Dumping Duty (Add)**

This variable is representing the amount of anti dumping duty, in percentage, which imposed to the export of paper product (HS 4802) from Indonesia to Korea.

4.3. Analysis Method

In order to analyze the impact of anti dumping duty to Indonesia's export on paper products, this thesis will use the multiple regression analysis with ordinary least square method to estimate the parameter of regression by used of time series data. In this research, anti dumping duty is taken as one of independent variables, together along with price of exported paper products, gross domestic products of Korea and exchange rate of rupiah in term of Korean won. Before analyzing the results of regression, there will be several tests that must be performed to fulfill economic criterions, statistical criterions and econometric criterion.

First, there will be a diagnostic test to examine the violation of Ordinary Least Square (OLS) assumptions or usually known as Classical Assumption Test. The violation on OLS assumption performed to examine the existence of multicollinearity, heteroschedasticity and autocorrelation in order to generate BLUE (Best Linear Unbiased Estimate) result of regression.

Second, there also exists statistical test which is performed to asses the significance and impact of each independent (explanatory) variable towards the dependent variable and also the significance and explanatory power of the model. This test includes coefficient of determination (R-square) test, individual significance test (t-statistic test) and overall significance test (F-statistic test).

4.3.1 Classical Assumption Test

4.3.1.1 Multicollinearity

Multicollinearity is one of the violation toward the classic assumption of OLS method in which there is a perfect, or exact, linear relationship among some

or all explanatory variables of a regression model[10]. Multicollinearity will lead some consequences, there are: (1) although still Best Linear Unbiased Estimate (BLUE), the OLS estimators have large variance and covariance, so it is difficult making precise estimation, (2) because of consequence 1, the t-ratio of one or more coefficients tends to be statistically insignificant, (3) although the t-ratio of one or more coefficient is statistically insignificant, but value of determination coefficient (R-square) relative high.

There are some method that can be used to detect the existence of multicollinearity:

- High R^2 (0,7-1) but few significant t-ratios. But the high R^2 is only sufficient condition, because multicollinearity still can exist although the R^2 is low.
- High pair-wise correlation among regressor. It can be examine using correlation matrix, if the correlation among regressor < 0,8, it is assumed that multicollinearity does not exist .
- Examination of partial correlations.

In overcoming the problems rose by multicollinearity, there are two alternatives, which are do nothing or follow some rules of thumb. Rule of thumb procedures which is used to solve the multicollinearity problem are (1) using a priori information, which could come from previous empirical studies in which the collinearity problems happens to be less serious or from the relevant theory underlying the field of study, (2) dropping a variable (s), (3) transform the variables, (4) take additional or new data.

4.3.1.2 Heteroschedasticity

Heteroschedasticity occurs when the assumption that the variance of the each error/residual (conditional on the explanatory variables) is constant is violated.

The presence of heteroskedasticity will generate inefficient estimation proccess which the variance of estimator is no longer minimum but it still linear and unbiased. Moreover, since the estimator no longer has minimum variance, it

[10] Gujarati, Damodar N.,2003, *Basic Econometrics*, McGraw-Hill, Fourth Edition, Singapore

will lead the confidence interval become larger, consequently, the t and F test are likely give inaccurate result.

Test on heteroschedasticity can be performed by using *white heteroschedasticity test* which is available in software (*Eviews* 4). In this test, heteroschedasticity can be detected by these criterions:

- If the probability value of Obs* R-squared < α (level of significant), then H_0 is rejected and H_1 accepted, which means there is heteroschedasticity.
- If the probability value of Obs* R-squared > α (level of significant), then H_0 is accepted and H_1 rejected, which means there is no heteroskedacity.

4.3.1.3 Autocorrelation

One of the assumptions of OLS method regarding to residual is there is no correlation between residuals. Autocorrelation is a condition that violates this assumption, it occurs when the covariances and correlations between different disturbances or errors are not zero. This means that the disturbances are not pairwise independent but are pairwise autocorrelated (or serially correlated), indicating that an error occurring at period t may be carried over to the next period t + 1 (Asteriou, 2006, p.140)

The presence of autocorrelation will generate underestimate standard error and variance of coefficient regression even though the estimator is still linear and unbiased estimator (Nachrowi, 2006 p. 184) which in turn lead to larger determinant coefficient. As a result, t-test and also F-test are no longer valid, and if applied, are likely to give seriously misleading conclusions about the statistical significance of the estimated regression coefficient. A strong autocorrelation will also generates misleading to the relation among variables. Furthermore, it will generate a high R^2 which is known as a Spurious Regression.

Autocorrelation can be detected by Durbin Watson statistic and also Bruesch-Godfrey test. In Durbin Watson, there is a decision rules (see table 4.2). The Durbin-Watson statistic has some weakness which are: (1) DW is just applied for stochastic variable, if there is lagged variable, this test can not be used; (2) DW is just applied if the autocorrelation between residual in first order AR(1),

this test can not be applied in the higher autoregressive model like AR(2), AR(3), and so on.

Tables.4.3. Durbin-Watson *d* test: Decision Rules

Null hypothesis	Decision	If
No positive autocorrelation	Reject	$0 < d < d_L$
No positive autocorrelation	No decision	$d_L < d < d_U$
No negative autocorrelation	Reject	$4-d_L < d < 4$
No negative autocorrelation	No decision	$4-d_U \leq d \leq 4-d_L$
No autocorrelation, positive or negative	Do not reject	$d_U < d < 4-d_U$

Bruesch-Godfrey (BG) test is the most general test on autocorrelation, it allows for nonstochastic regressors such as the lagged values of the regressand. This test is available in software *(Eviews 4)* which use correlation LM test. The null hypothesis in this method is that there is no autocorrelation In this research, autocorrelation is detected by comparing the probability of Obs*R^2 to α (level of significant).

- If the probability of Obs* R-squared < α (level of significant), then H_0 rejected and H_1 accepted. Which means there exist autocorrelation.
- If the probabilitas of Obs* R-squared > α (level of significant), then H_0 accepted and H_1 rejected, whch means there is no autocorellation.

Besides that, from the LM test result, if the value of Chi-squares stat smaller than the critical value from the Chi-squares table with certain α and df, than we accept the null hypothesis which mean there is no autocorrelation.

4.3.2 Statistical Test

4.3.2.1 Determinant Coefficient Test(R^2)

This test is implemented to analyze the value of R^2, the value of R^2 describe the proportion of variation in dependent variable could be explained by the model of regression (or by the independent variables). For example, an R^2 of 0.8 means that 80% of the variation in the dependent variable is explained by the variations of the explanatory variables.The value of R^2 lies between 0 and 1. If the

value of R^2 is 1, the model could explain dependent variable perfectly or on the other words the model explains 100 percent of the variation in dependent variable. But if the value of R^2 is 0, the model can not explain any variation in dependent variable.

4.3.2.2 F-Test

F test is implemented to examine whether the independent variables, simultaneously, have a significant effect to dependent variable. The test uses two hypotheses, H_0 and H_1. If the H_0 is accepted the H_1 will be rejected, vice versa.

$H_0 : \beta_1 = \beta_2 = 0$

This hypothesis shows, simultaneously, independent variables have no significant effect on dependent variable.

$H_1 : \beta_1 \neq \beta_2 \neq 0$

This hypothesis shows that there exists a significant effect of independent variables to dependent variables simultaneously.

In this research, the decision to accept or reject hypotheses above can be done by comparing p-value with the critical value used.

- If, p-value > Level of Significance, H_0 will be accepted and H_1 rejected, it means independent variables have no significant effect on dependent variable.
- If, p-value < Level of Significance, H_0 will be rejected and H_1 accepted, it means independent variables have a significant effect on dependent variable

4.3.2.3 T-Test

The absolute value of the estimated coefficient indicates the effect of a unit change of an explanatory variable on dependent variable, ceteris paribus. In addition, the sign of each estimated coefficient tells whether the relationship between the dependent variable and the explanatory variable is positive or negative.

While the absolute value of the coefficient indicates the effect of an explanatory variable on the dependent variable, the corresponding t-statistic will indicate whether the coefficient is statistically significant. t test is performed to examine the coefficient of regression of each independent variable towards

dependent variable. This test is implemented to examine whether the independent variable, individually, has a significant effect to dependent variable by assuming that other variables are constant. The test uses two hypotheses, H_0 and H_1. If the H_0 is accepted the H_1 will be rejected, vice versa.

$H_0 : \beta_1 = 0$

This hypothesis shows, individually, independent variable have no significant effect on dependent variable.

$H_1 : \beta_1 \neq 0$

This hypothesis shows that there exists a significant effect of independent variable to dependent variable individually.

In this research, the conclusion made to accept or reject hypotheses above done by comparing p-value with the critical value used.

- If, p-value > Level of Significance, H_0 will be accepted and H_1 rejected, it means independent variables have no significant effect on dependent variable.
- If, p-value < Level of Significance, H_0 will be rejected and H_1 accepted, it means independent variables have a significant effect on dependent variable

Besides that, the conclusion also can be made by comparing the t-stats with t-table. If the t-stats is higher than critical value of t-distribution table (t-table), with certain level of probability for rejecting the true hypothesis (alpha), it means that the independent variable is statistically significant in determining the dependent variable (Widarjono, 2005). If the value of t-stat is higher than the critical value of t-table, the null hypothesis of the regression model is rejected.

CHAPTER 5
RESULT AND ANALYSIS

5.1 Estimation Result

In order to examine the impact of the imposition of anti dumping duties variable and other independent variables towards Indonesia's export on paper products to Korea, we will estimate an equation model of export demand as stated at chapter 4 (equation 4.1), which is:

$$LogEXP_t = \alpha_0 + \alpha_1 \log GDP_t + \alpha_3 \log ER_t + \alpha_2 \log PR_t + \alpha_4 \text{Add} + \mu_t$$

The estimation of the equation model, using Eviews Ver. 4.1 software, produces results below:

LEXP = 4.3313*LGDP + 1.0349*LER - 2.5984*LPR – 0.2199*Add - 0.2053
(0.0000) (0.0075) (0.0003) (0.0003) (0.9470)

The estimation also generates results on R-Squared (63.57%), Probability of F-statistic (0.00000) and DW-Statistic (1.128). While the probabilities of T-Statistic, of each variable, are presented in the bracketed figures above.

Since the estimated model should fulfill the condition of Best Linear Unbiased Estimator (BLUE), which is accepted if the model meets the assumption of non-multicollinearity, non-heteroschedasticity and non-autocorrelation, it is needed to have an examination on the assumption above.

a. Multicollinearity Test

The regression result shows that all of the probabilities of t-stats from each independent variable is lower then significance level 1%. It means that independent variables have statistically significant t-stat for all of them. So in the early stage there is a conclusion of non multicollinearity in the model.

The test on the existence of multicollinearity can be implemented by using the Matrix Correlation Table, provided by Eviews. The result is stated below:

Tables.5.1.Correlation Matrix Table

	LGDP	LER	LPR	Add
LGDP	1	0.1729731	0.2127885	0.6781375
LER	0.1729731	1	-0.7179549	0.5921076
LPR	0.2127885	-0.7179549	1	-0.288842
Add	0.6781375	0.5921076	-0.288842	1

In determining the existence of multicollinearity among variables, there is a rule of thumb which used in this study. The higher value than 0.8 indicates that there is multicollinearity among regressors, on the contrary, if it is lower than 0.8, it indicates no multicollinearity among them.

Based on the result in the matrix correlation table above, we could also conclude that there are no perfect or exact, linear relationship among some or all independent variables of a regression model since all of the the figures on the table are less than 0,8. It means that the condition of non multicollinearity is fulfilled.

b. Heteroschedasticity Test

By using Eviews4 software to test the existence of heteroschedasticity, there are two methods can be used in examining the existence of heteroscheasticity, which are cross product terms option and no cross product terms. Since there is only few variables use in this thesis, it is suggested to use cross term product.

In this test, the Obs*R-squared stat become the reference to reject or accept the null hypothesis. If the probability value of obs*R-square statistic < α (significance level), Ho is rejected, which means there exist a heteroschedasticity problem.

Tables.5.2. White Heteroskedasticity Test:

F-statistic	2.687945	Probability	0.019420
Obs*R-squared	15.81480	Probability	0.026863

Based on the result of heteroschedasticity test on the table above, we can say that this model is still not free from heteroschedasticity problem, since the value of probability Obs*R-square, which is 0.026863, lower than α 5%.

c. Autocorellation Test

In the early stage we can see the regression result which shows that the Durbin-Watsons stat, which is 1.128160, is much lower than 2, so it can be indicated that the model contains an autocorellation problems.

Moreover, the test for autocorellation also could be implemented by using Breusch-Godfrey Serial Correlation LM Test provided by Eviews4 software. In this test, the Obs*R-squared stat become the reference to reject or accept the null hypothesis. If the probability value of obs*R-square statistic $< \alpha$ (significance level), Ho is rejected, which means there exist a heteroschedasticity problem.

Tables.5.3. Breusch-Godfrey Serial Correlation LM Test

F-statistic	8.935868	Probability	0.000481
Obs*R-squared	15.00903	Probability	0.000551

From the table above, it can be concluded that the model is still not free from autocorrelation since the probability of Obs*R-Squared, which is 0.000551, is lower than the significance level at 5%.

Based on several tests on the classical assumption above, it is found that there are violations of non-heteroschedasticity and non-autocorellation assumption, the model is no longer BLUE. There are treatments, which provided by the software, that can be used in order to overcome these violations, and make the model fulfill the condition of BLUE.

In overcoming the presence of heteroschedasticity, Eviews4 provide an option of treatment which is known as White Heteroskedasticity-Consistent Standard Errors & Covariance. By using this option, the heteroschedasticity problem could be overcome, as the results shown on the table below. After using this treatment, the value of probability Obs*R-Square has changed to 0.107815

which is greater than the alpha 5%, as a result, the null hypothesis can be accepted and the heteroschedasticity problem is no longer exist.

Tables.5.4. White Heteroskedasticity Test:

F-statistic	1.827915	Probability	0.103443
Obs*R-squared	11.78613	Probability	0.107815

Moreover, in order to overcome the presence of autocorellation in the model, the Cochrane-Orcutt iteration procedure can be used, by adding an autoregression (AR1) into the equation. AR(1) model becomes the basic in differencing to overcome the presence of autocorellation in the equation. Consequently, it is needed to add AR(1) into the regression as an independent variable which will be regressed together with other independent variables towards dependent variables. (Nachrowi, 2006)

After doing this treatment, the autocorellation is no longer exist, since the probability value of Obs*R-squared (0.607240) has been greater than the level of significance 5 %, as shown on the table below :

Tables. 5.5. Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.435325	Probability	0.649583
Obs*R-squared	0.997662	Probability	0.607240

After having treatments, the model is no longer contains any violations on OLS assumption, or on the other word, this model has fulfilled the condition of BLUE. Furthermore, the treatments to overcome the violations on non-heteroschedasticity and non-autocorellation assumptions will affect the whole estimation and generates some changes. The estimation result after the treatment is provided as follows:

Tabel 5.6. Result of Estimation on Export of Paper Products

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.612472	3.005182	0.203805	0.8393
LGDP	3.277167	0.745859	4.393816	0.0001
LER	1.258654	0.530923	2.370692	0.0217
LPR	-2.399774	0.611363	-3.925282	0.0003
Add	-0.181288	0.056684	-3.198243	0.0024
AR(1)	0.494966	0.129958	3.808674	0.0004
R-squared				0.731089
Prob(F-statistic)				0.000000

Thereby, the regression will generates a general equation of demand export model of paper products as follow:

LEXP = 3.2772*LGDP + 1.2587*LER - 2.3998*LPR – 0.1813*Add + 0.6125 + [AR(1)=0.4949]

d. Coefficient of Determinant (R-square test)

The result of regression shows that the value of R-square is 0,731089. It means that this model can be explained 73.1 % by the independent variable. On the other words the variations of export demand on paper products can be explained by independent variables (Real GDP, Nominal Exchange Rate, Relative Price, and anti dumping duties) as much as 73.1%. Otherwise, the rest 26.9% is explained by other variables that are not included in the models. This result can be accepted because the model has fulfilled the requirement of econometric criteria to have BLUE model, with no multicollinearity, no heteroschedasticity and no autocorellation.

e. T-Test

In this research, the test uses two hypotheses, H_0 and H_1. H_0 is accepted if probability of t-stats > α (significance level), it means that independent variable have no significant effect on dependent variable. While H_1 is accepted if

probability of t-stats < α (significance level), it shows that there exists a significant effect of independent variable to dependent variable individually.

The results of model's estimation shows that most of independent variables including real gross domestic product of Korea, relative price and the imposition of anti dumping duties have significant effects in defining the volume of export in 1 % level of significance. While nominal exchange rate significantly effect the export in 5% level of significance.

Tables.5.7. Result of T-Test

Independent Variables	Prob t-stat	Level of Signific.	Result H_0	Significance
1. LGDP	0.0001	1 %	Reject H_0	Significant
2. LER	0.0217	5 %	Reject H_0	Significant
3. LPR	0.0003	1 %	Reject H_0	Significant
4. Add	0.0024	1 %	Reject H_0	Significant

f. F-Test

F test is implemented to examine whether the independent variables, simultaneously, have a significant effect to dependent variable. In this research, the decision to accept or reject hypotheses above can be done by comparing p-value with the critical value used.

- If, probability-value > level of significance, H_0 will be accepted, it means independent variables, simultaneously, have no significant effect on dependent variable.
- If, probability-value < level of significance, H_0 will be rejected, it means simultaneously, independent variables have a significant effect on dependent variable

The result of test produces a significant result in every level of significant, since the value of prob. F stat which is 0,00000. This result shows that simultaneously, all of independent variables (Real GDP, Nominal Exchange Rate, Relative Price and anti dumping duties) have significant effect in defining the volume of export.

5.2 The Interpretation of Estimation Results

The result of regression shows that under the t-test, each of all explanatory variables (gross domestic product, nominal exchange rate, price index and anti dumping duties) are significantly affecting dependent variable. The signs of every explanatory variable estimated are also appropriate with the expected signs as has been stated in the hypothesis at Chapter 1. In relation with the fulfillment of classical assumptions, the violations in this model have been treated well and this model has become free from the violation of multicollinearity, homoschedasticity and autocorellation.

Furthermore, based on the last result of regression, the interpretation of each independent variable is described as follow:

a. Real Gross Domestic Product of Korea (GDP) variable will produce a significant effect to export volume in 1 % level of significance. It is in line with previous study done by Senhadji and Montenegro (1999) which estimates export demand elasticity for a large number of developing and industrial countries. The results of the study said that the effect of trade partner's income to export is significant and has a good statistical property.

   From the estimation results, the variable of gross domestic product has the biggest coefficient value compare to others. It makes the GDP of Korea become a factor which has relatively more dominant influence, compare to other factors in this study, in affecting the export volume of Indonesia. With the positive 3.28 coefficient value, GDP of Korea will play an important role in determining our export. This number shows that export is elastic which means export will be very responsive to the changes of GDP of Korea; every 1% increase in GDP of Korea will result in 3.28% increase on export volume of paper products.

   Korea's gross domestic products is the reflection of market size in Korea, so that, the increase of Korea's gross domestic products will results in the increase of Indonesia's export and vice versa (ceteris paribus). Besides that gross domestic product also represent the ability of a country to import from foreign countries to fulfill domestic demand. The increase of gross domestic product of Korea will increase their ability to import goods from other country

including the import of paper products from Indonesia which also means the increase of Indonesia's export on paper product to Korea. Due to the result above, it is needed to pay more attention on the possibility of the decrease on Korean GDP in the future, because the decrease of Korean GDP will directly contribute on the decline of our export of paper products.

b. Nominal exchange rate (ER) variable will also gives a significant effect to export volume in 5 % level of significance and has positive relation with export which means depreciation on rupiah will contribute to export increment, vice versa (ceteris paribus).

   The estimation result also shows that the coefficient value of this variable is positive 1.26; even though it is smaller than the coefficient of Korean GDP, it still greater than one which means that export is elastic to the changes of nominal exchange rate. It makes nominal exchange rate (ER) variable also has an important role in determining Indonesia's exports since the changes of this variable could directly contribute on changes of Indonesia's export and creates greater changes on export. With the positive 1.26 coefficient value, every 1% increase in ER will create an increase on export volume as much as 1.26%. Depreciation on rupiah will make the price of Indonesia's products become relatively lower in Korea market, it will raise the ability of Korea to import paper products from Indonesia and increase the demand of paper products from Indonesia, which in turn will increase Indonesia export. On the contrary, the depreciation of won in the future should be noticed because it would make as if the price of Indonesia's paper products become more expensive and decline exports.

c. The result shows that relative price (PR) variable will also produce a significant effect to export volume in 1 % level of significance and has an appropriate negative expected sign. The negative sign refers to the inverse relation between relative price and export which mean every increase in price will contribute to export decline, vice versa (ceteris paribus).

   With the negative 2.39 coefficient value, relative price become the second factor with the highest value of coefficient after Korean GDP. It means that relative price is the second most influencing factor for export after Korean

GDP in this study. Every 1% increase in relative price will result in 2.39 % decrease on export volume of paper products, it is lower than the changes that caused by GDP with 3.28 % changes of export on 1 % changes of GDP. Since the coefficient of Relative Price variable is greater than 1, it means that export volume is elastic to the changing of relative price and it makes price become an important variable that can affect Indonesia's export on paper products directly. The increased of relative price will be directly responded by the decrease of export. Price is the reflection of competitiveness, the higher the price the lower the competitiveness which makes export to decline. This result is resemble with the study done by Maria Luisa Streb (2003)[11] and Senhadji and Montenegro (1999) which conclude that export do react to relative price even though its elasticity is lower than trade partner income's elasticity.

d. Based on the estimation results, anti dumping duty (Add) variable will obviously gives a negative-significant effect to export volume in 1 % level of significance. Compare with other variables, anti dumping duty has the lowest coefficient value which means that the effect of the changes on anti dumping duty to export is relatively weaker than the effect of the changes on Korean GDP, nominal exchange rate and relative price. With the negative 0.18 coefficient value, every 1% increase in anti dumping duty will result in 0.18 % decrease on export volume of paper products. Moreover, since the coefficient of anti dumping duty variable is lower than 1, it means that the changing of anti dumping duty is inelastic to the changing of export volume. The changes of anti dumping duty will not much affect the export, the changes of anti dumping duty will generates smaller changes on export.

   The negative sign of the coefficient shows the inverse relation between the impositions of anti dumping duty with the amount of export. The imposition of anti dumping duties will decrease the export volume, while the cancellation of anti dumping duties will increase the export volume.

   The decrease on export happened since the anti dumping duty is considered as another form of tariff which act as an extra component of cost and basically will charge our exported products on the higher price at Korea market which

[11] See Streb, Maria Luisa; "*A Function for The Argentine Export Demand*"

in turn lowering the competitiveness of our products. The increase on price of Indonesia's exported product will make consumers reduces their average willingness to pay for the paper products from Indonesia, which in turn will move the domestic demand function leftwards and as a consequence, imports from Indonesia will fall or on the other words it will obviously decrease Indonesia's export of paper products to Korea. It is in line with previous study which said that anti dumping duties has a significant impact on import trade which caused the value of imports to fall on the first three years of protection (Prusa, 2001)[12].

[12] See Prusa, Thomas J, *"On the Spread and Impact of Anti-Dumping"* The Canadian Journal of Economics / Revue canadienne d'Economique, Vol. 34, No. 3 (Aug., 2001), pp. 591-611

CHAPTER 6
CONCLUSION AND RECOMMENDATION

6.1. Conclusion

In accordance with the result and analysis of regression on Indonesia's export which is described on the previous chapter, there are several points can be conclude, which are stated as follows:

a. All of the independent variables are statistically significant under T-test, it means that every independent variables, individually, can influence the volume of export on paper products. Moreover, all of independent variables are also, simultaneously, have significant effects on the changing of export volume.

b. From the result of regression it can be concluded that: the imposition of anti dumping duties will contributes the decrease on the export of paper products even though the impact that generated by the imposition of anti dumping duty is smaller than the impact of other variables in this study. The increase on 1% of anti dumping duty will make Indonesia's export on paper products decline about 0.18%. The decrease on export happened since the anti dumping duty is considered as another form of tariff which basically will charge our exported products at a higher price at Korea market which in turn lowering the competitiveness of our products compared with paper products from other countries. The increase on price of exported paper products will make consumers reduce their average willingness to pay for the paper products from Indonesia, which in turn will move the domestic demand leftwards and as a consequence, imports from Indonesia will fall or on the other words it will obviously decrease Indonesia's export of paper products to Korea.

c. Gross domestic product of Korea has an important role in determining export volume of paper products to Korea, when Korea's income experiences an increase, they will have more power to demand more on imported products. On the other words the higher income of Korea, the higher the demand on our export of paper products. The changes of Korea's

income will be responded directly by the changes of Indonesia's export in the short period of time, since the estimated coefficient shows that there is an elastic relation between Korea's incomes with Indonesia's export. Moreover, the result shows that Korea's income has the biggest coefficient, it can be interpreted that in this research the changes of Korea income would give the highest impact, compare to other variables, on changes of Indonesia's export of paper product to Korea with 3.28% changes on export for every 1% changes in Korean gross domestic product. Therefore, Korean gross domestic product should be considered as the main determinant factor of Indonesia's export on paper product.

d. The increase in relative price of Indonesia's paper products will contributes the decline on Indonesia's export, the higher the price charged to Indonesia's paper products, the lower the demand on our export. In this research, relative price is also an important determinant factor of export, since its coefficient has the second highest value (after Korea's gross domestic product) which means that changes on export price of paper products has the second largest contribution to the changes of Indonesia's export on paper products, every 1% increase of price will contribute 2.39% decline in volume of export.

e. The last independent variable of Indonesia's export in this research is nominal exchange rate. This variable is also important in determining Indonesia's export of paper products to Korea. When rupiah's value depreciated in terms of won, paper products from Indonesia will become cheaper, and the demand on paper products from Indonesia will increase. Every 1% increase on nominal exchange rate of won in term of rupiah will create 1.26% increase on export.

6.2. Recommendation

As the result shows, the imposition of anti dumping duty on our exported products will obviously decline the volume of export. This is an apprehensive condition for paper industry in Indonesia. The case of the imposition of anti dumping duties to Indonesia's certain paper products by Korea has been brought to Dispute Settlement Body (DSB) of WTO and it has been decided in DSB

meetings that the imposition of anti dumping duty by Korean authority has violated the basic rule of WTO on anti dumping agreement. Unfortunately, the government of Korea still refuses to implement the result of panel and refuse to tear of the imposition of anti dumping duties. In facing this problem, the government of Indonesia should be brave to take actions against this unfair treatment to protect Indonesia's producers and exporters, which in turn will also raise the credibility of the Indonesia's government in international trade domain.

There are several actions that will be recommended in this thesis. First, after the refusal of Korean Trade Center (KTC) to tear off the anti dumping duties, the government of Indonesia should try to hold another bilateral consultation with the authority of Korea which based on WTO rules in order to make the Korean authority cancel off the imposition of antidumping duties and ask for compensation as an indemnification of the loss that suffered by Indonesia's paper industry. This bilateral negotiation should involve both Government to Government (G to G) negotiation and Government to Business (G to B) negotiation. Second, hold consultation with competent authority at WTO to find another legal opinion and steps to be taken to force Korea authority to comply with DSB decision if there is no satisfied decision in bilateral consultation with Korean authority.

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Appendix 1: First Result of Regression

Dependent Variable: LEXP

Method: Least Squares

Date: 12/22/08 Time: 13:34

Sample: 1994:1 2008:1

Included observations: 57

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	4.331283	0.698430	6.201458	0.0000
LER	1.034979	0.372154	2.781053	0.0075
LPR	-2.598458	0.672982	-3.861110	0.0003
AD_DUTY	-0.219979	0.056657	-3.882624	0.0003
C	-0.205272	3.071838	-0.066824	0.9470

R-squared	0.635683	Mean dependent var	15.63426
Adjusted R-squared	0.607659	S.D. dependent var	1.218680
S.E. of regression	0.763346	Akaike info criterion	2.381421
Sum squared resid	30.30026	Schwarz criterion	2.560636
Log likelihood	-62.87049	F-statistic	22.68322
Durbin-Watson stat	1.128160	Prob(F-statistic)	0.000000

Appendix 2 : White Heteroscedasticity Test

White Heteroskedasticity Test:

F-statistic	2.687945	Probability	0.019420
Obs*R-squared	15.81480	Probability	0.026863

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 12/22/08 Time: 13:35
Sample: 1994:1 2008:1
Included observations: 57

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-84.60117	32.00092	-2.643710	0.0110
LGDP	-1.976096	1.043534	-1.893658	0.0642
LGDP	1.102002	1.489886	0.739655	0.4630
LER	2.712103	4.269455	0.635234	0.5282
LER^2	-0.876515	1.321903	-0.663071	0.5104
LPR	-35.75234	13.16433	-2.715850	0.0091
LPR ^2	-3.789402	1.394172	-2.718031	0.0091
AD_DUTY	-0.000904	0.062016	-0.014585	0.9884

R-squared	0.277453	Mean dependent var	0.531584
Adjusted R-squared	0.174232	S.D. dependent var	0.898591
S.E. of regression	0.816565	Akaike info criterion	2.562051
Sum squared resid	32.67218	Schwarz criterion	2.848796
Log likelihood	-65.01847	F-statistic	2.687945
Durbin-Watson stat	2.672516	Prob(F-statistic)	0.019420

Appendix 3: Breusch-Godfrey Serial Correlation LM Test:

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	8.935868	Probability	0.000481
Obs*R-squared	15.00903	Probability	0.000551

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 12/22/08 Time: 13:37

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	-0.526777	0.632420	-0.832954	0.4088
LER	-0.135482	0.328728	-0.412139	0.6820
LPR	-0.340952	0.603602	-0.564862	0.5747
AD_DUTY	0.028919	0.050245	0.575555	0.5675
C	-1.348953	2.752123	-0.490150	0.6262
RESID(-1)	0.321879	0.137299	2.344360	0.0231
RESID(-2)	0.328525	0.136851	2.400600	0.0201

R-squared	0.263316	Mean dependent var	-5.18E-16
Adjusted R-squared	0.174914	S.D. dependent var	0.735579
S.E. of regression	0.668157	Akaike info criterion	2.146000
Sum squared resid	22.32171	Schwarz criterion	2.396901
Log likelihood	-54.16099	F-statistic	2.978623
Durbin-Watson stat	1.970532	Prob(F-statistic)	0.014482

Appendix 4: White Heteroschedasticity Test (After Treatment)

White Heteroskedasticity Test:

F-statistic	1.827915	Probability	0.103443
Obs*R-squared	11.78613	Probability	0.107815

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 12/22/08 Time: 13:41

Sample: 1994:2 2008:1

Included observations: 56

White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-57.14008	36.68061	-1.557773	0.1259
LGDP	-0.566838	0.955979	-0.592940	0.5560
LGDP ^2	-0.194266	1.158051	-0.167752	0.8675
LER	3.011007	4.547998	0.662051	0.5111
LER^2	-0.944297	1.419053	-0.665441	0.5090
LPR	-24.12123	14.56183	-1.656470	0.1042
LPR ^2	-2.591963	1.550546	-1.671645	0.1011
AD_DUTY	-0.003133	0.031233	-0.100296	0.9205

R-squared	0.210467	Mean dependent var	0.399370
Adjusted R-squared	0.095326	S.D. dependent var	0.745567
S.E. of regression	0.709141	Akaike info criterion	2.282040
Sum squared resid	24.13831	Schwarz criterion	2.571376
Log likelihood	-55.89712	F-statistic	1.827915
Durbin-Watson stat	2.569569	Prob(F-statistic)	0.103443

Appendix 5: Breusch-Godfrey Serial Correlation LM Test (After Treatment)

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.435325	Probability	0.649583
Obs*R-squared	0.997662	Probability	0.607240

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 12/22/08 Time: 13:40

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	0.167009	0.849595	0.196575	0.8450
LER	0.045518	0.541865	0.084002	0.9334
LPR	-0.143365	0.820368	-0.174757	0.8620
AD_DUTY	-0.007396	0.073243	-0.100986	0.9200
C	-0.863191	3.829540	-0.225403	0.8226
AR(1)	0.194178	0.344782	0.563191	0.5759
RESID(-1)	-0.273328	0.370533	-0.737660	0.4643
RESID(-2)	-0.019892	0.223927	-0.088832	0.9296
R-squared	0.017815	Mean dependent var		3.07E-13
Adjusted R-squared	-0.125420	S.D. dependent var		0.637676
S.E. of regression	0.676484	Akaike info criterion		2.187747
Sum squared resid	21.96626	Schwarz criterion		2.477083
Log likelihood	-53.25693	F-statistic		0.124379
Durbin-Watson stat	2.024827	Prob(F-statistic)		0.996192

Appendix 6: Final Result of Regression

Dependent Variable: LEXP

Method: Least Squares

Date: 12/22/08 Time: 13:39

Sample(adjusted): 1994:2 2008:1

Included observations: 56 after adjusting endpoints

Convergence achieved after 8 iterations

White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	3.277167	0.745859	4.393816	0.0001
LER	1.258654	0.530923	2.370692	0.0217
LPR	-2.399774	0.611363	-3.925282	0.0003
AD_DUTY	-0.181288	0.056684	-3.198243	0.0024
C	0.612472	3.005182	0.203805	0.8393
AR(1)	0.494966	0.129958	3.808674	0.0004

R-squared	0.731089	Mean dependent var	15.63338
Adjusted R-squared	0.704198	S.D. dependent var	1.229690
S.E. of regression	0.668800	Akaike info criterion	2.134295
Sum squared resid	22.36470	Schwarz criterion	2.351297
Log likelihood	-53.76026	F-statistic	27.18699
Durbin-Watson stat	2.123092	Prob(F-statistic)	0.000000

Inverted AR Roots	.49

Appendix 7: Main Export Destination Countries on Paper Products included in HS 4802. (2008)

Source: Central Bureau of Statistic, Processed

Destination Countries	2000	2001	2002	2003	2004	2005	2006	2007
JAPAN	54,516,283	55,462,411	42,078,274	59,632,266	204,038,384	323,159,800	338,494,947	291,625,251
MALAYSIA	69,254,346	90,807,748	77,992,694	69,063,583	85,843,553	124,021,473	166,719,852	189,746,372
USA	40,530,252	41,160,973	14,062,241	14,083,350	15,763,902	15,935,568	119,918,424	177,044,504
RRC	16,711,078	32,208,887	60,951,905	85,537,564	102,811,544	105,444,974	163,912,710	149,930,213
IRAN	77,299,778	42,347,357	48,917,549	36,354,880	38,661,663	91,506,863	95,156,036	119,018,363
AUSTRALIA	33,995,567	48,391,184	54,042,402	51,506,046	101,121,641	91,873,177	87,255,142	94,966,678
SAUDI ARABIA	24,876,231	19,434,161	18,170,303	14,578,465	25,122,375	37,402,920	49,998,829	73,363,858
SINGAPORE	70,273,041	37,581,807	41,767,576	30,828,149	36,552,157	49,111,597	73,567,020	76,724,346
HONG KONG	40,879,840	40,212,026	79,981,702	61,294,593	64,879,458	71,182,074	76,175,837	71,170,727
KOREA, REP. OF	57,101,452	57,337,573	60,893,472	37,415,853	30,094,493	62,839,402	76,734,117	63,905,266