THE ASEAN-CHINA FREE TRADE AGREEMENT (ACFTA): THE IMPACT TO INDONESIAN ECONOMY BEYOND PROS AND CONS

By

Zufri Hadi

THESIS

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
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ABSTRACT

THE ASEAN-CHINA FREE TRADE AGREEMENT (ACFTA): THE IMPACT TO INDONESIAN ECONOMY BEYOND PROS AND CONS

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Free trade has become an interweaving phenomenon of the market in the globalized political economy. Indonesia is taking part in the framework of ASEAN-China Free Trade Agreement (ACFTA). Controversies on the anticipated impacts of ACFTA's implementation on the Indonesian economy are legion across various economic strata: among people, economic observers, entrepreneurs and bureaucrats. This study is aimed at exploring the ACFTA's impact to the Indonesian economy by examining the potential impacts on domestic sectors. Included in the examination are the changing of the international trade transaction, the economic growth (GDP per capita) and the changing of market share of Indonesian export commodities before and after its implementation. The analysis uses the Gravity Model, Revealed Comparative Advantage (RCA) and Intra-Industry Trade (IIT) Index. Overall, the result shows a positive impact; however there will be a significant decrease of the group commodities of chemicals and related products, miscellaneous manufactured articles, and the other commodities and transactions which are not classified in the Standard International Trade Classification (SITC).

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Dedicated to my parent,
and my beloved wife Rosmala

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LIST OF SYMBOLS

ln	logarithm natural
β	beta
α	alpha
ε	standard error

I. Section 1

A. Introduction

The emerging world's international trade lately witnesses a trend toward liberalization bilaterally, regionally and multilaterally. The literature on global trade shows a positive impact on the world's economic growth.

> Krueger (1999, p.1) asserted that "Until the l980s, the liberalization of international trade on a multilateral basis was the great success story of the postwar era, and certainly contributed in a major way to the rapid economic growth of the international economy. World trade had grown at more than twice the rate of growth of real world GDP, and had provided a highly permissive environment for economic policy, even in those developing countries that then chose inward-looking trade policies."

Under this system, the trade scenario –known as Free Trade Agreement (FTA) – had been created in order to reduce and even to eliminate the existence of trade barrier rather than to use the common external tariffs.

The ASEAN[1] and China Free Trade Agreement (ACFTA) is one of the larger regional framework agreements addressing a range of comprehensive economic cooperation between the ASEAN and the People's Republic of China. This framework covers free trade agreements between China and six ASEAN member countries (ASEAN-6) consist of Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand. It went into effect January 2010. The remaining four ASEAN member countries (ASEAN-4) –Cambodia, Laos, Myanmar and Viet Nam – are expected to join the agreement by 2015.

[1] ASEAN is the Association of South East Asian Nations, the geopolitical and economic organization in South East Asia, was established on 8 August 1967 under Bangkok Declaration and recently, it has 10 member countries, such as Brunei Darussalam, Cambodia, Indonesia, Laos, Myanmar, Malaysia, Philippines, Singapore, Thailand and Viet Nam

To Indonesia, ACFTA is expected to support the improvement of the economic prosperity and welfare of the people in the region. However, even after it has been fully implemented on January 2010, controversies are wide spread among the Indonesian people. On one hand, most parties, economic observers, entrepreneurs and many Indonesian people oppose the government's decision for implementing the ACFTA. On the other hand, many others, especially bureaucrats support the agreement since they believe it will create a significant impact to geostrategic and economic interests of Indonesia and Southeast Asia as a whole, which will ultimately enhance production network and investment liberalization.

Critics argue that Indonesian economy will be negatively impacted by ACFTA. They predict that many domestic producers may go under because they are not as competitive as their counterparts in China. The FTA is likely to threaten small and medium enterprises which are the driving wheels of the national economy[2]. On the other hand, proponents argue that the economic interdependencies within ACFTA will certainly put pressure on domestic industries to increase their competitiveness in order to face international trade competition which is inevitable.[3]

The argument of the proponents relies on the general theory of free trade in which "the trade makes everybody better-off". On the other hand, the critics rely on microeconomic factors –cost and benefit in term of prices and quantities within supply and demand- within the small scope of economic sectors. Who has a better argument? Deductive reasoning is of limited power. Therefore, it is necessary to empirically examine the potential impact of the ACFTA on the Indonesian economy with an emphasis on the macroeconomic factors within the whole domestic sectors.

[2] Press Release, Ministry of State of the Republic of Indonesia, 7 April 2010, Jakarta
[3] Ibid

There are also other researches and studies that analyzed the impacts of ACFTA[4]. However, those previous studies analyzed the impacts of the ACFTA on ASEAN member countries as a whole rather than specifically focusing on Indonesian economy. Therefore, this study will focus the discussion on the Indonesian economy and also will use a different model within the analysis.

The aim of this thesis is to explore the impact of the ACFTA's implementation specifically to the Indonesian economy. It will be measured by the changing of the international trade transaction and the economic growth of the whole domestic sectors. Moreover, it will be observed by the changing of market share of Indonesian export commodities before and after the implementation of ACFTA.

In achieving the purpose of study, this thesis will focus on answering a question. How is the impact of the ACFTA's implementation to the Indonesian economy? From the main question, there are two sub-questions can be made. Are there any significant changes of the market shares and the competitiveness level of most manufacture industries within domestic sectors after the implementation of the ACFTA? Which sectors can "survive" and which sectors will "hit-hard" by the ACFTA?

Based on those questions and the basic principle of trade –to gain benefit - there are several hypotheses can be made. The impact of the ACFTA's implementation to the Indonesian economy is positive. Hence, it can be said that ACFTA will also increase the market shares and the competitiveness level of most manufacture industries within domestic sectors.

[4] Such as:
a) Park et al (2008)
b) Yue (2004)
c) Tambunan (2006)

The ACFTA, as it relates to Indonesia, will potentially benefit for the group of agricultural products, such as vegetable and palm oil, coffee, rubber, pulp, wood and other fibrous cellulosic material, paper or paperboard bleached, seed metal, crust and ash. It is due to the product value of this groups which have tendency to increase significantly. Meanwhile, the others are predicted to be negatively affected, such as garment, electronics, food, steel/iron industry and horticultural products. This is due to the imports of these products that significantly decrease after the implementation of ACFTA.

The remaining part of this thesis is organized as follows. In Section 2, the framework of a Gravity Model will be presented to analyze the impact of the ACFTA's implementation to the Indonesian economy. Meanwhile, in Section 3, the impact of the ACFTA's implementation to the competitiveness of most manufacture industries within domestic sectors will be analyzed by using the Revealed Comparative Advantage (RCA) and Intra-Industry Trade (IIT) model. This quantitative analysis will also answer the research question about the sectors that will "survive" and "hit-hard" by the ACFTA based on their competitiveness. The thesis concludes with Section 4.

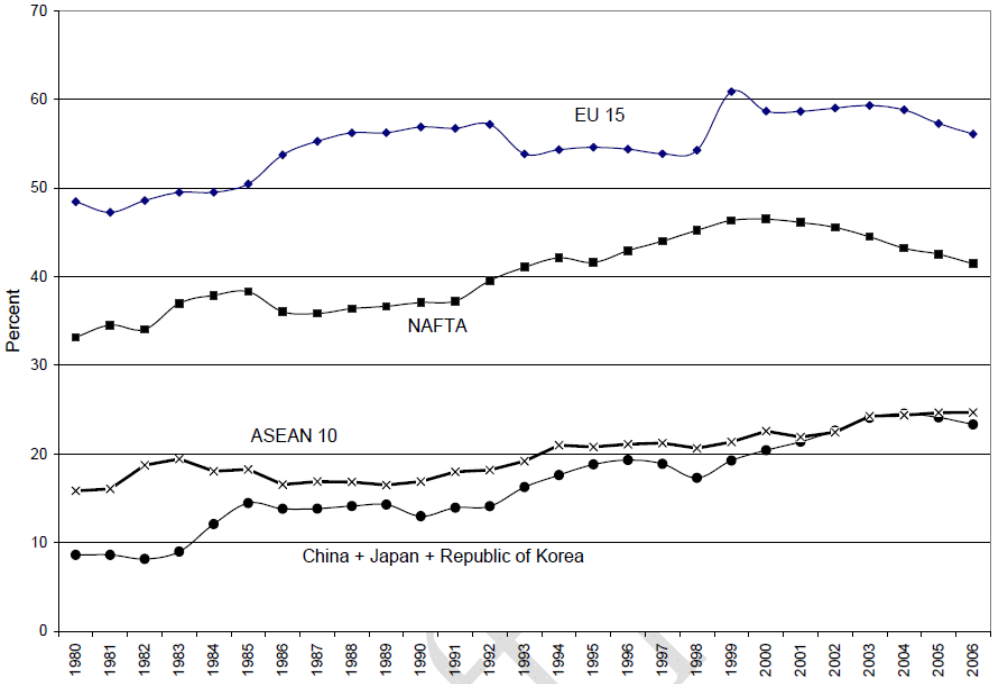
B. Issue Background

Indonesia, one of the developing countries in the world, is taking part in the FTA within the regional scope of the ASEAN regime, the geopolitical and economic organization in South East Asia. As one of the founding member countries of the organization, Indonesia signed the framework agreement of the ACFTA. In establishing the ACFTA, the Heads of ASEAN member countries and China signed the ASEAN-China Comprehensive Economic Cooperation on 6th November 2001 in Bandar Sri Begawan, Brunei Darussalam. As its major pillar, both side moved forward by signing the Framework Agreement on Comprehensive

Economic Cooperation between ASEAN and People's Republic of China in Phnom Penh, Cambodia on 4th November 2002. Meanwhile, the change of its protocol was signed in 6th October 2003 in Bali, Indonesia.

Indonesia perceives the ASEAN plus China as one of the world's largest trading blocs. It has more than 1.9 billion of population, the largest population in the world, which also makes this bloc become a high potential market. In term of the trade volume, ASEAN plus China trade values reached almost US$200 billion in 2008[5] with a combined Gross National Income (GNI) of US$4.3 trillion, the third-largest trade value in term of size of union after European Union (EU) and North American Free Trade Agreement (NAFTA)[6].

Figure 1. Intra-regional Trade 1980-2006



Source: "ASEAN and Trade Integration", 8 April 2009, UN-ESCAP Trade and Investment Division

[5] ASEAN Trade Statistics Database (Data as of July 2009)
[6] Park et al (2008)

Considering those potency and positive impacts, the Head of ASEAN member countries (ASEAN-6) and China ratified ACFTA on November 2002 during the 8thASEAN Summit. Its aims are to (a) strengthen and enhance economic cooperation, trade and investment on both sides; (b) liberalizing trade in goods, services and investments; (c) seek new areas and developing mutually beneficial economic cooperation on both sides; and (d) facilitate more effective economic integration with the new member countries of ASEAN and bridging the gaps that exist on both sides. In addition, both sides also agreed to strengthen and to enhance economic cooperation through (a) eliminating tariff and non tariff barriers in trade; (b) progressively liberalizing trade in services; and (c) creating a competitive and open investment regime within the framework of ACFTA. Moreover, although it went into effect on January 2010, the implementation of reducing tariff had been started through the framework of Early Harvest Program on January 2004.

As the common practice of democracy, however, every government's decision mostly will be characterized by controversy. Every people, as the stakeholders, have their own interest and also freedom to deliver their voice and concerns. Therefore, in term of ACFTA, Indonesian people have been divided into two voices, agree and disagree, pros and cons, as like as two sides of a coin.

The pros' arguments are simply based on the theory of international trade in which ACFTA is the part of globalization's order where every aspects are interdependence one to each others. Since individual needs are unlimited, commodity exchange automatically will be established within the system through international trade activities. Hence, the flow of goods, services, ideas and information could no longer be resisted.

In fact, the basic concept of international trade and even free trade itself has fundamentally represented those interdependencies because each country has its own strengths and weaknesses. Many countries are rich with resources, yet less productive within their industries. Meanwhile, many others are lack of natural resources, but they have high level of productivity. Therefore, no countries can afford to remain isolated from the trends of economic interdependences and integration without suffering losses.

In the other side, critics argue that ACFTA is only the complement "building blocks" of multilateral trade liberalization under WTO-plus. They also argue that Indonesia is not ready to implement the agreement. It can be seen from the lack of infrastructure, regulation and its global competitiveness.[7] It is noted that Indonesia's global competitiveness remains low. From 139 countries, Indonesia is on the 54th rank in 2009-2010[8]. Meanwhile, competitiveness is the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy.[9]

According to the analysis of the Indonesian Economist Association[10], an Indonesian research group, the ACFTA will lead Indonesia to total losses of US$ 3.8 billion per year within seven manufactures- electronics, textiles, petrochemicals, ceramics, leather products, steel and iron products, and foods and beverages. Meanwhile, the Indonesian Chamber of Commerce and Industry[11] in its earlier analysis even called on the government to review the free trade agreements of the ACFTA immediately. The chamber noted that almost 1%

[7] Keynote Speech of Vice President of the Republic of Indonesia, Prof. Budiono, The Asia News Network Seminar *"The Strategic Balance in Asia: Cooperation & Competition",* Jakarta, 26 April 2011
[8] Schwab et al (2010)
[9] Schwab et al (2009, p.3)
[10] In Indonesian language can be translated as "Ikatan Sarjana Ekonomi Indonesia (ISEI)"; also at Journal of ICTSD (2010).
[11] "The Indonesian Chamber of Commerce and Industry" or in Indonesian translation known as "Kamar Dagang dan Industri Indonesia (KADIN)"

from the total 52 million of Indonesian small and medium enterprises, especially metal, iron, garment and textile became bankrupt in just a few months after the agreement was fully implemented in January 2010[12]. It emphasized that even though until the early 2011, the agreement had not yet showed significant impact on the eminent sectors, but it does not imply that this condition will keep stagnant. It also predicted that if Indonesia remains on its current track, there will be much more national industries that are going to collapse.[13]

The cons' analysis, arguments and prediction, however, were based only on microeconomic factors -cost and benefit- within the small scope of economic sectors. The analysis of ACFTA's impacts should be based on macroeconomic factors that are determined by the economic growth. It also needs to covers a wide scope of economy that is described by the whole domestic sectors.

The ACFTA, as the trading practice, can cause both, positive and negative impacts. On one hand, positive impacts of the agreement will be enjoyed directly by manufactured sectors with exported products to China. Meanwhile, on the other hand, due to less competitive advantages, some of the domestic producers with the same product with China will relatively affected by the negative impact and it definitely will caused a massive labor layoff within these sectors. In this term, we should know that FTA is associated with substantial employment losses in which include the most-impacted, import competing group of industries; and then manufacturing as a whole.[14]

To be concerned, Secretary General of the Indonesian Ministry of Industry, Mr. Agus Tjahajana Wirakusumah (Bisnis Indonesia, 2009) asserted that "not all of the

[12] Uno (2010)
[13] Sulisto (2011)
[14] Trefler (2004, p.31)

domestic's manufacture industries are having low competitive advantages compare to China; therefore, not all of those need to be protected by tariff". [15] But the most important part, in fact, is a possible winning strategy forged by the policy makers and industry leaders within the trade competition. Hence, it is necessary to measure the impact of the ACFTA's implementation to the economy, especially the competitiveness of domestic sectors as a whole, based on the statistical evidences.

C. Literature Review

Theory of International Trade: Basic Model and Advantages

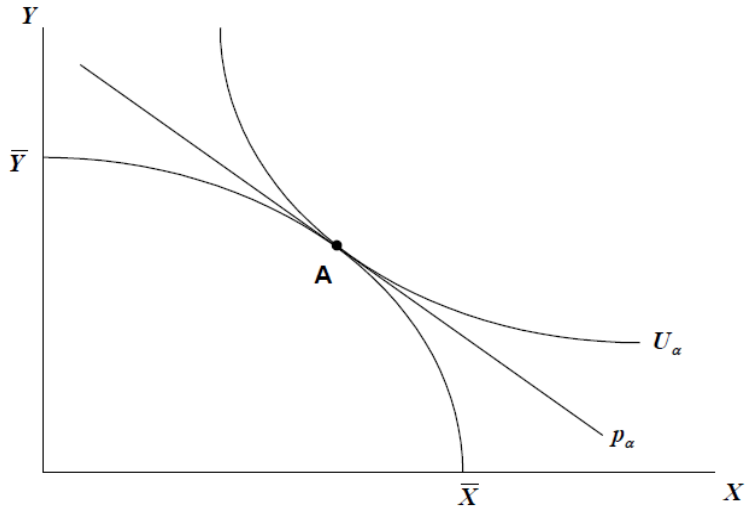
Economic system is the entirety of institution and stakeholders, law, policy and even process that manage and utilize the finite available resources to provide the community needs. It should be underlined that even though there are such different economic systems in the world, but those are fundamentally build upon the same economic principal, supply and demand between producers and consumers respectively. In the other word, the aggregation of this stakeholders' behavior has established the economic within a country. Hence, the equilibrium within the economic system is created by the interaction of behaviors between the producers who want to maximize their profit, described by the curve of production possibility frontier (X□Y□), and the customers who want to maximize their utility based on their indifference curve (U) at given commodity price (p).

In a closed-economic system (Figure 2), known as autarky, the composition of products within the equilibrium position (point A) is the result of an interaction mechanism of domestic aggregate demand and aggregate supply at given price (p). The aggregate demand curve is strongly influenced by the level of consumer utility (U) in the available consumption.

[15] "Products with lower competitive advantage is still protected", Interview of the Secretary General of the Indonesian Ministry of Industry, Mr. Agus Tjahajana Wirakusumah with *Bisnis Indonesia*, editorial, Desember 2009

Meanwhile, the aggregate supply is greatly influenced by the level of available production and its factors. On one hand, manufacturers only have the option to produce a collection of certain types of products and try to maximize profits within their production functions. On the other hand, consumers can only maximize their utility by consuming a combination of types of products manufactured only within the country and this, indirectly, will limit their utility level.

Figure 2. Closed-Economy (autarky) General Equilibrium

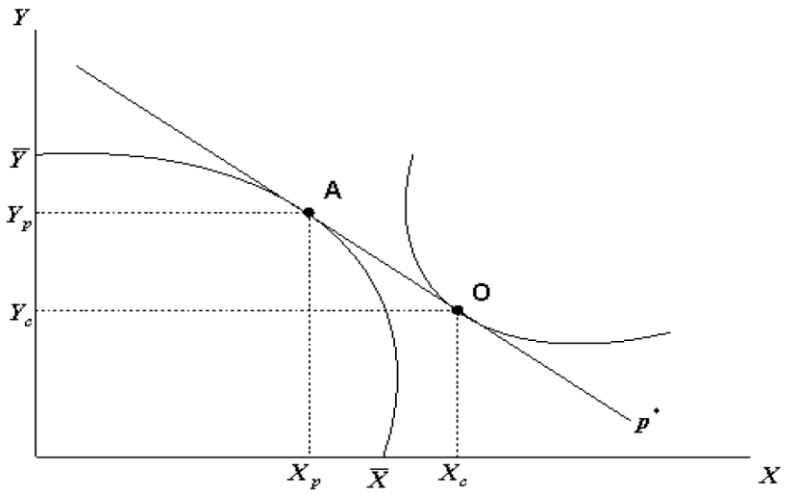


Source: Markusen et al (1995, p.53). International Trade Theory and Evidence

As have been mentioned, in the era of globalization, the economy is no longer limited to the scope of a country but has been developed and passed cross-border. The difference of resources, level of production and technology has caused the magnitude of variations in the type of product manufactured among countries. Meanwhile, the difference of taste and individual utility level of consumers imply a high inter-country variation within the available consumption. At this point, the behavior of firm and consumer to maximize profit and utility, respectively, has encouraged the closed-economy to become an open-economy in which the international trade occurred.

In an open-economic system (Figure 3), the international trade among countries implies the exchange of products. Hence, it has created the opportunity for both, the consumers and producers. The available access to international markets can be used by the producers to increase the number of products with up to exceed domestic demand. While the consumers also have the opportunity to maximize their utility by consuming an excess supply of certain products within the domestic market or by consuming a more diverse range of products without being limited to domestic products only. As the result, these activities have shifted the initial equilibrium (point A) to the balance based on international trade (point O).

Figure 3. Open-Economy General Equilibrium



Source: Markusen et al. (1995, p.55). International Trade Theory and Evidence

The new equilibrium describes and excess demand product of X (Xc-Xp) and excess supply of product Y (Yc-Yp). The excess demand can be met by imports from other countries so that consumers can choose the combination of products that generate a higher level of their utility (point O). Meanwhile, the production of Y that exceeds domestic demand will be an

excess supply within the domestic market. Thus, it can generate more profit for the producers through export surplus in the international market.

In international trade system, based on the model of open economy general equilibrium, a country will tend to export a product with abundant availability in the country or in the other word, excess supply product. Meanwhile, Ricardian model described that a country will focus its export on the type of products that have the highest comparative advantage. More specifically, Heckscher-Ohlin theorem stated that a country will tend to export the commodities which intensively use the abundant and cheap factors of production and export the commodities which are produced by using the scarce and expensive factors of production[16]. At this point, the differences of the production function among countries will also determine the differences of trade direction within the international market system. A country which is relatively efficient in producing certain commodities would likely be an exporter of those commodities.

The consideration of a country to choose whether to adopt the open-economic system or closed-economy is based on its idealism. But virtually, most of the countries now have adopted the open-economy. It is due to the importance of international trade for the development of their economy.

International trade practice is done on the basis of mutual agreement. It can be interpersonal, among individuals with the government of a country or a government with other governments. Although it has occurred thousands of years, its major impact on economy, social and politics can be experienced within the recent few centuries. International

[16] Blaug, Mark (1992, p.286)

trade represents economic size of a country through it shares to Gross Domestic Product (GDP). It encourages industrialization, advanced transportation, advanced communication, the presence of multinational companies and the development of international financial system. It also strengthens social and political relationship among nations through cultural exchange and economic integration.

Theoretically, there are several advantages of international trade practice. *First*, the advantages of exchange. There are so many factors that will create the difference of production yield in each country, such as geographical condition, climate, advanced level of science and technology and so forth. By using the international trade system, each country will be able to meet the needs that are not domestically produced. Each country can produce certain product exceeds over the domestic demand and export the surplus from the excess supply to international market that will eventually expand the market and enhance the profit. Meanwhile, the excess demand on certain product can be met by import from the other countries. International trade also can provide the various needs of products based on different individual references of domestic consumers in order to enhance the consumers' utility.

Second, the advantages of specialization. Even though a country can produce the same products with the other countries, but it is necessary to consider the import of those products due to the cost efficiency. A country can be more focused on a type of product which can be produced at a relatively high level of efficiency. Meanwhile, the needs of product that will not be able to produce efficiently within the domestic sectors can be met by importing those products from other countries. *Third*, the advantages that will be achieved by technology and knowledge transfer. International trade will give an opportunity to learn the production technique and technology. Moreover, it will create a chance to transfer the

knowledge of operational management and modern mechanism in order to produce more efficiently.

International trade, however, has many constraints in the implementation, such as tariff and non-tariff barrier. By imposing these constraints, government tries to limit or even ban the import of specific products in order to protect the domestic sectors and its products. As an illustration, on one hand, the tariff barrier will increase the price of imported commodities and finally will decrease its demand. This condition gives an incentive for domestic production in order to provide those commodities with lower price. On the other hand, the non-tariff barrier, such as export subsidies will create the price of domestic product to be relatively cheaper than the same in imported country. Hence, it will increase the demand from overseas market due to the less comparative advantage, in term of price, of the imported country's product.

It seems that the protection policies, by imposing those barriers, can protect the domestic sectors and its products in which also to protect local employees, to encourage domestic production in order to increase the revenue and to reduce the consumption and reliance on export commodities. In the long term, however, it can be economically dangerous because such policies will encourage domestic producers to continue producing inefficiently. It eventually leads to economic stagnation[17]. They may not make the necessary improvements that could be done within the situation without tariffs. The policies even protect those which are under performing industries and uncompetitive manufacturers. Hence, it will waste the country's resource and decrease the level of customers' utility. It also will lead to retaliation in which the other countries will impose the tariffs upon the export of those domestic products. Thus, the domestic producers will lose due to sell less exports.

[17] The World Bank Group, (2000, p. 67)

ACFTA: A Framework of Trade Liberalization

Many countries have globalized their economies into a greater extent, trade liberalization. The extent of this process can be measured by the ratio of a country's trade to its GDP[18]. Table 1 shows the export to GDP ratio of 160 countries in the world according to the data of World Bank.

Table 1. Export to GDP Ratio of Countries in the World[19].

Export to GDP Ratio	Number of Countries
>35%	102
25% - 34%	35
10% - 24%	21
<10%	2

Source: World Bank (2008)

From 160 countries in the world, 102 countries have more than 35% of export to their GDP and 35 countries are between 25%-34% export to their GDP. Moreover, 10%-24% of export portion to GDP covers 21 countries and only 2 countries with less than 10% export to GDP. At this point, liberalization, in fact, has been implemented by most of the countries in the world. This indication can be recognized by the significant number of the export to GDP ratio of many countries.

This evidence is also supported by the fact that the increasing number of the export to GDP ratio has been followed by the increasing number of the world trade. In 1965, the ratio of the world's export to GDP is 3.3%. This number increases significantly to 10.2% in

[18] The World Bank Group, (2000, p. 68).
[19] World Bank (2008)

1975. In 1985, it reached 14% and became 17% in 1995. According to the recently data, the ratio has been in the position of 23.9% in 2007[20].

One of those countries that are describing the significant growth is Indonesia. As an illustration, in 1985, the ratio of Indonesian export to GDP is 22.2%. This number increased significantly to 32.2% in 2004. It is higher than the import to GDP ratio which is only 27% and even higher than 25.8%, the world's exports to GDP ratio at the same period[21]. It indicates that Indonesia is also the part of trade liberalization.

In trade liberalization, the trade barrier can be reduced or even eliminated through the framework of Free Trade Agreement (FTA). Hence, it will increase the economic integration among countries within the bilateral, regional and international scope. Although it will increase the competition among countries in which some countries may be lose in certain economic sectors, however, it will also increase the prosperity (Kindleberger dan Lindert,1978)[22], quantity of the world trade and efficiency (Hadi, 2003)[23]. More specifically, Urata and Kiyota (2003) found that free trade in East Asia gives a positive impact to the regional economy[24].

Indonesia has developed many FTAs especially within the regional scope of ASEAN such as ACFTA. The agreement that had been ratified during the 8th ASEAN Summit in 2002 emphasized the important of cooperation among China and ASEAN member countries in order to increase the regional prosperity. In term of this framework, like two sides of a coin that cannot be separated away, there are opportunities and also challenges. On one hand, it is noted that trade volume between ASEAN and China had increased from

[20] Ibid.
[21] United Nation Data (2011)
[22] Kindleberger (1978)
[23] Hadi (2003)
[24] Urata (2003)

US$ 160 billion in 2006 to US$ 171.1 billion in 2007. More specifically, during the period of 2003-2007, the Indonesian trade volume increased 28.7% in average with the total US$ 28.9 million of China's real investment in Indonesia. Hence, ACFTA has a potential benefit for increasing the Indonesian economy[25]. Park et al (2008) emphasized that there is a big probability of developing the regional economy based on the effective cooperation within the framework of ACFTA[26]. Moreover, Yue (2004) illustrates the increasing number of intra-industry trade in machinery and electrical equipment as an example of the ACFTA's positive impact on regional economy[27].

On the other hand, however, there is no doubt that the ACFTA also has a potential for losses. One of the major challenges is to increase the competitiveness of the Indonesian domestic products relatively compared with China. There is a huge concern of Indonesian business sectors on the inability of domestic products to compete with imported commodities from China in which are cheaper in price with the same quality. Another concern is the inability of those domestic products to enter the China's potential market especially within the framework of ACFTA in which Indonesia have to compete with other ASEAN member countries in gaining the market share. Tambunan (2006) found that even though the trade creation of ASEAN-China is higher than the growth of intra-trade among ASEAN member countries; however, there is a significant increase of competition among domestic products with imported products from China within the domestic market of the ASEAN member countries[28].

[25] Data from *The Ministry of Trade of the Republic of Indonesia* and *Indonesian Statistics* (2008)
[26] Park et al (2008)
[27] Yue (2004)
[28] Tambunan (2006)

Gross Domestic Product (GDP): A Macroeconomics Indicator

In term of concept and indicators, it should be differentiate between macroeconomics and microeconomics. Macroeconomics forecasts the future values of aggregates such as GDP, unemployment rate, inflation, or price indices[29]. Hence, GDP is one of the macroeconomic indicators. Macroeconomics focuses on such indicators in order to understand about how the whole economy functions. Meanwhile, microeconomics focuses on the individual agents, such as producers and consumers and how their economic behavior will determine the tradeoff among prices and quantities within the market[30].

According to Snowdon and Vane (2002), "Gross Domestic Product (GDP) is the total value of goods and services produced in a country by the factors of production located in that country, regardless of who owns them" [31]. Hence, the GDP per capita is the approximation of that total value per person in the country. Even though in economy, the GDP per capita is not a measurement of the standard of living since it determines the total national economic activities, however, it is strongly linked over time to a nation's standard of living[32]. The GDP per capita can be used to measure the national productivity with which a nation utilizes its capital and resources [33]. Meanwhile, the productivity defines the competitiveness that will strongly affect the national prosperity[34].

D. The Analysis Method

There are several studies that analyzed the implication of FTA to the member countries. Based on those studies, there are two main methods in conducting empirical

[29] Watson (2008)
[30] Bouman (2011)
[31] Snowdon (2002, p.308)
[32] Lopez-Claros (2005, p.27)
[33] Ibid.
[34] Ibid, p.44-45

studies of FTA's impact to economy[35]. *First, ex-ante* method , which uses partial or general equilibrium models, known as Computable General Equilibrium (CGE) as was done by Imada et al. (1991), DeRosa (1995), and Adams and Par (1995). Within this method, many trade Indicators are used to evaluate the potential economic effects of an FTA, such as Revealed Comparative Advantages (RCA) and Intra Industry Trade (IIT) model. The *second* one is the *ex-post* approach by using the Gravity Model, such as those conducted by Hamilton and Winters (1992), Frankel (1993), Endoh (1999), and Sharma and Chua (2000). In this study, the Gravity Model will be used to analyze the impact of the ACFTA's implementation to the Indonesian economy.

This study will cover the period of analysis from 1997-2010. Related to the ACFTA, even though it went into effect on January 2010, however, the measurement of the impact can be made by considering the implementation of reducing tariff through the framework of Early Harvest Program that starts in January 2004[36]. Thus, in this study, the period of analysis will be divided into two parts. Part I is from 1997-2003 and period of 2004-2010 as the second part (part II).

For the countries covered within the analysis, this study uses the trade data of China and ASEAN-5 (Indonesia, Malaysia, Philippines, Singapore and Thailand) which are provided by the *United Nation Commodity Trade Statistic Database* (UNCOMTRADE)[37]. Meanwhile, Brunei Darussalam is not included within the analysis due to the lack of trade data. Data of GDP per capita in current US dollars are available at the World Bank's World Development Indicators[38]; while data on geographical distance –between capitals of each

[35] Plummer et al. (2010)
[36] The aim of the Early Harvest Program is to facilitate the tariff reduction before the ACFTA is fully implemented.
[37] Available at website: comtrade.un.org
[38] Can be accessed at http://data.worldbank.org/indicator/NY.GDP.PCAP.CD

country respectively- can be found at *the Centre d'Etudes Prospectives et d'Informations Internationales* (CEPII)[39].

E. Gravity model

The Gravity Model was pioneered by Tinbergen (1962) and Pö yhö nen (1963) to analyze bilateral trade flows between two different geographical entities. Furthermore, Frankel (1997) tried to uncover the impact of regional integration by inserting a dummy variable of international agreements in general equation of the Gravity Model. In analyzing the impact of the ACFTA's implementation to the Indonesian economy, the Gravity Model that will be used as follow:

$$\ln X_{ij} = G + \beta_1 \ln Y_i + \beta_1 \ln Y_j + \beta_1 \ln D_{ij} + u_{ij}$$

where:

X_{ij} is the export value from county i to country j

G is constant

Y_i and Y_j are the economic performance of country i and j respectively, described by GDP per capita

D_{ij} is geographical distance between country i and j

u_{ij} is measurement of standard error

The difference between the Tinbergen Gravity Model and the Frankel's is the inclusion of GDP per capita of the exporting country and GDP per capita the country trading partner, described by GDPP variable in Frankel's Model. The coefficient of this multiplication is expected to be positive. It is due to the higher the GDP per capita, the higher

[39] The CEPII database are available at: www.cepii.fr/anglaisgraph/bdd/distances.htm

the purchasing power of the people is. Meanwhile, the coefficient of *distance* variable (Dist) is expected to be negative, since this variable might be have a negative correlation with the export variable (X). The longer the geographical distance between both countries, the higher the transportation cost will be. Hence, it may reduce the number of international trade transaction.

The variable of international agreement is *ACFTA*, a dummy variable. *ACFTA* describes the influence of the agreement to the bilateral trade between both countries within the ACFTA's market area. The value of *ACFTA* dummy variable is 0 for period I (1997-2003) and 1 for period II (2004-2010) as related to the implementation of the Early Harvest Program in January 2004. Hence, the Gravity Model can be restated as follow:

$$\ln X_{ij} = \alpha_0 + \alpha_1 \ln(GDPP_{ij}) + \alpha_2 \ln(Dist_{ij}) + \beta_1 ACFTA + \varepsilon_{ij}$$

where:

X_{ij} is the export value from county *i* to country *j*

α_0 is constant

$GDPP_{ij}$ are the economic performance of country *i* and *j*, described by the inclusion of GDP per capita country *i* and *j*

$Dist_{ij}$ is geographical distance between country *i* and *j*

ACFTA is a dummy variable

ε_{ij} is measurement of standard error

F. Revealed Comparative Advantage (RCA)

The theory of international trade states that gains from trade will be achieved through specialization in the area of a country's comparative advantage in which the economic sectors

produce the services and commodities relatively more efficiently. Balassa (1965) introduced the Revealed Comparative Advantage (RCA) index to discover those products in which a country has a comparative advantage. It is defined as "the ratio of a country's share of the commodity in the country's total exports to the share of world exports of the commodity in total world exports"[40]. If the index value exceeds 1, it is said that a country has a revealed comparative advantage; and if the index value is below 1, it means that a country has disadvantage. In term of regional ACFTA, the RCA index can be formulated as follow:

$$RCA = \frac{(X_{ijk} / X_{jk})}{(X_{ik} / X_{k})}$$

where:

X_{ijk} is value of commodity *i* that country *j* exports to region *k*

X_{jk} is total export value of country *j* to region *k*

X_{ik} is total value of commodity *i* that other countries in region *k* export

X_{k} is total export value of region *k*

G. Intra-Industry Trade (IIT)

Intra-Industry Trade (IIT) index is used to measure that a country tends to have a bond in a chain of international trade for certain commodity with the other countries. This indicator has a value between 0 and 1. A country is said to have intra-industry trade if the IIT index is close to 1. However, a country has an inter-industry trade if the IIT index is close to 0. As an illustration, a country tends to export manufacture product (i.e. textile), but it also imports such product at the same time. It means that a country tends to have intra-industry

[40] Plummer et al. (2010)

trade flow for the manufacture product, and the index will be close to 1. Meanwhile, for the certain commodities such as natural resource-based commodities (i.e. oil and gas), a country tends to have more export with small amount or even no import at all. It means that a country tends to have inter-industry trade flow for such commodities with the index closes to 0. Therefore, in term of the ACFTA, the higher the index is, the more a country is engaged in intra-industry trade with other countries in the ACFTA's region. In measuring the index, this study uses the *Grubel-Lloyd's* formula as follow:

$$IIT_{ijk} = 1 - \frac{|X_{ijk} - M_{ijk}|}{(X_{ijk} + M_{ijk})}$$

where:

X_{ijk} is the value of commodity group *i* that country *j* exports to region *k*

M_{ijk} is the value of commodity group *i* that country *j* imports from region *k*

This study will combine the RCA and IIT index in order to identify the "spread" and the "movement" of the Indonesian export commodities based on their comparative advantage and their linkages in the international trade's chain within the ACFTA's region and within the scope of period before and after the implementation of the ACFTA respectively. By using the tradeoff between both indexes, The analysis by using the combination of these indexes has been practiced by Okamoto (2005)[41].

In the analysis of RCA and IIT index, the classification of commodities generally refers to the grouping method of the Standard International Trade Classification (SITC). This study uses the SITC Revision 3 within 1 digits of commodity code (see Appendix 1). It is due

[41] Okamoto (2005)

to the wider scope of commodities covered, especially the derivation products, relatively compared with the SITC Revision 1 and 2. Even though the SITC Revision 4 is currently being implemented after it was accepted internationally in the 37th session of the United Nation Statistical Commission in 2006, this study is not using that standard due to the lack of data considering to the analysis period.

II. Section 2

Result and Analysis: The Impact of the ACFTA's Implementation to the Indonesian Economy

Based on the Gravity Model of the ACFTA, the estimation can be made as shown in Table 2. It is found that the estimation supports the hypothesis that the impact of the ACFTA's implementation to the Indonesian economy is positive. The coefficients of the GDPP variable are positive align with the positive coefficient of variable export in international trade within the implementation of the ACFTA. It is also supported by the variable dummy of ACFTA in which shows the positive result. It means that the implementation of the ACFTA gives a positive impact relatively compared with before its implementation. It is not only to Indonesia, but also to other countries within the ACFTA's cooperation framework.

Although the coefficient of the *Distance* variable of Philippines and Thailand are negative due to the effect of "distance cost" incur within the international trade, however, most of the *Distance* variables' coefficients show positive result especially for Indonesia and China. It means that variable distance in the gravity model of the ACFTA cannot be considered as the proxy of trade cost. In fact, there are many studies found that the variable of distance does not completely describe the effect of distance on trade[42]. It is due to the coefficient of distance that is obtained from the cross-section equations for different period may not change significantly overtime. Buch et al (2003) even emphasize that coefficient of distance may measure "how important bilateral economic activities with partners that are far away are relative to those with partners that are close to the home country". Hence, in term of ACFTA, the positive *distance* variable of Indonesia may reflect the strong bilateral

[42] Such as: Buch et al (2003) and Brun et al (2003)

economicrelationship and also the strong linkage in economic activities between Indonesia, China and the other ASEAN member countries.

Table 2. The Estimation of ACFTA's Gravity Model[43]

VARIABLES	China ln_ex	Indonesia ln_ex	Malaysia ln_ex	Philippines ln_ex	Singapore ln_ex	Thailand ln_ex
ln_gdpp	0.352***	0.525***	0.789***	0.341***	0.920***	0.176***
	(11.193)	(7.306)	(6.156)	(6.103)	(10.183)	(3.410)
	0.031	0.072	0.128	0.056	0.090	0.052
ln_dis	0.305**	0.375**	0.234	-9.062***	1.282***	-1.067***
	(2.296)	(2.224)	(1.325)	(-7.313)	(5.235)	(-4.653)
	0.133	0.168	0.177	1.239	0.245	0.229
acfta	1.063***	0.253	0.063	0.430***	0.070	0.828***
	(11.770)	(1.645)	(0.362)	(3.122)	(0.490)	(7.307)
	0.090	0.154	0.174	0.138	0.143	0.113
Constant	14.147***	10.729***	7.567**	86.184***	-3.324	26.768***
	(12.512)	(4.859)	(2.295)	(8.612)	(-1.231)	(11.702)
	1.131	2.208	3.297	10.007	2.700	2.288
Observations	70	70	70	70	70	70
Adjusted R-squared	0.894	0.697	0.798	0.725	0.750	0.749

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Meanwhile, as relates to the concern about bilateral trade between Indonesia and China in the framework of ACFTA, it can be estimated as shown in Table 3. The positive coefficient of variable *GDPP* and dummy variable *ACFTA* also reflect the positive impact of ACFTA to the Indonesian economy.

[43] Calculated by using STATA software.

Table 3. The Estimation of Bilateral China-Indonesia within ACFTA

VARIABLES	Indonesia ln_ex
ln_gdpp	0.538***
	(8.977)
	0.060
acfta	0.325**
	(2.608)
	0.125
Constant	14.347***
	(17.172)
	0.835
Observations	14
Adjusted R-squared	0.978

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

III. Section 3

Result and Analysis: The Impact of the ACFTA's Implementation to Domestic Sectors' Competitiveness

In term of ACFTA, the regional trade pattern will be different with bilateral trade between Indonesia-China. The trade value within regional scope of ACFTA may probably increase significantly; while the bilateral trade between Indonesia and China may probably decrease if the domestic commodities have less competitiveness compared with China. Thus, it is necessary to analyze the impact of the ACFTA's implementation to the competitiveness of most manufacture industries within domestic sectors. At this point, the industries which can "survive" and which will "hit-hard" by the ACFTA's implementation also can be observed.

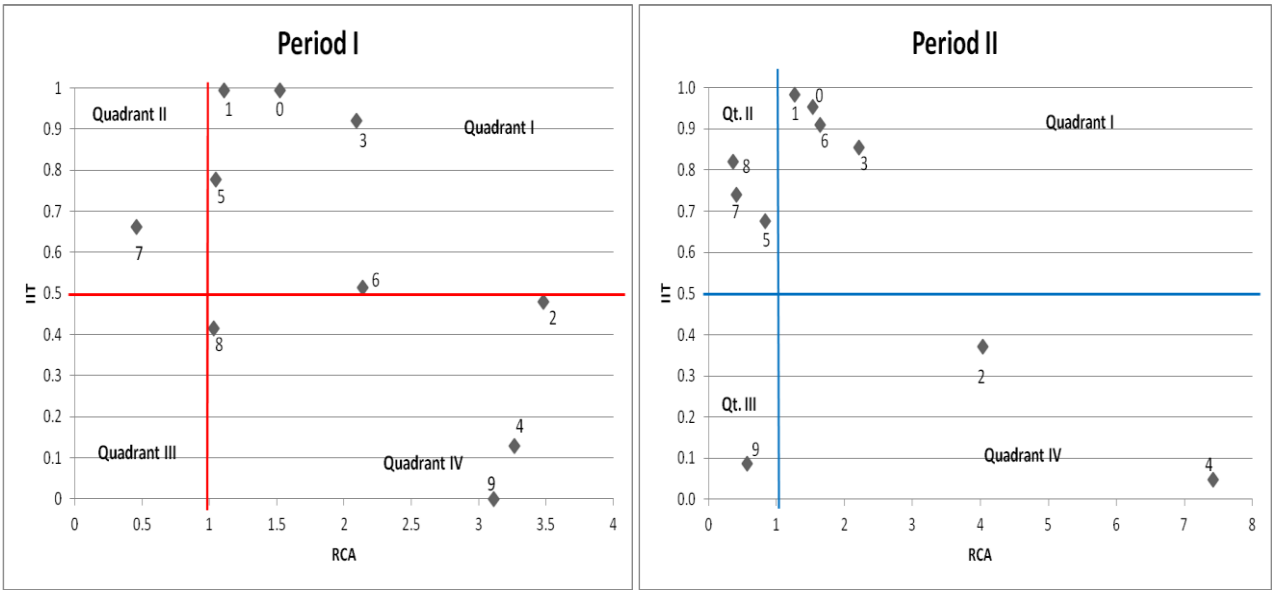
From the calculation of RCA and IIT index (see Appendix 2), a simple commodity mapping can be made based on certain conditions. For the RCA, as have been stated above, the basic index point is 1. If the index value exceeds 1, it is said that a country has a revealed comparative advantage; and if the index value is below 1, it means that a country has disadvantage. Meanwhile, for the IIT index, the value is between 0 and 1. A country is said to have intra-industry trade if the IIT index is close to 1. However, a country has an inter-industry trade if the IIT index is close to 0. The higher the index is, the more a country is engaged in intra-industry trade with other countries in the ACFTA's region. Therefore, for the IIT index, the median-line is 0.5.

The mapping can be figured in Figure 4 for each period in order to analyze the "spread" and "movement" of domestic products based on their competitiveness and inter-linkages within the ACFTA's market before and after the ACFTA's implementation. Hence, it also will determine the impact of the ACFTA's implementation to the changing of level of

competitiveness of most manufacture industries within those domestic sectors. The mapping itself can be made into 4 quadrants based on the level of index. *Quadrant I* describes the group of commodities with high level of competitiveness and high level of inter-linkages within the market based on their high RCA and IIT indexes respectively. Those commodities in quadrant I have a hinger potential chance to survive and to penetrate the competitive ACFTA market relatively compared with the other quadrants. *Quadrant II,* with high level of IIT index and low level of RCA index, and *Quadrant IV*, with high RCA index and low IIT index, also have a potential capacity even though it is lower than those in quadrant I. The lowest chance to penetrate and to survive within the competitive market is those commodities in quadrant III due to their low level of RCA and IIT indexes.

In Figure 4, it is found that some commodities are still exist in quadrant I for both periods such as the products of food and live animal, beverages and tobacco, mineral fuels, lubricants and related materials, and manufactured goods classified chiefly by material. The commodities of machinery and transport equipment also stay on quadrant II as well as the commodities of crude materials, inedible, except fuels, and the commodities of animal and vegetable oils, fats and waxes in quadrant IV. Meanwhile, there is a significant movement of the group commodities of chemicals and related products from quadrant I to quadrant II, and miscellaneous manufactured articles from quadrant IV to quadrant II. The other commodities and transactions which are not classified in the SITC also moves aside from quadrant IV to quadrant III. It describes that there is a significant decrease in the level of competitiveness of those commodities. However, for the group commodities of miscellaneous manufactured articles, although the level of its competitiveness is decrease, there is a significant increase of its inter-linkage within the market as intra-industry trade commodities.

Figure 4. The Tradeoff of RCA-IIT Indexes and Quadrant Mapping of Commodities

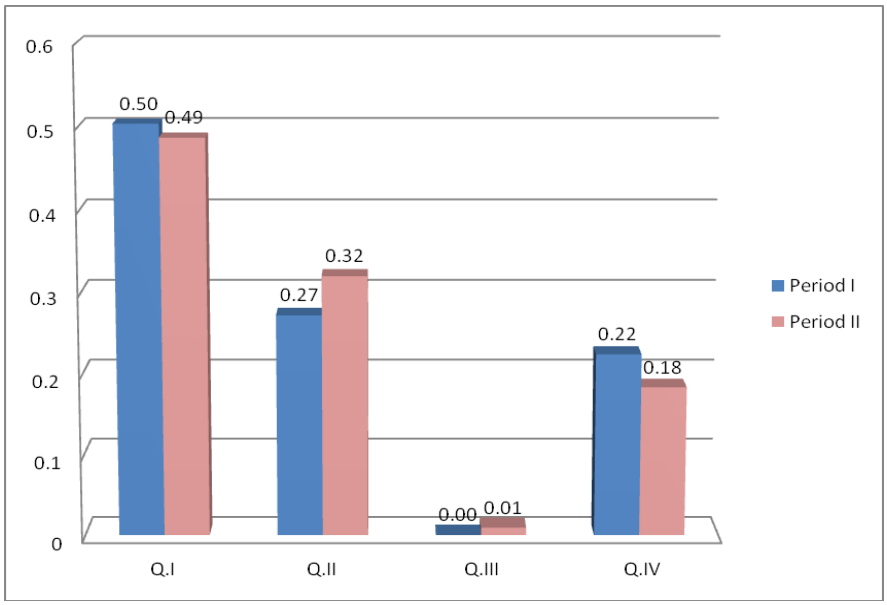


SITC Code	Commodities Classification
0	Food and live animals
1	Beverages and tobacco
2	Crude materials, inedible, except fuels
3	Mineral fuels, lubricants and related materials
4	Animal and vegetable oils, fats and waxes
5	Chemicals and related products, n.e.s.
6	Manufactured goods classified chiefly by material
7	Machinery and transport equipment
8	Miscellaneous manufactured articles
9	Commodities and transactions not classified elsewhere in the SITC

Moreover, by analyzing the changes of market share shown in Figure 5, it is found that there is no significant changing of market share of Indonesian export commodities before and after the implementation of the ACFTA. The changes are in the range of 1-5% point for all quadrants. One that should be concerned the most is quadrant I, since this quadrant reflects the group of commodities with the highest market share and also with high level of competitiveness and inter-linkages as intra-industry trade commodities within the ACFTA market. It also seems that the movement of the group commodities of chemicals and related

products from quadrant I to quadrant II does not impact to the significant change of market share of commodities within quadrant I. It describes that there is no significant impact of the ACFTA's implementation to the changing of the Indonesian export commodities' market share.

Figure 5. The Changing of Market Share of the Indonesian Export Commodities Before and After the ACFTA's Implementation



IV. Section 4

Conclusion

Based on the analysis result, it is concluded that the impact of the ACFTA's to the Indonesian economy as a whole is positive. It is described by the positive coefficient of the GDPP variable align with the positive coefficient of variable export in international trade within the implementation of the ACFTA. It is also supported by the variable dummy of ACFTA in which shows a positive impact after the implementation of the ACFTA relatively compared with the period before its implementation. Meanwhile, the positive coefficient of variable distance in the Gravity Model of the ACFTA may reflect the strong bilateral economic relationship and also the strong linkage in economic activities between Indonesia, China and the other ASEAN member countries. Moreover, concerning to the bilateral trade between Indonesia and China in the framework of ACFTA, we can estimate the positive impact of ACFTA to the Indonesian economy by the positive coefficient of variable *GDPP* and dummy variable *ACFTA.*

In term of market share, there is no significant changing of the Indonesian export commodities' market share before and after the implementation of the ACFTA. However, in term of competitiveness, there is a significant decrease of the group commodities of chemicals and related products, miscellaneous manufactured articles, and the other commodities and transactions which are not classified in the SITC. Meanwhile, for the group commodities of miscellaneous manufactured articles, although the level of its competitiveness is decrease, there is a significant increase of its inter-linkage within the market as intra-industry trade commodities. Hence, the decrease of the competitiveness' level of those commodities should be concerned.

At this point, however, it should be underlined that this study is only a statistical estimation of the ACFTA's impact to the Indonesian economy based on certain economic factors. There will be numerous factors involved in reality that should be considered in term of measuring the "real" impact of the ACFTA's implementation. Therefore, it can be concluded as the final analysis that it all depends on what policy makers and industry leaders do to mitigate their challenges and forge a possible winning strategy.

APPENDICES

Appendix 1

Classification of Commodities Based on SITC Rev. 3 (1 digit)

SITC Code	Commodities	Description
0	Food and live animals	Live animals other than animals of division 03
		Meat and meat preparations
		Dairy products and birds' eggs
		Fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof
		Cereals and cereal preparations (including rice and paddy rice)
		Vegetables and fruit
		Sugars, sugar preparations and honey
		Coffee, tea, cocoa, spices, and manufactures thereof
		Feeding stuff for animals (not including unmilled cereals)
		Miscellaneous edible products and preparations
1	Beverages and tobacco	Beverages
		Tobacco and tobacco manufactures
2	Crude materials, inedible, except fuels	Hides, skins and furskins, raw
		Oil-seeds and oleaginous fruits
		Crude rubber (including synthetic and reclaimed)
		Cork and wood
		Pulp and waste paper
		Textile fibres (other than wool tops and other combed wool) and their wastes (not manufactured into yarn or fabric)
		Crude fertilizers, other than those of division 56, and crude minerals (excluding coal, petroleum and precious stones)
		Metalliferous ores and metal scrap
		Crude animal and vegetable materials, n.e.s.
3	Mineral fuels, lubricants and related materials	Coal, coke and briquettes
		Petroleum, petroleum products and related materials

		Gas, natural and manufactured
		Electric current
4	Animal and vegetable oils, fats and waxes	Animal oils and fats
		Fixed vegetable fats and oils, crude, refined or fractionated
		Animal or vegetable fats and oils, processed; waxes of animal or vegetable origin; inedible mixtures or preparations of animal or vegetable fats or oils, n.e.s.
5	Chemicals and related products, n.e.s.	Organic chemicals
		Inorganic chemicals
		Dyeing, tanning and colouring materials
		Medicinal and pharmaceutical products
		Essential oils and resinoids and perfume materials; toilet, polishing and cleansing preparations
		Fertilizers (other than those of group 272)
		Plastics in primary forms
		Plastics in non-primary forms
		Chemical materials and products, n.e.s.
6	Manufactured goods classified chiefly by material	Leather, leather manufactures, n.e.s., and dressed furskins
		Rubber manufactures, n.e.s.
		Cork and wood manufactures (excluding furniture)
		Paper, paperboard and articles of paper pulp, of paper or of paperboard
		Textile yarn, fabrics, made-up articles, n.e.s., and related products
		Non-metallic mineral manufactures, n.e.s.
		Iron and steel
		Non-ferrous metals
		Manufactures of metals, n.e.s.
7	Machinery and transport equipment	Power-generating machinery and equipment
		Machinery specialized for particular industries
		Metalworking machinery
		General industrial machinery and equipment, n.e.s., and machine parts, n.e.s.
		Office machines and automatic data-processing machines

		Telecommunications and sound-recording and reproducing apparatus and equipment
		Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof (including non-electrical counterparts, n.e.s., of electrical household-type equipment)
		Road vehicles (including air-cushion vehicles)
		Other transport equipment
8	Miscellaneous manufactured articles	Prefabricated buildings; sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s.
		Furniture, and parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings
		Travel goods, handbags and similar containers
		Articles of apparel and clothing accessories
		Footwear
		Professional, scientific and controlling instruments and apparatus, n.e.s.
		Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks
		Miscellaneous manufactured articles, n.e.s.
9	Commodities and transactions not classified elsewhere in the SITC	Postal packages not classified according to kind
		Special transactions and commodities not classified according to kind
		Coin (other than gold coin), not being legal tender
		Gold, non-monetary (excluding gold ores and concentrates)

Source: UNCOMTRADE

* n.e.s : not elsewhere classified

APPENDIX 2

Revealed Comparative Advantage (RCA) and Intra-Industry Trade (IIT) Index

Period I (1997-2003)

SITC Code	Commodities Classification	Indonesia			ACFTA		RCA	IIT
		Import Value	Export Value	Share to Total	Export Value	Share to Total		
0	Food and live animals	5,344,353,085	5,281,124,086	0.065	29,216,541,373	0.043	**1.52**	**0.99**
1	Beverages and tobacco	790,219,436	782,268,031	0.010	5,940,864,116	0.009	**1.11**	**0.99**
2	Crude materials, inedible, except fuels	1,887,984,349	5,964,405,946	0.073	14,435,692,564	0.021	**3.48**	**0.48**
3	Mineral fuels, lubricants and related materials	15,180,298,140	12,935,028,802	0.159	52,073,209,279	0.076	**2.09**	**0.92**
4	Animal and vegetable oils, fats and waxes	206,178,155	2,978,598,297	0.037	7,676,932,119	0.011	**3.27**	**0.13**
5	Chemicals and related products, n.e.s.	10,280,235,495	6,526,603,796	0.080	52,500,727,917	0.077	**1.05**	**0.78**
6	Manufactured goods classified chiefly by material	5,325,321,857	15,386,093,683	0.189	60,596,153,658	0.089	**2.14**	**0.51**
7	Machinery and transport equipment	10,942,327,595	22,082,906,978	0.272	406,914,223,372	0.595	**0.46**	**0.66**
8	Miscellaneous manufactured articles	1,416,422,263	5,403,083,269	0.067	43,982,293,816	0.064	**1.03**	**0.42**
9	Commodities and transactions not classified elsewhere in the SITC	668,409	3,864,856,489	0.048	10,453,181,853	0.015	**3.11**	**0.00**
Total		**51,374,008,784**	**81,204,969,377**		**683,789,820,067**			

*import and export value in US$

Period II (2004-2010)

SITC Code	Commodities Classification	Indonesia			ACFTA		RCA	IIT
		Import Value	Export Value	Share to Total	Export Value	Share to Total		
0	Food and live animals	10,791,782,400	9,808,073,321	0.046	60,181,479,754	0.030	**1.53**	**0.95**
1	Beverages and tobacco	1,387,723,883	1,437,142,015	0.007	10,653,354,963	0.005	**1.27**	**0.98**
2	Crude materials, inedible, except fuels	4,492,599,712	19,752,845,315	0.093	46,013,185,120	0.023	**4.03**	**0.37**
3	Mineral fuels, lubricants and related materials	74,958,998,963	56,031,900,448	0.265	237,660,509,885	0.120	**2.21**	**0.86**
4	Animal and vegetable oils, fats and waxes	470,032,882	19,143,253,848	0.091	24,193,930,806	0.012	**7.43**	**0.05**
5	Chemicals and related products, n.e.s.	31,777,995,062	16,197,026,178	0.077	181,754,029,585	0.092	**0.84**	**0.68**
6	Manufactured goods classified chiefly by material	29,829,785,386	35,722,585,293	0.169	204,465,336,866	0.103	**1.64**	**0.91**
7	Machinery and transport equipment	77,327,618,194	45,523,744,300	0.215	1,034,018,107,703	0.521	**0.41**	**0.74**
8	Miscellaneous manufactured articles	8,504,543,325	5,922,796,739	0.028	153,997,676,358	0.078	**0.36**	**0.82**
9	Commodities and transactions not classified elsewhere in the SITC	88,706,111	1,947,645,654	0.009	32,337,085,018	0.016	**0.57**	**0.09**
Total		**239,629,785,918**	**211,487,013,111**		**1,985,274,696,058**			

*import and export value in US$

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