

The sub-regional economic cooperation under the framework of China-ASEAN Cooperation: The Case Study of Indonesian-China “Early Harvest Program”

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Abstract

Several studies have examined the idea of regional economic integration or cooperation in Asia. Most of these studies have focused on separate regions of ASEAN like North East Asia (China, Japan and Korea) and the ASEAN+3. By taking the implementation of the Indonesia-China “Early Harvest Program (EHP)” as one important element of the China-ASEAN cooperation as the case, this paper makes an attempt to estimate the possible positive or negative effects of the sub-regional cooperation under the framework of China-ASEAN cooperation for both countries. This EHP is considered as the most sensitive part of the China-ASEAN cooperation programs since agriculture is sensitive and vulnerable sector in countries like Indonesia and China. In Indonesia, agriculture is the key sector for poverty alleviation as the poor in the country are predominantly rural; food accounts for a major share of all poor people’s expenditure; and agriculture is their major source of income. Therefore, theoretically, it is expected that the ASEAN-China FTA agreement in the context of the EHP will bring a significant impact not only on Indonesian agriculture but also on poverty in the country.

For this purpose, the paper will contain three parts. The first part will discuss regional economic cooperation from a theoretical perspective as the framework of analysis in this paper. The second part will evaluate recent development of trade and investment integration between China and ASEAN. The final part will assess the likely impact of the EHP on Indonesian export, import and production in agriculture. This part will use two approaches: competitiveness analytical approach by analyzing a number of competitiveness indicators on selected commodities included in the program from the two countries and simulation approach by using the Agricultural Trade Policy Simulation Model (ATPSM) designed by UNCTAD, also on selected commodities covered by the program.

Part I

Regional Economic Cooperation: Theoretical Discussion

Naturally, the first step toward a regional economic cooperation (REC) is a regional economic integration (REI). REI focuses on the strengthening existing and new international linkages of commerce and trade between countries in a particular region (Daniels and van Hoose, 2001). REI is defined not solely within the confines of geographic proximity, but rather in terms of the relationship between economic flows and policy choice (Mansfield and Milner, 1999). REC strengthens REI or economic linkages or interdependence between states or countries in a particular region as REC goes beyond trade linkages. REC has broader activities than REI as it also involves regional investment and production activities.

Theories of REI can be divided between classical and modern theories. Classical theories of REI are from the 1950s and 1960s which dealt primarily with European integration, which was dominated by governments and influenced by national interests. Modern theories of REI, on the other hand, are from the late 1980s onwards when there has been an explosion of various forms of regionalism and regionalist projects all over the world. The development of the European Union (EU) is perhaps the most debated example of this trend. Many other regionalization processes can be observed in other parts of the world such as the Association of Southeast Asian Nations (ASEAN), Economic Commission of West African States (ECOWAS), Southern Common Market (MERCOSUR), North American Free Trade Agreement (NAFTA), Southern African

Development Community (SADC), South Asian Association for Regional Cooperation (SAARC) and the like.

The theory of REI explains that the reduction or elimination of trade barriers among nations will eventually bring together the commodity market, financial market and labour market of the economies involved. REI is an effort of constituting policies to reduce or eliminate trade barriers among nations joining together to form a union (Salvatore, 2004).¹ Economic integration occurs when several countries in a region in order to discriminate between economic units belonging to different member nations and promoting various economic and political activities to benefit citizens of member countries (Balassa, 1961). The degree of REI, however, ranges from establishing free trade areas, customs unions, common markets, economic and political unification among member nations (UPM, 2005).

. The loosest degree of economic integration is in the form of reduced trade barriers free trade area. Example of such established among two or more nations to form a trade arrangements include the European Free Trade Association (EFTA) formed in 1960 by the UK, Austria, Denmark, Norway, Portugal, Sweden and Switzerland; the North America Free Trade Agreement (NAFTA) formed in 1993 by the US, Canada and Mexico; the ASEAN Free Trade Area or AFTA formed in 1992; as well as the SAARC Preferential Trading Arrangement, formalised as the South Asian a custom union is formed Free Trade Area (SAFTA) in 1998. From a free trade area, when member nations begin to harmonise trade policies toward the rest of the world to create a duty-free economic zone. An example of a custom union is the European Common Market (ECM) formed by West Germany, France, Italy, Belgium, the Netherlands and Luxembourg in 1957. A matured custom union provides the common market where a high degree of free trade foundation for the formation of a movement of labour and capital among member nations occurs. The ECM achieved the status of a common market in 1993 (UPM (2005)

It is often stated that REI is a necessary instrument in the international political economy to ensure that inadequacies and needs of one country can be offset by another country. One way in which REI is implemented is through policies facilitating preferential trading arrangements (PTAs) among integrating countries. REI can help minimize or not completely eliminate the negative effects of globalization and trade liberalization among countries, since these forces usually provide benefits to competitive or more developed countries at the cost of less competitive/developed ones. With PTAs, REI can facilitate the realization of economies of scale and hence economic efficiency. The formation of ASEAN and later AFTA is one initiative aimed towards greater REI (Bowles, 1997).

¹ See also e.g. Bahae and Saremi (2002), Choe (2001), Breslin and Higgott (2000), Dent (1998), Hallett and Piscitelli (2002), Li and Shaohua (2002), Pomfret (1997), Krumm and Kharas (2004), Sharma. and Chua (2000), Shin. and Wang. (2003), Goglio and Thornton (2002), Hettne et al (1999–2001), Maudos et al. (1999), Vickerman (1992), Yunling and Jiangling (2003), Cable and Henderson (1994), Hettne and Söderbaum (2000), Robson (1993), and Schulz et al.(2001).

The implementation of REI, however, can give more benefits to participant countries if they also closely cooperate in other economic fields. In other words, REI should be expanded, better in a stepwise way, to REC in order to get optimal benefits. REC can be utilized as one key instrument for economic development and hence poverty reduction. The hypothesis is that through a close cooperation among countries will lead to the growth in productive economic activities and further lead to the increase in employment and income

Of course, there are also some negative effects of an REC, especially in the short-run. One negative effect is that it may lead to increasing worker insecurity among advanced economies. For instance, in the ASEAN case, cheaper workers in Indonesia may attract investments from Singapore, a higher wage member country, at the cost of employment creation in the latter country. In this respect, foreign direct investment (FDI) by multinational enterprises (MNEs) is the part of REC that generates such risk. FDI increases the elasticity of demand for labor by the individual firms and this increases the volatility of wages and employment, creating an insecure environment for the workers.

However, it must be noted that REC in the East Asian region is still remarkably limited, possibly because of tariff and non-tariff barriers, linguistic or cultural differences, exchange rate uncertainty, and many other obstacles.

Part II

ASEAN+China

In its early years, ASEAN recognized intra-regional trade as a tool in which economic cooperation can be encouraged between member countries. Share of intra-ASEAN trade initially constitutes of merely 12 to 15 percent of total trade between members. ASEAN has since introduced several schemes such as the initial PTA in 1977, which was promoted to the Enhanced PTA Program ten years later. Subsequently, a scheme was launched for AFTA during the Fourth ASEAN Summit 1992 in Singapore.

Recently, the ASEAN leaders have expressed their interest in expanding the existing economic cooperation between ASEAN 10 member countries to include China, Japan and Korea. ASEAN acknowledges the benefits they have gained from sustaining close relations with these three countries and foresees more advantages from the proposed cooperation of ASEAN+3. An outline of the East Asian Cooperation was further refined, made finalized and issued in 1999 (UPM, 2005)

The formation of ASEAN+3 certainly will expand East Asian trade which is characteristically open and global. Table 1 gives the regional countries' average trade share for the period 2001 to 2003. While most countries have large trade volumes with EU and the United States (U.S.), intraregional trade within ASEAN+3 is significant. Half of ASEAN trade with ASEAN+3 and over one-third of industrialized Asia's² trade is within ASEAN+3.

² "Industrialized Asia" refers to Japan, Korea, and China.

Table 1: Trade Shares, (2001-2003)

Country	BRN	CAM	CHN	HKK	IND	JPN	KOR	LAO	MLY	MYN	PHL	SIN	THL	VNM
Japan	32.6	2.9	16.5	8.7	19.4		14.7	2.3	14.1	4.6	17.5	10.5	19.2	13.8
Korea	9.1	3.0	7.2	3.4	6.4	6.0		0.5	4.1	4.8	5.6	3.9	2.8	7.2
China	4.5	6.2		41.7	6.0	13.3	13.1	6.4	6.5	15.7	5.1	6.4	6.3	9.8
Hong Kong	1.2	8.9	11.8		1.7	3.5	3.7	0.6	3.8	1.7	5.3	6.0	3.4	3.0
Brunei		0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.2	0.0	0.0	0.3	0.3	0.0
Cambodia	0.0		0.0	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.4	0.6
Indonesia	1.6	2.0	1.3	0.6		2.8	2.3	0.2	2.1	1.4	1.3	3.6	2.4	1.9
Lao	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.4	0.4
Malaysia	5.8	2.2	2.1	1.7	3.5	3.0	2.4	0.3		6.1	4.0	17.1	5.0	2.6
Myanmar	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2		0.0	0.2	0.8	0.0
Philippines	0.4	0.2	0.9	1.2	1.1	1.9	1.5	0.0	2.1	0.1		2.3	1.8	1.2
Singapore	12.8	7.9	2.3	3.4	10.4	2.5	2.6	2.5	16.9	11.7	6.8		6.3	9.8
Thailand	7.7	12.3	1.4	1.4	2.8	3.1	1.2	46.9	3.9	21.7	3.2	4.4		3.5
Vietnam	0.0	5.5	0.5	0.2	0.8	0.6	0.8	12.3	0.6	0.2	0.5	1.2	0.9	
ASEAN	28.3	30.1	8.7	8.6	18.8	14.3	11.0	62.3	26.0	41.2	15.7	29.3	18.4	20.2
ASEAN+3	74.5	42.3	32.4	62.5	50.6	33.5	38.8	71.5	50.6	66.3	43.9	50.2	46.6	51.1
APEC	92.0	82.1	64.7	78.2	69.5	67.3	66.6	74.6	75.7	76.1	74.3	74.1	67.3	67.9
CER	7.4	0.2	1.9	1.1	4.3	3.4	2.9	0.9	2.4	0.6	1.7	2.6	2.6	4.5
E.U.	6.8	12.4	14.6	11.2	13.1	14.2	12.0	12.9	12.2	8.1	12.7	12.6	13.2	14.4
US	8.3	27.0	15.4	13.2	11.6	23.1	17.5	0.7	17.7	6.6	21.8	15.0	14.7	8.4
NAFTA	8.3	27.7	17.3	14.5	12.8	25.6	19.7	0.9	19.1	7.2	23.2	15.8	16.0	9.1

Notes: 1) Table reads as follows: total trade share of a country in the left hand column with a partner country in the top row e.g: starting top left - Brunei's exports to and from Japan as percentage of Brunei's total trade; 2) total trade = sum of imports and exports; 3) Singapore does not report its trade with Indonesia to the IMF. Therefore, Singapore's trade with Indonesia is estimated using data from Indonesia; 4) all trade data excludes Taiwan. APEC Countries are as follows: Australia, Brunei, Canada, Chile, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Thailand, USA, and Vietnam. CER countries are Australia and New Zealand. NAFTA is Canada, Mexico and United States.

Source: Table 1 in Hwee et al (2005) (data from IMF, Direction of Trade Statistics, 2004).

Within the plus three countries, China is the largest economy, not only in terms of annual GDP growth rates but also it has a vast domestic market due to its very huge population. In recent years, both China and ASEAN have played important role in promoting REC. China used to be a very introverted country, isolated from the other parts of the world and reluctant to engage her self in the multilateral activities. This was because China worried that her role would be diminished or even contained by others at the multilateral arena. However, this is no longer true for China today (Jianqun, 2003). China, as a potential market of 1.3 billion population and its rapidly expanding economy, and ASEAN as a potential market of 500 million population, their combined market size is huge, therefore, China-ASEAN cooperation will boost not only ASEAN economies but also East Asian future economic growth as a whole; although, until now much of this intra-Asian trade is still dependent on final demand in the US and EU rather than in Asia (Jianren, 2003).³

³ Jianren (2003) argues that China is very important for ASEAN or East Asia not only because it is a huge country with a vast domestic market but also with dramatically rising economic scale and multi-layered economic structure. Some industries and some coastal areas in China are relatively advanced, which makes China-ASEAN cooperation appear dual-natured. The fact that China

China's increasing economic strength as a result of its high economic growth rate highlighted its rising position in the East Asian economic cooperation (EAEC). It appears that China has a great role in keeping the overall situation stable and enhancing coherence in the region. In the 1997/98 Asian financial crisis, China stood firmly not letting Chinese currency depreciate in order to prevent the second wave of the crisis coming to the East Asia. Every time in the Leaders' Summit, China proposed scores of suggestions on strengthening EAEC. China supports taking "East Asian Community" as a long-term goal of APT cooperation, agrees on the initiative of holding East Asian Summit, and gives its endorsement to ASEAN for its leading role in APT as well as the East Asian cooperative process. Chinese leaders put forward lots of suggestion including steadily prompting the establishment of EAFTA, enhancing financial and investment cooperation, further strengthening non-conventional security cooperation (Jianren, 2003).

No doubt, China's growing market provides a great business opportunity to all the parties joining the EAEC. After more than twenty years of rapid development, the GDP of China surpassed 1 trillion US Dollars. In 2004, the total volume of its foreign trade is expected over 1.2 trillion US Dollars. China now turns to be the third largest trading house in the world even ahead of Japan. With its economy developing and its purchasing power rising, China is in great demand for the products from the other East Asian economies. In 2006, its trade with the rest of East Asia accounts for 51% of its total foreign trade. Since its accession to the WTO, China has been sincerely implementing its commitment of opening domestic market, which paved way for East Asian economies to expand their export to China. From 2004 then on, China's annual imports reached above 500 billion US dollar. Thus, in the future, China will have a great role in further promoting EAEC (Jianren, 2003).

In the last few years China and ASEAN countries have expanded their economic integration, and both sides have gradually put in place and substantiated the mechanisms of cooperation.⁴ They have set up all kinds of mechanisms of dialogue and cooperation at various levels and rapid progress has been achieved. In November 2002, China and ASEAN signed the Framework Agreement of Comprehensive Economic Cooperation, launching the process of establishing the China-ASEAN Free Trade Area (FTA).⁵ The China-ASEAN FTA, covering a population of 1.8 billion and enjoying gross domestic product (GDP) of US\$2

will become a Development Partner of BIMP-EAGA certainly will provide a new and a very important channel for China-ASEAN cooperation.

⁴ There are three levels of regular meetings between China and ASEAN, namely: (1) the ASEAN Plus China Summit, which has been held annually since 1997; (2) three Ministerial Meetings (Foreign, Economic and Transportation Ministers); and (3) six Working Parallel Mechanisms, such as 4 ASEAN-China Senior Officials Political Consultations; the 5 ASEAN-China Joint Cooperation Committee (ACJCC); China-ASEAN Joint Committee on Economic and Trade Cooperation (ACJCETC); China-ASEAN Joint Committee on Science and Technology (ACJCST); ASEAN Committee in Beijing (ACB); and China-ASEAN Trade Council (Jianqun, 2003).

⁵ The idea of forming the China-ASEAN FTA was first put forward by Chinese leaders in 1999. One year later, the two sides formed an expert group on economic cooperation. The expert group had an extensive study on this initiative for almost one year. In 2001, both China and ASEAN came to an agreement on establishing the FTA by 2010, while the Framework Agreement on China-ASEAN Comprehensive Economic Cooperation was signed in November 2002.

trillion, is the largest FTA built by developing countries.⁶ It has been expected that the China-ASEAN FTA will give substantial results via such projects as the Early Harvest Program (EHP). Since July 2005, tariffs on more than 7,000 categories of commodities made in ASEAN countries have been cut when they were exported to China. The economic cooperation between the two sides has also been expanded into broader areas or 10 major fields, including agriculture, manpower development, the Mekong River exploitation, transport, energy, culture and tourism (Jianqun, 2003).

From the ASEAN side, theoretically, this closely economic cooperation between China and ASEAN opens a great opportunity for the ASEAN members to get access to China's market. Indeed, since that formation, China-ASEAN economic and trade relations improved considerably. Raw materials such as agricultural commodities, mineral products, fuel etc. and intermediate goods like electronic components and parts are especially important for the Chinese economic growth. Since the mid-1990s, China's demand for these products from ASEAN to feed its export-orientation toward global markets has dramatically shifted the trends that were in place prior to the 1997/98 Asian Financial Crisis. China's import structure from ASEAN has been thus enhanced.⁷

As can be seen in Table 2, the share of China for ASEAN's exports tends to grow continuously. Two important points warrant noting. One, China plus Hong Kong has constituted more than 10% of ASEAN's global exports. Two, the share of China in ASEAN's total export basket has risen by a full percentage point in the last five years. For the period under review, the share of intra-trade of ASEAN declined while that for extra-trade of ASEAN with China increased.

In their analysis, Hwee et al (2005) divide ASEAN export share trends into three phases. Phase I, roughly the years through the late 1980s, represents the formative period in which Japan and increasingly the US and the EU were direct targets of export growth for ASEAN countries. Phase II, essentially from the late 1980s to the mid 1990s, was marked by the rapid integration of intra-ASEAN export trade. Phase III, beginning with the mid 1990s, is characterized by both the consolidation of trade with Japan, the US, the EU and ASEAN and by the rapid rise in export trade toward China. Based on their study, Figures 1 and 2 present ASEAN's export trade shares to China by member countries and to "industrialized" Asian, respectively. As can be seen, ASEAN's exports to China are only getting started. It was only around the onset of the Asian crisis that exports from ASEAN6 to China began to grow. Even with six years of rapid growth, exports to China still only comprise 6-12% of total exports of ASEAN6 economies.

⁶ It is estimated that this China-ASEAN FTA will become the third largest market in the world with a population of 1.7 billion, a GDP of US\$2 trillion, and two-way trade of US\$1.23 trillion. (Jianqun, 2003).

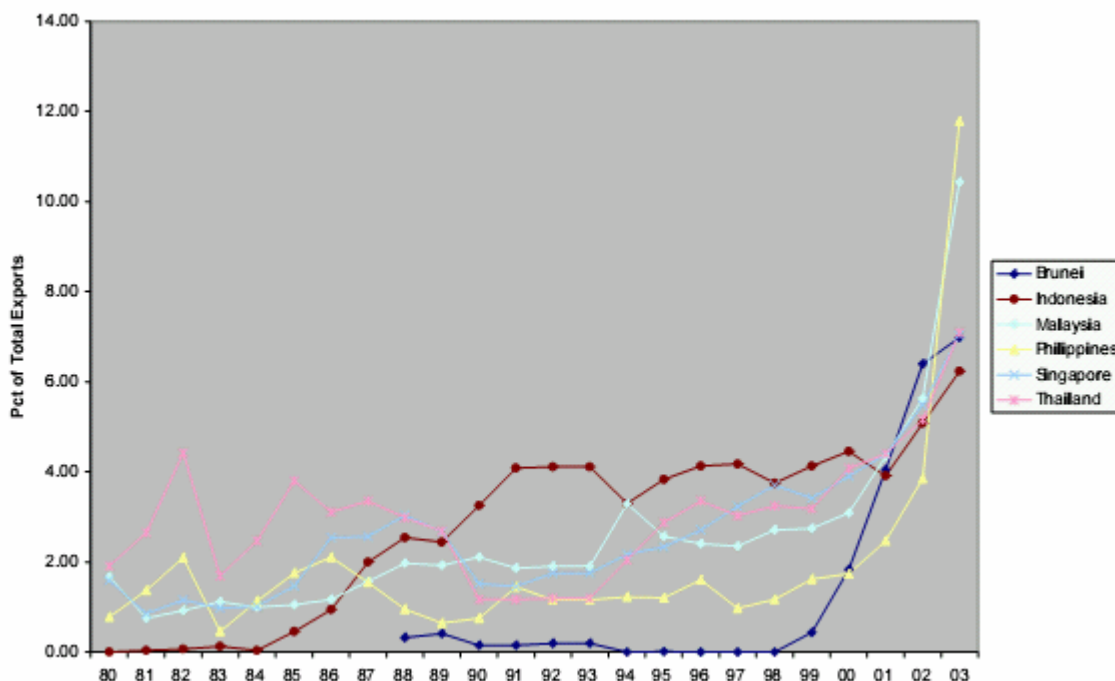
⁷ Jianren (2003) argues that in a few years of continuously being the most important manufacturing center of the world, China will import more and more these items, and ASEAN will be an important source of China's imports. While, for ASEAN member countries, they are taking more export to China as an engine for their economic growth.

Table 2: Share of ASEAN's Export to Major Trading Partners (%)

Major Trading Partners	1995	2000	2002	2003	2004	2005
ASEAN	23.6	23.2	22.4	22.8	22.2	25.3
Hong Kong	-	5.5	5.2	6.7	5.5	-
ROK	2.9	3.6	4.1	4.0	3.6	3.8
China	2.1	3.1	5.1	6.4	7.5	8.1
Taiwan	-	-	4.9	3.3	3.2	-
India	1.0	1.6	2.1	1.8	-	2.3
Japan	14.4	13.3	11.7	11.8	12.2	11.2
EU-15	14.9	14.8	14.2	13.3	10.5	12.5*
Other European countries	-	-	-	-	2.8	-
USA	18.5	17.4	15.9	14.2	9.3	14.3
Australia	1.7	2.0	2.5	2.7	2.9	3.0
New Zealand	0.3	0.3	-	-	-	0.4

Note: * = 25 countries

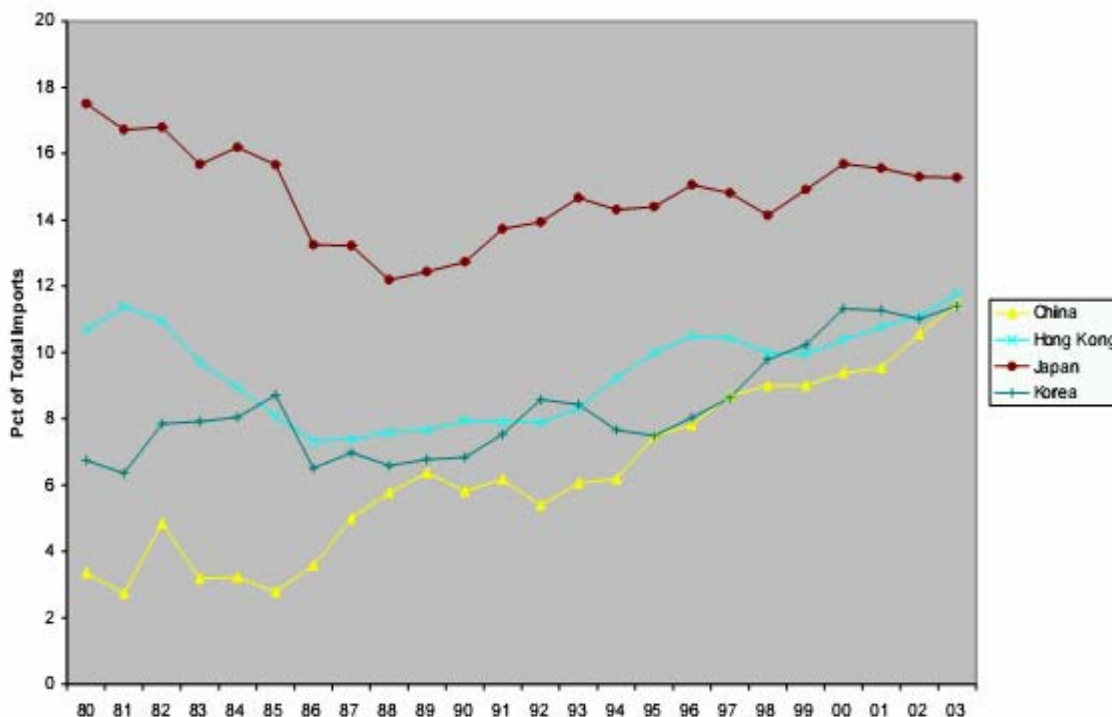
Source: ASEAN Trade Statistics Database, ASEAN Secretariat Office

Figure 1: ASEAN Exports to China by 6 Member Countries

Source: from Figure A3 in Hwee et al (2005).

From the import-side, ASEAN's import from China also tends to increase continuously, and in 2005, the share of China reached 10.6% of total imports by ASEAN (Table 3). The ASEAN's import share, however, varies by member country, depending on a variety of factors, including population, level of development, income elasticity of demand for imported goods from China, and trade regime (i.e. degree of domestic protection against foreign goods or imports from China in particular); As can be seen in Figure 3, Indonesia reveals as the most depending economy on Chinese goods, which since 2001 increased significantly. Indeed, in the post-1997/98 economic crisis era, Indonesian economy has become more liberal against external trade.

Figure 2: Industrialized Asia: Imports from ASEAN



Source: from Figure A6 in Hwee et al (2005).

Table 3: Share of ASEAN's Import from Major Trading Partners

Major Trading Partners	1995	2000	2002	2003	2004	2005
ASEAN	16.9	23.2	21.7	20.4	22.2	24.5
Hong Kong	-	5.5	2.4	2.1	-	-
ROK	3.6	3.6	4.5	4.2	4.2	4.1
China	2.3	3.1	7.0	7.8	9.7	10.6
Taiwan	-	-	3.8	4.4	4.0	-
India	0.6	1.6	-	-	-	1.4
Japan	24.8	13.3	16.3	16.3	15.4	14.1
EU-15	14.7	14.8	12.2	12.0	9.0	10.3*
Other European countries	-	-	-	-	2.0	-
USA	14.7	17.4	13.4	14.0	8.0	10.6
Australia	2.3	2.0	2.2	2.1	1.9	2.0
New Zealand	0.3	0.3	-	-	-	0.3
Saudi Arabia	-	-	1.9	2.0	2.0	-

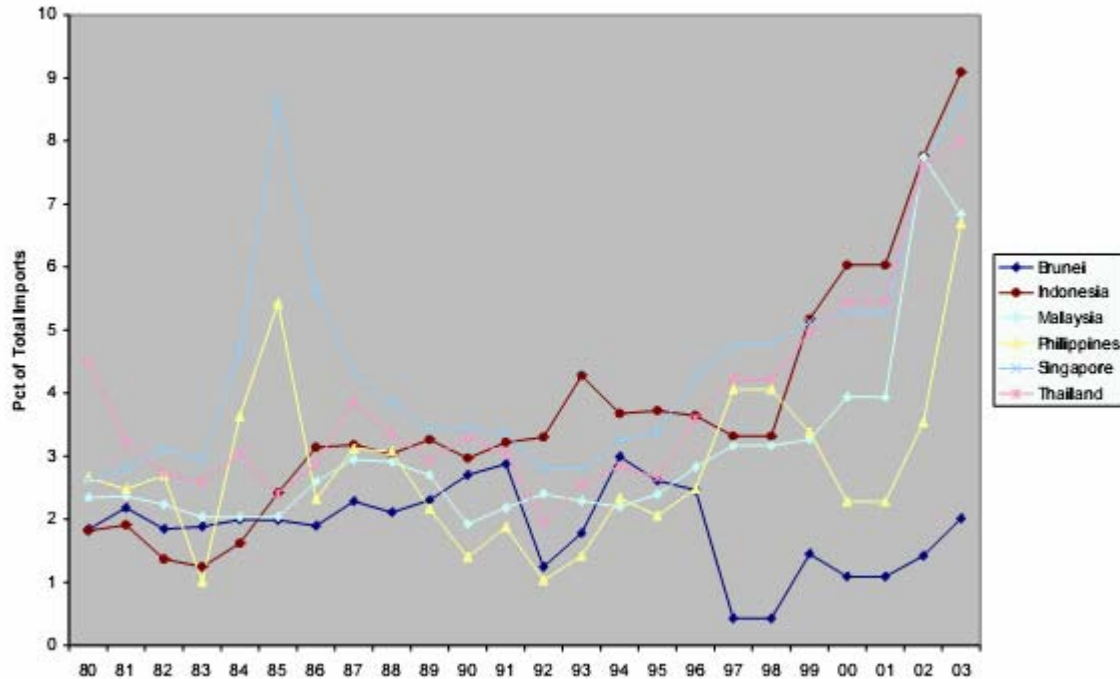
Note: * 25 countries

Source: ASEAN Trade Statistics Database, ASEAN Secretariat Office

In 1975, the bilateral trade volume between China and ASEAN was only US\$523 million, and in 1996 their trade volume reached US\$20 billion. In 2001, trade between the two sides totaled US\$41.6 billion in 2001, which was four times higher than that of 1991, making China the sixth, and ASEAN the fifth, biggest trading partner to each other respectively. From January to August of 2002, trade between the two sides reached US\$33.29 billion, an increase of 24.4 percent year-on-year. Further, according to the statistics of Chinese Ministry of Commerce, from January to October of 2004, bilateral trade between the country and ASEAN amounted to 84.61 billion US dollars. China's import from ASEAN reached 51.04 billion dollars, and its export to ASEAN was 33.57 billion US dollars. So China's trade deficit with ASEAN during this

period was 17.47 billion US dollars, larger than its trade deficit with ASEAN before 2004. That rising trade deficit on China's side proves that China was increasingly becoming a main consumer of ASEAN's products.

Figure 3: ASEAN6 Imports from China



Source: from Figure A8 in Hwee et al (2005).

However, data per December 2006 provided by the ASEAN Secretariat Office suggest that trade structure between ASEAN and China has changed recently. As shown in Table 4, there are two important facts. First, China and U.S are the second most important exporting countries to ASEAN, after Japan. Second, exports from China to ASEAN (based on data on ASEAN imports from the country) accounted for 10.6% of total ASEAN imports, compared with 8.1% of total ASEAN export to China. So, it seems that China now is going to gain more benefit from trading with ASEAN than before, as China export more to than import from ASEAN. Excluding oil and gas, the formation of ASEAN+3 can create annual trade deficits for the ASEAN rather than fro the three countries.

Hwee et al (2005) mention some factor driving the increase in intra-regional trade in East Asia. Among these, has been the formation of a tight web of production networks in the region. As noted by Sakakibara and Yamakawa (2003b), MNC play a key role in establishing regional production chains by locating each stage of a production process according to the comparative advantage of individual countries. In particular, as part of the adjustment to China's integration to the world economy, non-Chinese manufacturing firms have relocated more labor intensive manufacturing plants to lower wage economies in the region. Such regional supply chains have in turn given rise to a growing intensity in intra-industry trade between East Asian countries (Hwee et al, 2005). As the second factor, the establishment of regional production networks will also increase the extent and importance of service transactions. The fragmentation of goods production depends on reduced

transaction costs in insurance, transportation, and with information and communication technology (ICT) services.

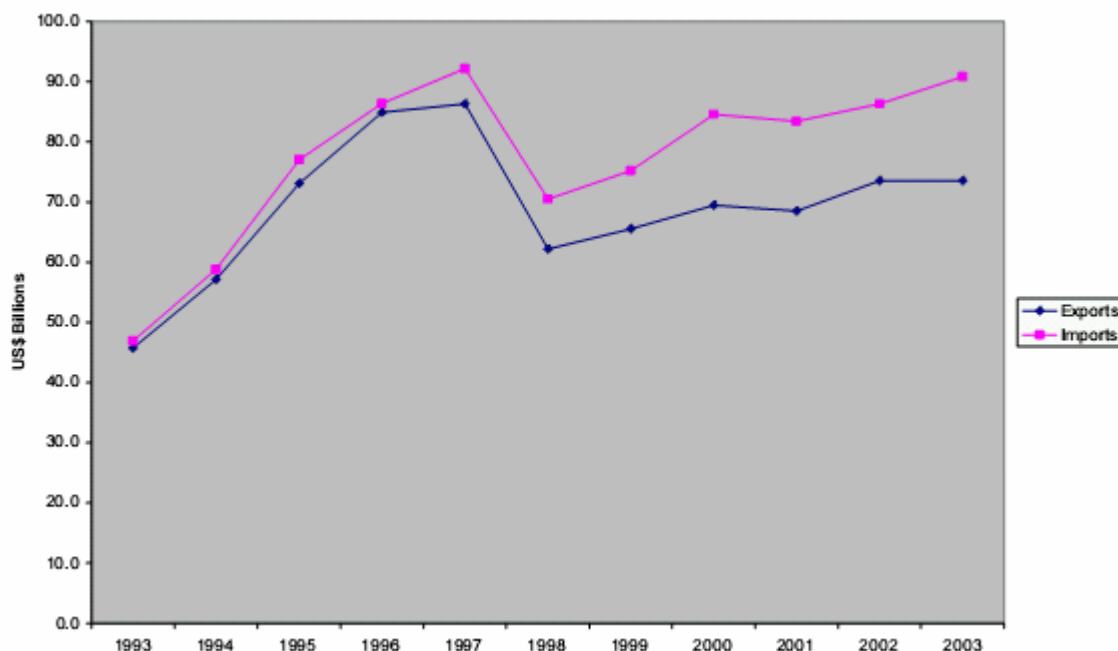
Table 4: ASEAN Trade with Most Important Trading Partner Countries, December 2006

Trade Partner country	Trade value			Share to total		
	Exports from ASEAN	Imports by ASEAN	Total trade	Exports from ASEAN	Imports by ASEAN	Total trade
China	52,257,514.2	61,136,048.4	113,393,562.6	8.1	10.6	9.3
India	15,048,254.3	7,952,339.5	23,000,593.9	2.3	1.4	1.9
Japan	72,756,360.4	81,077,948.8	153,834,309.2	11.2	14.1	12.6
Republic of Korea	24,362,314.5	23,609,546.0	47,971,860.5	3.8	4.1	3.9
United States	92,941,892.6	60,976,354.5	153,918,247.1	14.3	10.6	12.6
EU	14,753,994.6	10,712,411.9	25,466,406.5	2.3	1.9	2.1

Source: ASEAN Trade Statistics Database, ASEAN Secretariat Office

Based on Hwee et al (2005), Figure 4 gives the trade volume in commercial services by ASEAN countries over the past decade. The service trade has remained robust throughout the 1990s and into 2003. As information technology and other high value-added human capital services become more essential to commercial portfolios, the existence of regional production networks will increasingly benefit East Asia's trade in corporate services

Figure 4: Trade in Commercial Services by ASEAN Countries



.Source: from Figure 1 in Hwee et al, 2005 (data from ASEAN Statistical Yearbook, 2004.)

Going forward, regional trade in services, particularly in service exports, will be further boosted by China's GATS (General Agreement of Trade in Services) commitment to remove most restrictions on foreign entry and ownership over the next few years (Srivastava & Rajan, 2004). The dismantling of these trade barriers should lead to greater demand for services by China, particularly in the areas of distribution, professional and infrastructure services, areas in which other integrating nations are well positioned to exploit.

Since foreign direct investment (FDI) is strongly linked to external trade, it is then generally expected that the ASEAN + China will enlarge not only trade but also investment relationships between the two parties. Indeed, the amount of two-way direct investment has been on the rise with the passing years. ASEAN became the sixth largest investment source of China by 2000. In 2000, ASEAN (mainly Singapore, Malaysia, Thailand, Indonesia and Philippines) invested in 1,047 new projects in China, up by 15.6% compared to the year before, with the contract amount at US\$3.05 billion, or an increase by 3.1%. By 2001, ASEAN's total direct invested projects in China were 17,972, with the contract investment amount of US\$53.46 billion. In the first three quarters of 2002, ASEAN contract direct investment in China reached US\$4.3 billion.

China's FDI flows into ASEAN also show an upward trend since the end of the 1997/98 Asian financial crisis; although sometimes the total invested amounts in certain years are lower than in years before. For instance, by 2000, China had invested in 740 projects in ASEAN countries with a total investment amount of US\$650 million. In 2001, China direct invested declined to 48 projects with an investment amount of US\$200 million. The amount of China's FDI into this region, however, varies by member countries (Table 5). As can be seen, during the period under review, the largest recipient member country of China's FDI is the Philippines with total amount of US\$ 304 million, followed in the second place by Singapore at US\$224 million.

Table 5: FDI Inflows into ASEAN member countries from China, 1995-2004 (US\$ million)

Host Country	1995	2002	2003	2004	1995-2004
(1)	(2)	(3)	(4)	(5)	(6)
Brunei Darussalam	0	0	0	2	2
Cambodia	-	49	26	33	111
Indonesia	6	-1	0	-1	-37
Lao PDR	1	1	2	0	33
Malaysia	22	13	2	2	123
Myanmar	3	5	0	5	18
Philippines	14	0	0	0	304
Singapore ^{1/}	81	-178	137	98	224
Thailand	2	20	21	1	51
Viet Nam	7	9	1	86	189
ASEAN ^{2/}	137	-81	189	226	1,018

Notes:

Unless otherwise indicated, the figures include equity, re-invested earnings, and inter-company loans.

1/ 2000-2003 data revised based on recent FDI survey and updates in administrative records

2/ Excludes: (a) total FDI in Cambodia (1995-2000); (b) reinvested earnings in Myanmar (1995-2002);

(c) reinvested earnings (1995-2002 & 2004) and inter-company loans in the Philippines (2004); and

(d) reinvested earnings (2004) and inter-company loans (1995-1996 & 2004) in Singapore; includes privatization and asset sales under the Indonesian Bank Restructuring Agency program; figures for Myanmar cover the fiscal year ending in March of the following calendar year.

Source: ASEAN Trade Statistics Database, ASEAN Secretariat Office

However, as shown in Table 6, China is still a small source of FDI into ASEAN in comparison with such as EU (25 countries), Taiwan, Japan, USA, and Korea. During the sample period, the share of China in total FDI inflow into ASEAN is only 1.3% as compared to 26.3 (the highest) came from EU (25), 18% from Japan and 8% from US. Even, intra-direct investment flows among ASEAN member countries are much larger than that from China.

Table 6: Top ten sources of ASEAN foreign direct investments inflow (as of 13 August 2007)

Country	Value (US million)				Share to total inflow (%)			
	2004	2005	2006	2002-06	2004	2005	2006	2002-06
EU(25)	10,046.1	11,139.6	13,361.9	44,955.6	28.6	27.1	25.5	26.3
Japan	5,732.1	7,234.8	10,803.3	30,813.7	16.3	17.6	20.6	18.0
ASEAN	2,803.7	3,765.1	6,242.1	19,377.7	8.0	9.2	11.9	11.3
US	5,232.4	3,010.6	3,864.9	13,736.1	14.9	7.3	7.4	8.0
Other CSA ¹⁾	(60.5)	919.4	1,035.1	3,958.3	(0.2)	2.2	2.0	2.3
Hong Kong	529.6	773.0	1,353.4	3,430.7	1.5	1.9	2.6	2.0
Korea	806.4	577.7	1,099.1	3,347.3	2.3	1.4	2.1	2.0
Cayman island	2,029.1	(19.9)	476.4	3,003.7	5.8	(0.0)	0.9	1.8
Taiwan	366.8	(66.8)	668.1	2,417.4	1.0	(0.2)	1.3	1.4
China	731.5	502.1	936.9	2,302.9	2.1	1.2	1.8	1.3
Total top ten sources	28,217.1	27,835.4	39,841.2	127,343.3	80.4	67.8	76.1	74.5
Other ²⁾	6,900.1	13,232.4	12,538.3	43,478.5	19.6	32.2	23.9	25.5
Total	35,117.2	41,067.8	52,379.5	170,821.9	100.0	100.0	100.0	100.0

Notes: 1) Central & South America which includes countries in the region other than Argentina, Brazil, Mexico and Panama; 2) includes inflow from all other countries, as well as total reinvested in the Philippines (local banks only) for 2001-2005 and inter-company loans in Singapore from 2001. Ranking is based only on countries where data is available.

Source: ASEAN Trade Database (ASEAN Secretariat Office).

Part III

EARLY HARVEST PROGRAM: A CASE STUDY

III.1 Introduction

Under the Early Harvest Program (EHP), agricultural products such as live animals, meat and edible meal offal, fish, dairy produce, other animal products, live trees, edible vegetables and edible fruits and nuts, as well as other specified products⁸ now enjoy 0% tariffs. As a general rule, to enjoy ACFTA tariff rates your product must originate from ASEAN and/or China. To be classified as originating, at least 40% of a product's local content should have come from ASEAN and/or China. This 40% local content requirement refers to both single country and cumulative content.

⁸ For a complete list of products, visit <http://www.aseansec.org/13196.htm> and <http://www.aseansec.org/15157.htm> (refer to the relevant annexes)

This case study aims to analysis the likely impact of the implementation of the program on agricultural production, import and export in Indonesia. For this purpose, it uses two approaches: competitiveness analytical approach by analyzing a number of competitiveness indicators on selected commodities included in the program from the two countries and simulation approach by using the Agricultural Trade Policy Simulation Model (ATPSM) designed by UNCTAD, also on selected commodities covered by the program.

III.2 Indonesia-China Trade Pattern on EHP Commodities.

Not China, but Japan and the United States (US) have been historically the most important market destinations for Indonesian non-oil and gas exports since the New Order era. In terms of value, total Indonesian exports to Japan increased from 13,010 million US dollar in 2001 to almost 18,1 million US dollar in 2005 or 9.82 per cent trend value for the whole period. While those to the US reached almost 9,9 million US dollar in 2005, increased from about 7,75 million US dollar in 2001, or 6.52 per cent trend value during 2001-2005. Although China is consistently in the fifth place, total Indonesian exports to this country has the highest percentage trend value at around 30.7, after Pakistan and Turkey, from 2,2 million US dollar in 2001 to almost 6,7 million US dollar in 2005 (Table 7).

Interestingly, from Indonesian point of view, China is more important for import than for exports. Again, as already explained before, this trade pattern between Indonesia and China may suggest that in general China is more competitive than Indonesia, especially in manufactured labor intensive products, in which China has a strong comparative advantage, including textiles, garments, and electronics. As shown in Table 8, China is in the third place as country of origin for Indonesian imported goods. In 2001, total imports from this country reached 1,8 million US dollar and constantly increase to 5,8 million US dollar in 2005.

The main question of this study is: whether Indonesian agriculture will gain benefit of the implementation of ASEAN-China FTA? This will depend on two main factors: level of competitiveness and current as well as potential production capacity. Of course many factors behind these two such as level of technology and human skill, infrastructure, supply of raw materials, and government policies. With respect to production capacity, the next question is: whether the level of supply response is high enough to response to market changes induced by such as the implementation of ASEAN-China FTA.

Table 7: Indonesian Export by Country of Destination, 2001-2005

NO.	COUNTRY	2001	2002	2003	2004			2005			% CHANGE 2005/2004		% TREND VAUE 2001-2005
		VALUE IN US\$ MILLION			TONS (000)	US\$ MILLION	% SHARE	TONS (000)	US\$ MILLION	% SHARE	QUANTITY	VALUE	
1	JAPAN	13,010	12,045	13,603	57,646	15,962	22.30	59,524	18,049	21.07	3.26	13.07	9.82
2	UNITED STATES	7,749	7,559	7,374	7,371	8,767	12.25	7,156	9,068	11.52	-2.91	12.56	6.52
3	SINGAPORE	5,364	5,349	5,400	18,389	5,998	8.38	19,289	7,835	9.15	4.78	30.64	9.12
4	KOREA, REPUBLIC OF	3,772	4,107	4,324	25,275	4,830	6.75	29,119	7,086	8.27	15.21	46.70	15.29
5	CHINA	2,201	2,903	3,803	12,632	4,605	6.43	18,630	6,662	7.78	47.40	44.68	30.69
6	MALAYSIA	1,779	2,030	2,364	10,510	3,016	4.21	11,248	3,431	4.01	7.03	13.77	18.65
7	INDIA	1,054	1,302	1,742	14,847	2,171	3.03	20,709	2,878	3.36	39.40	32.61	28.67
8	TAIWAN, PROVINCE OF CHINA	2,188	2,067	2,233	24,075	2,854	3.99	21,642	2,475	2.89	-10.11	-13.29	5.86
9	THAILAND	1,064	1,227	1,393	7,551	1,976	2.76	8,499	2,246	2.62	12.55	13.67	21.79
10	NETHERLANDS	1,498	1,618	1,401	3,987	1,798	2.51	5,740	2,234	2.61	43.96	24.26	9.46
11	AUSTRALIA	1,845	1,924	1,792	4,724	1,887	2.64	4,852	2,228	2.60	2.70	18.03	3.64
12	GERMANY	1,297	1,270	1,417	1,550	1,655	2.31	1,292	1,782	2.08	-16.64	7.68	9.41
13	HONG KONG	1,290	1,242	1,183	8,262	1,387	1.94	10,046	1,492	1.74	21.59	7.56	4.10
14	PHILIPPINES	815	778	945	4,780	1,238	1.73	5,026	1,419	1.66	5.15	14.67	17.04
15	UNITED KINGDOM	1,383	1,252	1,136	1,535	1,295	1.81	1,775	1,291	1.51	15.67	-0.29	-1.03
16	SPAIN	904	996	1,022	3,561	837	1.17	4,213	1,205	1.41	18.32	43.94	4.11
17	ITALY	622	720	844	6,072	923	1.29	7,058	1,007	1.18	16.23	9.17	12.89
18	BELGIUM	762	783	903	469	916	1.28	408	997	1.16	-13.05	8.92	7.19
19	UNITED ARAB EMIRATES	757	720	760	403	745	1.04	881	907	1.06	118.87	21.76	4.03
20	VIET NAM	322	393	468	938	601	0.84	1,163	678	0.79	23.99	12.89	21.11
21	PAKISTAN	179	265	265	1,339	416	0.58	2,363	634	0.74	76.38	52.49	34.79
22	FRANCE	663	649	653	718	660	0.92	720	624	0.73	0.20	-5.43	-1.03
23	TURKEY	176	238	264	337	356	0.50	616	566	0.66	82.59	58.78	31.49
24	SAUDI ARABIA	482	475	435	398	418	0.58	436	524	0.61	9.54	25.34	0.39
25	CANADA	390	378	382	245	437	0.61	278	464	0.54	13.42	6.37	5.05
26	BRAZIL	202	327	244	504	330	0.46	406	403	0.47	-19.32	22.06	14.88
27	BANGLADESH	216	246	266	1,242	282	0.39	1,559	353	0.41	25.54	25.43	11.90
28	SRI LANKA	159	153	185	437	238	0.33	887	338	0.39	103.18	41.88	21.44
29	SOUTH AFRICA	160	167	233	305	260	0.36	362	314	0.37	18.71	20.76	19.59
30	EGYPT	197	180	170	243	197	0.28	304	290	0.34	57.62	47.25	9.11
	OTHERS COUNTRIES	3,822	3,794	3,855	11,971	4,530	6.33	12,472	5,376	6.28	4.18	18.67	8.98
	TOTAL	56,321	57,159	61,058	232,317	71,585	100.00	258,732	85,660	100.00	11.37	19.66	11.22

SOURCE : CENTRAL BOARD OF STATISTICS

(CEIS-NAFED)

Table 8: Indonesian Import by Country of Origin, 2001-2005

NO.	COUNTRY	2001	2002	2003	2004			2006			% CHANGE 2006/2004		% TREND
		VALUE IN US\$ MILLION			TONS (000)	US\$ MILLION	% SHARE	TONS (000)	US\$ MILLION	% SHARE	QUANTITY	VALUE	VAUE 2001-2006
1	SINGAPORE	3,147	4,100	4,155	12,149	6,083	13.07	15,300	9,471	16.41	25.94	55.70	29.67
2	JAPAN	4,589	4,409	4,228	2,654	6,082	13.07	2,661	6,906	11.97	0.28	13.56	11.58
3	CHINA	1,843	2,427	2,957	7,638	4,101	8.82	8,905	5,843	10.13	16.58	42.46	32.74
4	UNITED STATES	3,208	2,640	2,695	3,740	3,225	6.93	3,731	3,879	6.72	-0.24	20.26	5.98
5	THAILAND	986	1,191	1,702	4,653	2,772	5.96	4,529	3,447	5.97	-2.66	24.37	39.77
6	KOREA, REPUBLIC OF	2,209	1,547	1,528	1,614	1,943	4.18	3,553	2,869	4.97	120.07	47.70	7.12
7	SAUDI ARABIA	1,314	1,104	1,498	6,126	1,967	4.23	6,095	2,712	4.70	-0.51	37.91	22.47
8	AUSTRALIA	1,814	1,587	1,548	8,022	2,215	4.76	6,987	2,567	4.45	-12.90	15.90	10.82
9	MALAYSIA	1,005	1,037	1,138	2,965	1,682	3.62	4,002	2,149	3.72	34.98	27.74	22.16
10	GERMANY	1,301	1,224	1,181	776	1,734	3.73	705	1,781	3.09	-9.16	2.70	10.26
11	TAIWAN, PROVINCE OF CHINA	1,071	1,010	877	1,084	1,240	2.67	1,072	1,338	2.32	-1.14	7.88	6.72
12	KUWAIT	708	675	687	2,874	1,066	2.29	2,519	1,275	2.21	-12.37	19.60	17.74
13	BRUNEI DARUSSALAM	37	35	117	814	295	0.63	2,629	1,197	2.08	222.96	305.60	148.13
14	INDIA	486	638	666	2,967	1,102	2.37	1,871	1,052	1.82	-36.95	-4.56	23.26
15	NIGERIA	445	1,132	862	3,354	1,077	2.31	2,120	963	1.65	-36.79	-11.45	15.85
16	FRANCE	397	406	453	266	544	1.17	336	707	1.22	31.04	29.85	15.55
17	CANADA	357	412	322	1,794	552	1.19	2,175	698	1.21	21.24	26.51	17.78
18	UNITED KINGDOM	643	656	464	1,118	703	1.51	818	645	1.12	-26.85	-8.23	0.77
19	ITALY	407	402	324	216	473	1.02	160	569	0.99	-26.01	20.20	8.67
20	SWEDEN	249	266	191	142	380	0.82	131	500	0.87	-7.17	31.35	19.14
21	BRAZIL	170	274	332	1,286	442	0.95	1,210	454	0.79	-5.92	2.80	27.75
22	VIET NAM	171	259	416	1,363	416	0.89	1,063	439	0.76	-22.02	5.59	25.57
23	RUSSIAN FEDERATION	138	151	100	695	234	0.50	1,036	436	0.76	49.08	86.50	31.43
24	ARGENTINA	30	82	72	1,123	330	0.71	1,532	379	0.66	36.49	14.77	90.65
25	NETHERLANDS	344	352	370	633	475	1.02	394	369	0.64	-37.63	-22.23	4.50
26	UKRAINE	116	122	165	1,077	421	0.90	1,002	350	0.61	-6.98	-16.90	41.00
27	UNITED ARAB EMIRATES	174	115	113	810	340	0.73	678	343	0.59	-16.35	0.68	27.71
28	FINLAND	89	63	89	75	211	0.45	78	329	0.57	3.78	55.98	45.52
29	PHILIPPINES	94	114	183	206	229	0.49	289	322	0.56	40.78	40.97	37.24
30	SWITZERLAND	174	193	222	61	265	0.55	195	321	0.56	218.30	25.52	16.13
	OTHER COUNTRIES	3,144	2,565	2,797	9,026	3,936	8.45	5,888	3,401	5.89	-34.77	-13.59	6.03
	TOTAL	30,982	31,269	32,561	81,821	48,626	100.00	83,886	67,701	100.00	2.88	24.02	17.84

SOURCE : CENTRAL BOARD OF STATISTICS

(CEIS-NAFED)

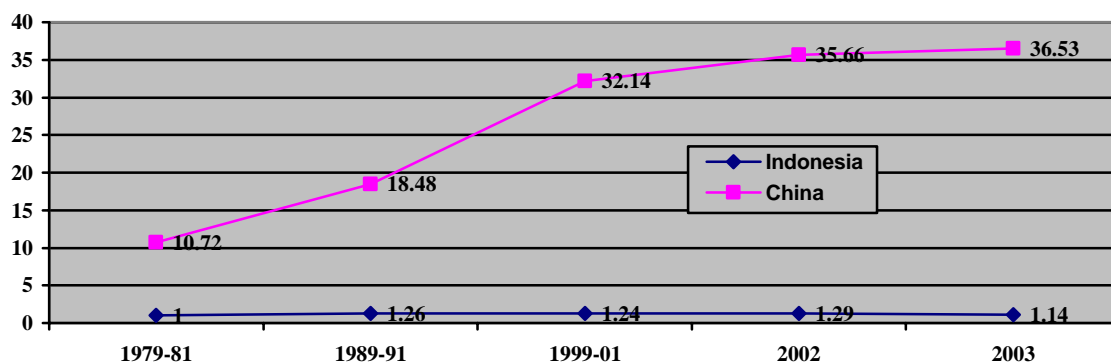
As an illustration, Table 9 shows that China produced fruits and vegetables more than Indonesia did and hence it has much higher world market share than Indonesia for these crops (Figure 5), which included in the EHP program. For fruits, Indonesia experienced an increasing negative trade balance in the last few years, and the gap tends to wider (Figure 6), whereas for vegetables, Indonesia used to export more than import; only in 2004, Indonesia experienced a negative net trade for this particular crop (Figure 7).

Table 9: World Production of Fruits and Vegetables in Indonesia and China (1000 tons)

Period	Indonesia	China
1979-81	6 648	67 472
1989-91	10 245	150 189
1999-01	14 987	387 902
2002	16 622	461 213
2003	15 083	483 103

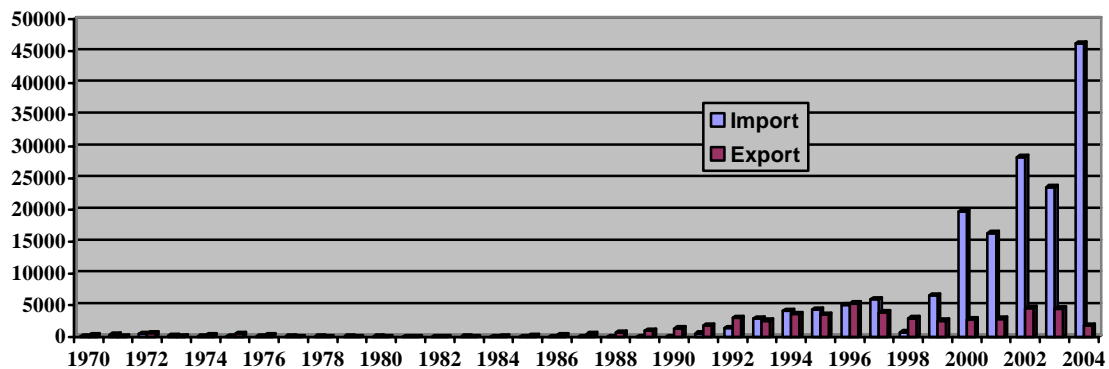
Source: UNCTAD database

Figure 5: World Shares in Fruits and Vegetables Production of Indonesian and China (%)



Source: UNCTAD database.

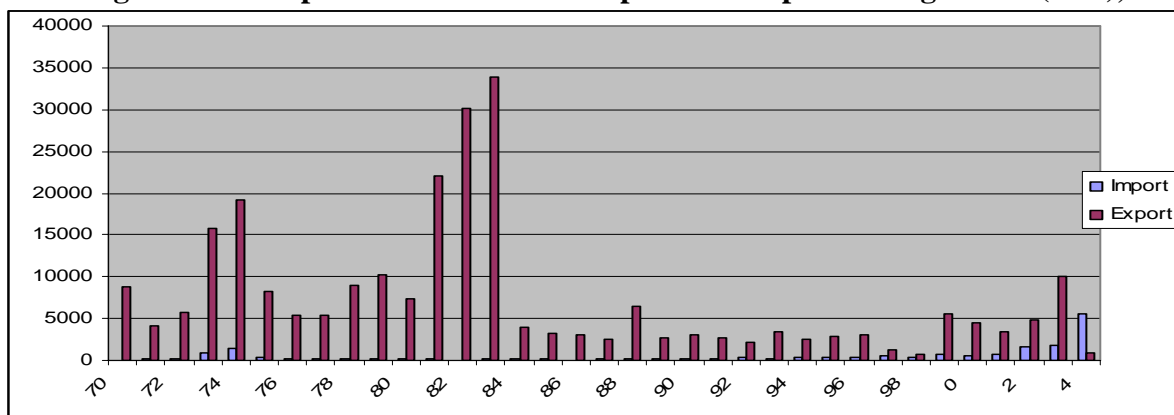
Figure 6: Long-term development of Indonesian export and import of Fruits Fresh (tons), 1970-2004



Source: FAO (FAOSTAT).

For these two crops, Indonesia has always negative net trades with China. For fruits, Indonesia imported more from than exported to China (Table 10), ranging from 1.1 per cent in 1999 to 1.5 in 2004; while for vegetables Indonesia imports from but not exports to China, which increased significantly from 5.7 per cent in 1998 to almost 76 per cent in 2004 (Table 11).

Figure 7: Long-term development of Indonesian export and import of Vegetables (tons), 1970-2004



Source: FAO (FAOSTAT)

Table 10: Indonesian Imported from and Exported Fruit Fresh to China (mt)

Year	Import			Export		
	From China	Total import	% from China	To China	Total export	% from China
1999	76	6506	1.1	16	2536	0.6
2000	28	19695	0.1	12	2759	0.4
2001	65	16349	0.3	10	2839	0.3
2002	406	28327	1.4	10	4547	0.2
2003	304	23585	1.2	-	4462	0.0
2004	722	46201	1.5	-	1819	0.0

Source: FAO (FAOSTAT)

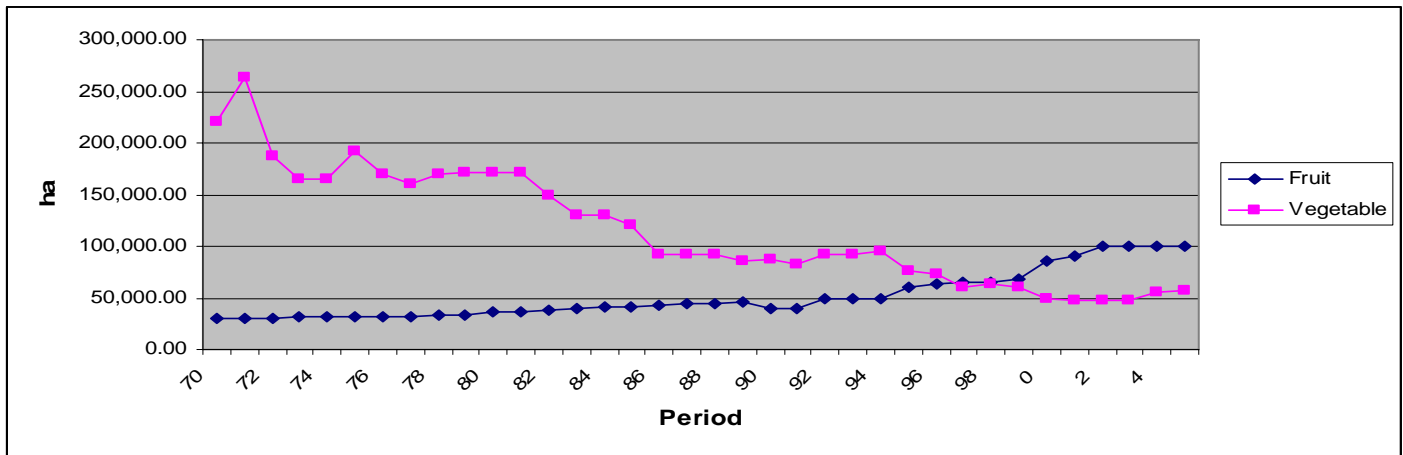
Table 11: Indonesian Imported from and Exported Vegetable Fresh to China (mt)

Year	Import			Export		
	From China	Total import	% from China	To China	Total export	% from China
1998	18	311	5.7	-	719	0.0
1999	204	680	30.0	-	5550	0.0
2000	53	527	10.0	-	4406	0.0
2001	91	647	14.0	-	3378	0.0
2002	738	1586	46.5	-	4855	0.0
2003	1136	1840	61.7	-	9971	0.0
2004	4235	5600	75.6	-	945	0.0

Source: FAO (FAOSTAT)

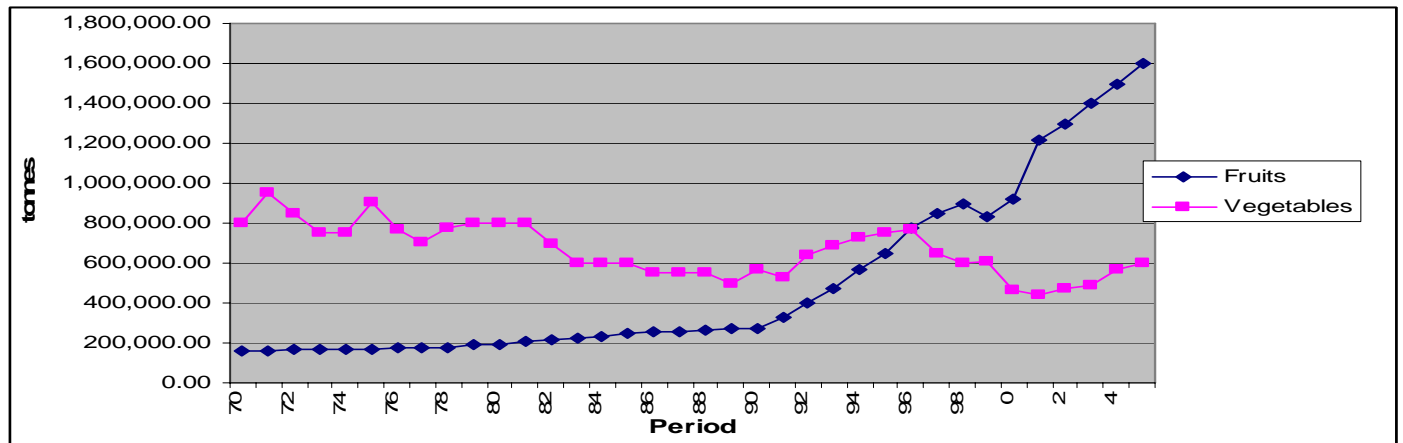
The inferior position of Indonesia in trade with China for these crops may have been related to limited production capacity, among other supply bottleneck factors, in these two subsectors in Indonesia. Historical data on production volume, area harvested, and yield show in next figures may give some idea about the level of supply response of Indonesian fruits and vegetables subsector, to market changes. Figures 8 and 9 may suggest that especially in production of vegetable, Indonesia probably faces a supply bottleneck. During the period reviewed, the area harvested and production volume of this crop constantly declined. Indonesia seems to have better prospect for the production of fruits, although during the same period its area harvested increased slowly and it tends to stabilize at the level of 100,000 ha.

Figure 8: Area harvested of Fruit and Vegetable in Indonesia (ha): 1970-2004



Source: FAO (FAOSTAT)

Figure 9: Production of Fruit and Vegetable in Indonesia (tons): 1970-2004



Source: FAO (FAOSTAT)

III.3 Likely Impact of the EHP

Competitiveness Analytical Approach

The EHP will have direct impacts on Indonesian trade pattern (export and import) with China. It depends on two major domestic factors, namely the competitiveness and production capacity (supply response) of Indonesian agricultural subsectors included in the program. If Indonesian commodities are highly competitive and current production capacity is in position to fully response to the open market opportunity in China generated by the agreement, Indonesian exports for these commodities will increase. On the contrary, if Chinese commodities are cheaper than those produced in Indonesia or Indonesia is facing supply bottlenecks in the production of the commodities, Chinese exports to Indonesia or Indonesian imports from China will increase, and hence trade balance in these commodities will be positive for China and negative for Indonesia.

Not only in China but also in the third market (countries) within ASEAN, Indonesia will face challenges as well as opportunities. It is likely that Indonesian market shares in the third countries for commodities in

which Indonesia is less competitive will diminish in favor of those from China. This problem that Indonesia probably will face is related to the fundamental question with respect to the implementation of the ASEAN-China FTA: are individual member countries of ASEAN going to trade more with China than among themselves? The main reason of raising this question is because no common conclusion has been reached yet about which party will benefit more from the ASEAN-China FTA, whether ASEAN or China, and so far empirical studies estimating the possible ‘trade-diversion’ (TD) effects on intra-trade ASEAN of the formation of the FTA are very few, particularly with respect to trade in agriculture.

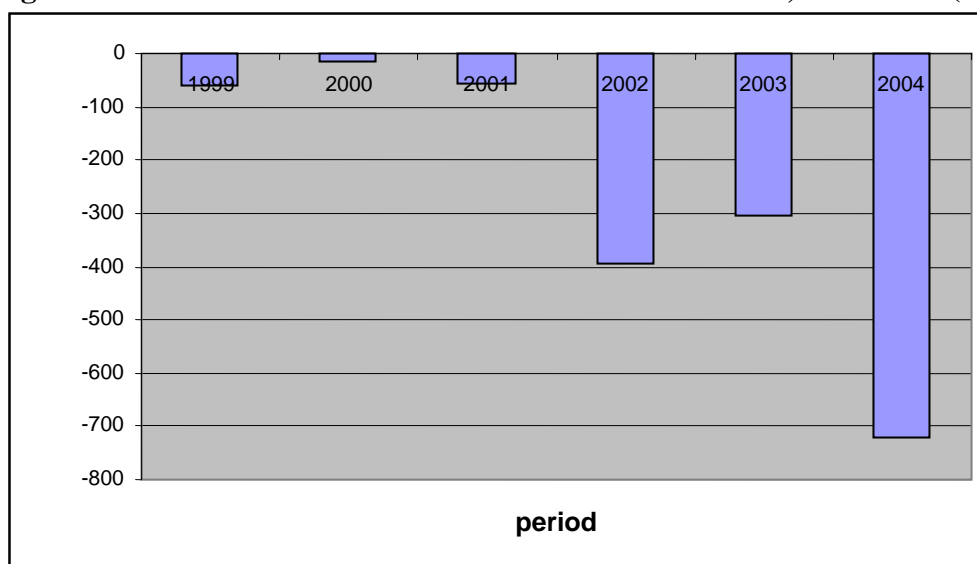
There are studies arguing that trade integration between ASEAN and China will be more in favor of China. These studies, however, deal with trade in manufacturing, not agricultural commodities. Tongzon (2005), for instance, finds that China’s top export industries, which account for 84 per cent of its total exports, are also ASEAN’s major export oriented industries. He argues that trade integration between ASEAN and China in the form of a FTA can be expected to increase the competitive pressures on ASEAN producers. So, this will say that if all ASEAN member countries are defeated in competition with China for certain goods, than the formation of the ASEAN-China FTA will certainly create TD among the member countries or reduce intra-ASEAN trade for those particular products. The main reason for that according to Tongzon (2005) is simple: it is because China has competitive advantages in both wages and labor productivity relative to ASEAN in many industries. The empirical analysis of Voon and Yue (2003) also indicates that China has a competitive advantage over ASEAN in manufacturing exports.

However, there are also studies which expect that the formation of the ASEAN-China will benefit both parties, or will have not so great impact. Laurenceson (2003), for instance, finds that there is already a high degree of integration between ASEAN and China in trade of goods and services, which implies that the impact of the formation of the ASEAN-China FTA may be quite limited. Chirathivat (2002) finds that both ASEAN and China should experience net trade gains from the ASEAN-China FTA, with ‘trade creation’ (TC) more than offsetting TD. He argues that under the ASEAN-China FTA, ASEAN may play a bigger role in satisfying China’s growing appetite for imported raw materials and intermediate inputs, while China may play an important role with respect to other goods and services.⁹

⁹ In the literature on economic integration, an economic integration generates trade creation (TC) but also trade diversion (TD) for individual member countries. In the case of TD, higher cost imports from a bloc member replace lower cost foreign supplies and the economic integration (or FTA) is said to be “trade diverting” from the most efficient supplier. As a further effect, world trade is reduced and at least one country is made worse off if the external tariff is greater than the cost difference between the FTA and non-member sources. With respect to the issue addressed in this study, however, the meaning of TD is rather different: it is higher cost imports from a member country (or higher cost intra-trade) within ASEAN are replaced by lower cost supplies from China (a non-member country). In other words, the ASEAN integration with China is said to be “trade diverting” from intra-trade towards extra-trade. Since China’s products are cheaper than those produced within ASEAN, then it is of course good for the ASEAN economy; specifically, it generate higher consumer surplus in ASEAN. However, from the point of view of ASEAN aiming to generate trade among member countries, the TD is a negative effect. TC, on the other hand, is a positive effect, meaning that extra-trade of individual member countries or ASEAN as a group increases when China freely enters the ASEAN market without reducing intra-ASEAN trade.

It is obvious that for some EHP commodities Indonesian has always trade deficits with China and these tend to continue and even increase. Fruits, for instance, Indonesian import from China has steadily increased from 76 mt. in 1999 to 722 mt. in 2004, whereas Indonesian export to China was very small and after 2002 Indonesia does not export anymore (Figure 10). For the second one, vegetables, Indonesia imports from but not exports to China, and its imports increased significantly from about 18 mt. in 1998 to 4235 mt. in 2004 (Figure 11). There is no hard evidence that the significant increases in Indonesian trade deficits with China for these two items in 2004 were direct consequences of the implementation of the EHP. However, it is easy to conclude that with current condition of Indonesian agriculture intact (e.g. lack of land, marginal farmers, no access to capital, and lack of technical infrastructure), Indonesia will have more losses than benefits from the implementation of this program for these two particular commodities.

Figure 10: Indonesian Trade Balance with China in Fruits, 1999-2004 (mt)



Source: FAO (FAOSTAT).

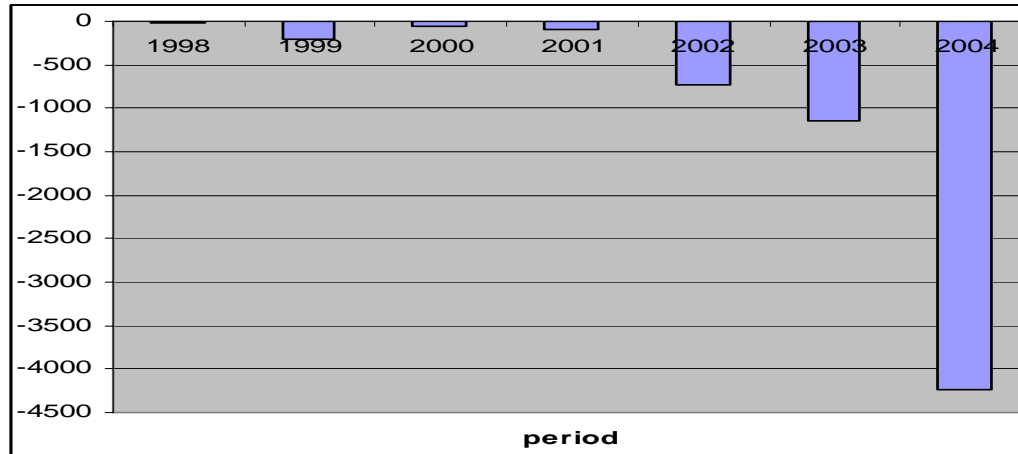
One simple analytical approach to answer the question, whether Indonesian production and export (or import) of agricultural commodities included in the EHP will increase or decline due to the implementation of the program, is by analyzing the relative competitiveness of Indonesia compared to China as well as other ASEAN countries and the tendency of Indonesia as a net exporter or a net importer for those commodities. In this study, this is done by examining two indexes, i.e. the *revealed competitive advantage index* (RCA) and the *trade specialization index* (TSI). The RCA index for competitiveness is calculated as follows:

$$RCA_{ij} = (X_{ij}/\acute{O}X_{ij})/(X_{iw}/\acute{O}X_{iw}) \quad (1)$$

where X_{ij} is the export value of product group i of country j , $\acute{O}X_{ij}$ is the total export value of country j , X_{iw} is the world export value of product group i , and $\acute{O}X_{iw}$ is the total world export value. The index for a product shows the ability of the particular country to gain market share in that product in the international market.

RCA is higher than 1 indicates that the particular country has a comparative advantage in the production of particular product in the global economy. RCA is less than 1 indicates the opposite.

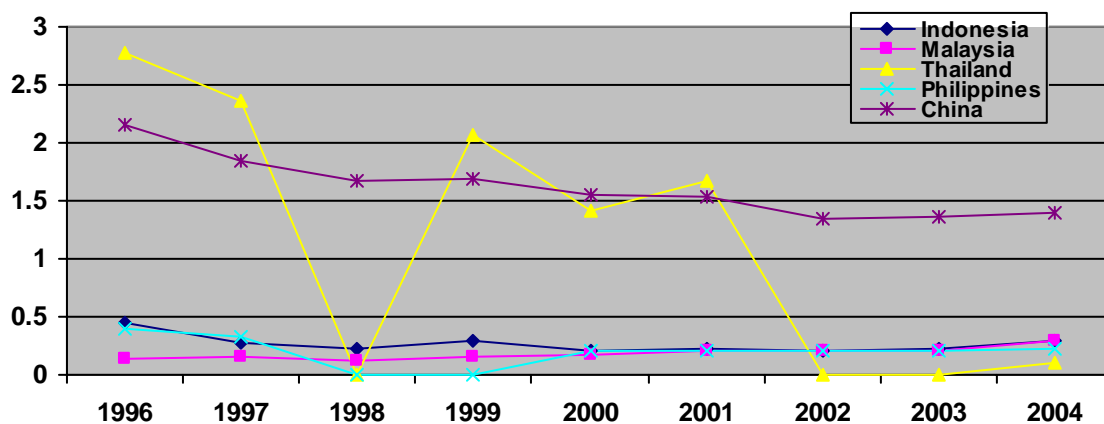
Figure 11: Indonesian Trade Balance with China in vegetables, 1998-2004 (mt)



Source: FAO (FAOSTAT)

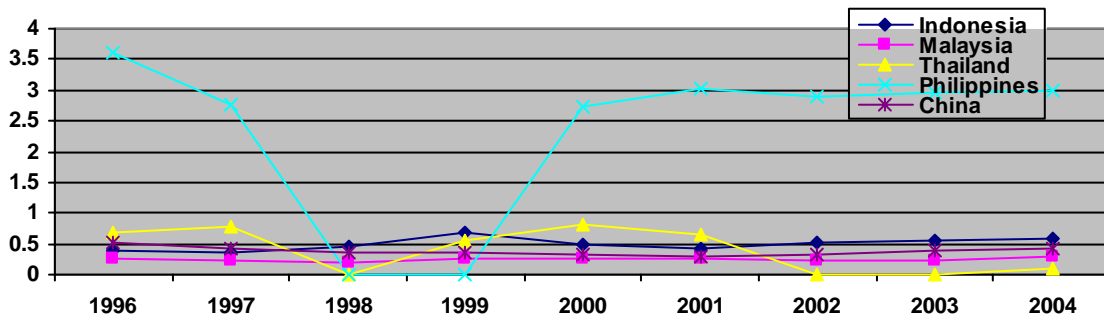
The result of the calculation for this index shows that for vegetables, China and Thailand are more competitive than Indonesia as the values of RCA for these two countries on average have higher than that of Indonesia (Figure 12). If not in domestic market, in China Indonesian vegetables will find hard to compete with those from the host country as well as the imported ones from Thailand. For fruits, China and Indonesia are more or less the same and the Philippines reveals obviously as the leading country (Figure 13). This means that in Chinese market, Indonesian fruits may face no difficulties to compete with Chinese fruits but well with those imported from the Philippines. For live animals, Indonesia is the leading country within the ASEAN countries included and in the same level of competitiveness with China; although the RCA indexes from both Indonesia and China tend to deteriorate (Figure 14). Only for fish, Indonesia is the strongest in the group (Figure 15).

Figure 12. RCA for Vegetables in the Selected ASEAN Countries and China



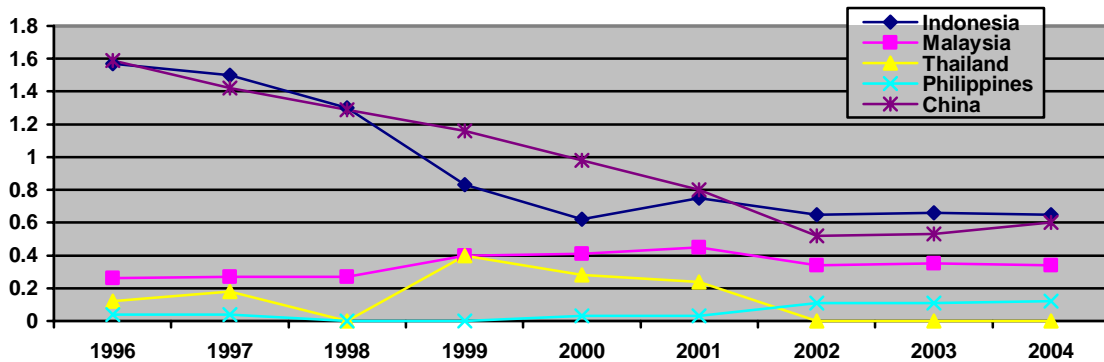
Source: FAO (FAOSTAT)

Figure 13. RCA for Fruits in the Selected ASEAN Countries and China



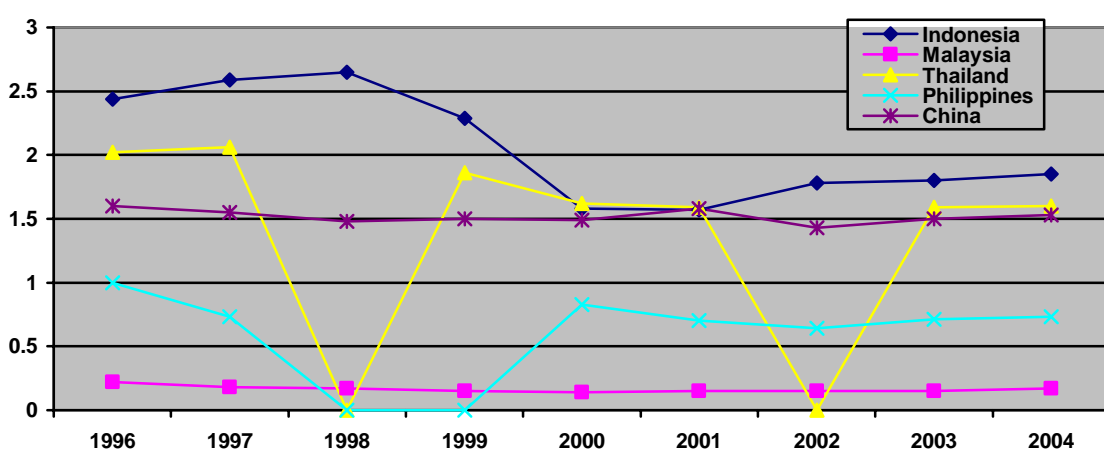
Source: FAO (FAOSTAT)

Figure 14. RCA for Live Animals in the Selected ASEAN Countries and China



Source: FAO (FAOSTAT)

Figure 15. RCA for Fish in the Selected ASEAN Countries and China



Source: FAO (FAOSTAT)

The TSI for tendency as a net exporter/importer is calculated as follows:

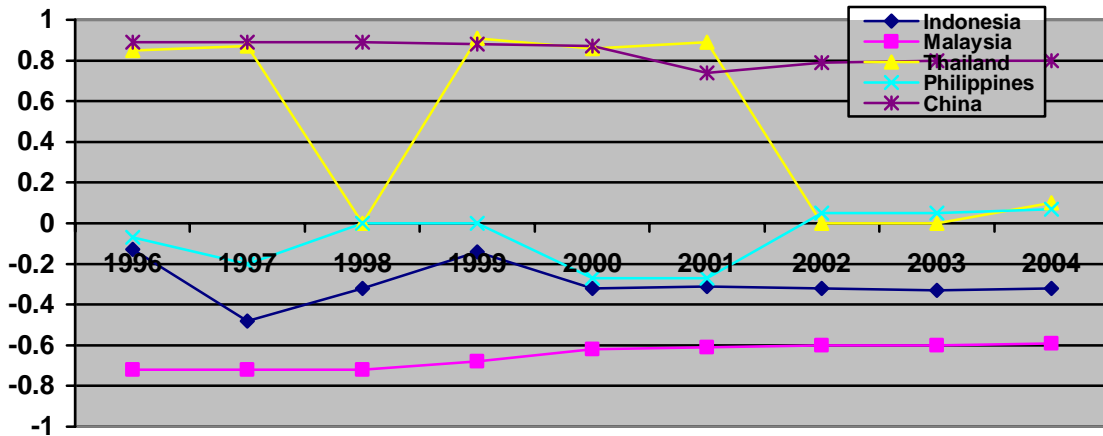
$$TSI_i = (X_i - M_i) / (X_i + M_i) \quad (2)$$

where X_i and M_i is, respectively, the export and import value of product i . If the value of TSI between larger than 0.5 and close to 1 means that the particular country tends to be a net exporter, and if the value is larger than -0.5 and close to -1, it tends to be a net importer.

The result of the calculation for this index shows very clear that for vegetables, China and Thailand are net exporting countries (Figure 16); for fruits, the Philippines, and also Thailand and China (except for certain

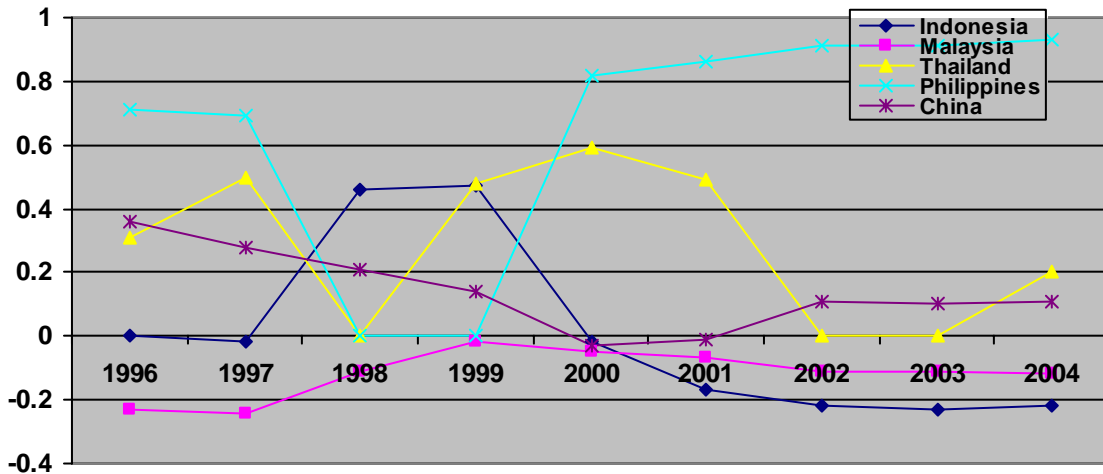
years) are much better than Indonesia (Figure 17); for live animals, China and Malaysia reveals as the leading exporters (Figure 18); for fish, as expected, Indonesia is stronger than China as an exporting country (Figure 19); and for meat, China is obviously the leading exporter in the group (Figure 20).

Figure 16. TSI for Vegetables in the Selected ASEAN Countries and China



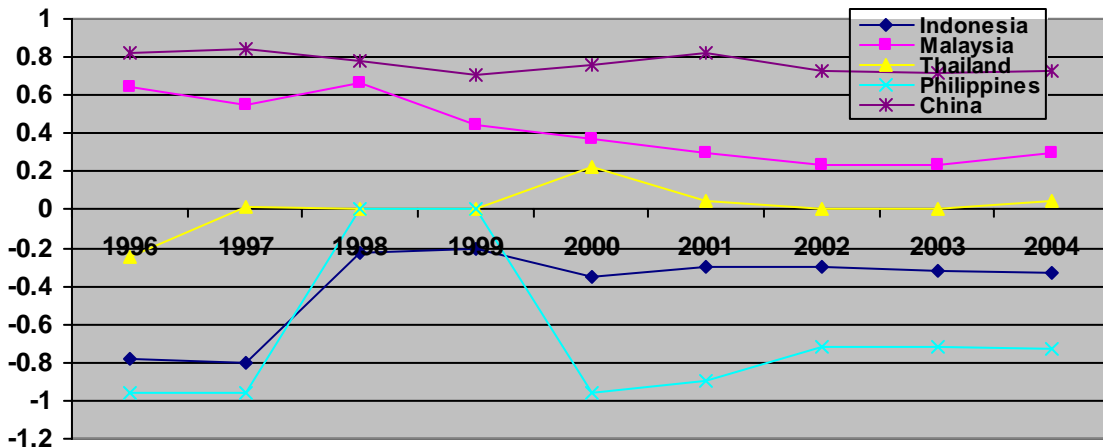
Source: FAO (FAOSTAT)

Figure 17. TSI for Fruits in the Selected ASEAN Countries and China



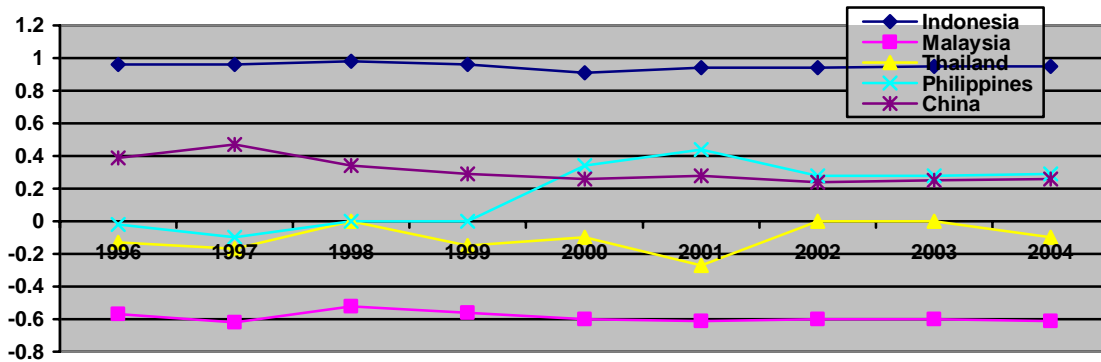
Source: FAO (FAOSTAT)

Figure 18. TSI for Live Animals in the Selected ASEAN Countries and China



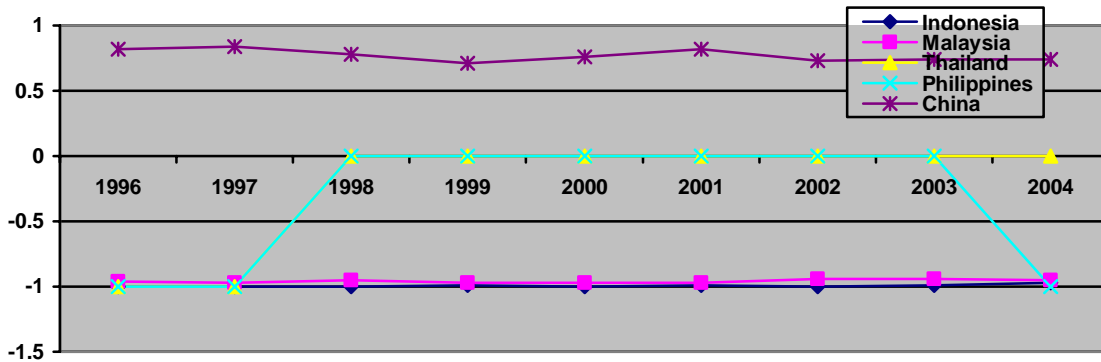
Source: FAO (FAOSTAT)

Figure 19. TSI for Fish in the Selected ASEAN Countries and China



Source: FAO (FAOSTAT)

Figure 20. TSI for Meat in the Selected ASEAN Countries and China



Source: FAO (FAOSTAT)

Simulation Approach

The likely impact of the EHP on export, import and domestic production on the commodities concerned can also be estimated by a simulation approach. For this purpose, the study used the Agricultural Trade Policy Simulation Model (ATPSM) version 3.1 (2006) designed by UNCTAD.¹⁰ It is a trade policy simulation model capable of detailed analysis of agricultural trade policy issues. The model covers 176 countries and 36 commodities groups including beverages, oilseeds, dairy products, meat, fruits, and vegetables. For prices, the model uses several sources (IFS, FAO Trade Yearbook and UNCTAD price statistics), extending the period covered from 1999 to 2001. The volumes of trade and production have been obtained from the FAO supply utilization accounts. Consumption is obtained by adding imports and production and subtracting exports – so called apparent consumption. This concept does not take into account movements in and out of stocks. Sometimes, due to incompatibility between production and trade accounts, the apparent consumption can equate to a negative number. In such a case production is increased to ensure consumption is non-negative. As the commodity specification in the supply utilization accounts is more detailed than the one used in the ATPSM, the volumes were aggregated applying appropriate conversion factors. The latest year available was

¹⁰ For more detail about the original (or early versions) of the model, see Vanzetti, and Graham (2002).

2001. To stabilize the data for annual variations in yield, a three year average of volumes from 1999 to 2001 was estimated.

All import trade barriers (out-of-quota and within-quota tariff rates and tariff rate quotas) are derived using information from the Agricultural Market Access Database (AMAD). AMAD is a publicly accessible from the website www.amad.org. It is maintained by the OECD and a number of organizations, including FAO, UNCTAD, US Department of Agriculture, Agriculture Canada and the EU Agricultural Directorate, contribute to its development. Most of the data in AMAD comes from WTO schedules and notifications. However, the applied rates are obtained from the [UNCTAD TRAINS database](#). The data on export subsidies and quotas are based on government notifications to WTO. They can be found in the atpsm.mdb sub-file 'xshedul'.

The model is a deterministic, comparative static, partial equilibrium model. This means that there are no stochastic shocks or other uncertainties, and there is no specific time dimension to the implementation of the policy measures or to the maturing of their economic effects. The comparative static nature of the model does not imply that the policies take effect instantaneously. Rather, the model is comparing two states at a similar point in time, one with the policy change, the other without. Finally, whereas the model aims at estimating far-reaching details of the agricultural economy, it does not deal with the repercussions of trade barrier reductions on other parts of the national economy.

The model analyses the effects of price and trade policy changes on supply and demand using a system of simultaneous equations that are characterized by a number of data and behavioral relationships designed to simulate the real world. The model solution gives estimates of the changes in trade volumes, prices and welfare indicators associated with changes in the trade policy environment. A feature of the model is its handling of a two tier tariff structure where upon imports within a quota level attracts a relatively low tariff, and out-of-quota imports face higher tariffs. Rents associated with these quotas are explicitly modeled within ATPSM.

The standard equation system for all countries has four equations:

$$\hat{D}_{i,r} = \eta_{i,i,r} \left[\hat{P}_{wi} + \left(1 + \hat{t}_{ci,r} \right) \right] + \sum_{\substack{j=1 \\ i \neq j}}^J \eta_{i,j,r} \left[\hat{P}_{wj} + \left(1 + \hat{t}_{cj,r} \right) \right] \quad (3)$$

$$\hat{S}_{i,r} = \varepsilon_{i,i,r} \left[\hat{P}_{wi} + \left(1 + \hat{t}_{pi,r} \right) \right] + \sum_{\substack{j=1 \\ i \neq j}}^J \varepsilon_{i,j,r} \left[\hat{P}_{wj} + \left(1 + \hat{t}_{pj,r} \right) \right] \quad (4)$$

$$\Delta X_{i,r} = \gamma_{i,r} \Delta S_{i,r} \quad (5)$$

$$\Delta M_{i,r} = D_{i,r} \hat{D}_{i,r} - S_{i,r} \hat{S}_{i,r} + \Delta X_{i,r} \quad (6)$$

where, D , S , X , and M denote demand, supply, exports and imports respectively; P_w denotes world price; t_c denotes tariff on the domestic consumption goods and t_p the tariff on domestic production goods; ε denotes supply elasticity and η demand elasticity; $\hat{\cdot}$ denotes relative changes and Δ absolute changes; i and j are commodity indexes; and r is a country index.

Equation 5 requires that the change in exports in each market is some proportion of the change in production. This proportion is determined by the ratio of exports to production. For example, if all the initial production is exported, all the change in production is exported. If half the initial production is exported, half of the change in production is exported. This implies that the proportion of exports to production is maintained. Equation 6 clears the market, so that production plus imports equals domestic consumption and exports.

A market equilibrium requires that, globally, the sum of the change in exports equals the total change in imports for each commodity:

$$\sum_{r=1}^M (\Delta X_r - \Delta M_r) = 0. \quad (7)$$

In the model, these equations are transformed into matrix notation and the equation system solved for world prices by matrix inversion. The principle of ATPSM is that trade policy changes induce price changes that alter supply, demand, exports and imports. The model calculates a market clearing world price where the global sum of net import changes equals zero. The model estimates all effects in terms of changes from a reference period.

The price effects of agricultural trade policy changes can be observed from equations 3 and 4. These equations show that domestic prices are all functions of the world market price, the border protection such as tariffs, subsidies, and quotas, and of the domestic support measures. There is no independent behavior of domestic prices. Domestic prices have the character of border wholesale prices. An exception is the farm (supply) price that might be affected by extra farm price support (for example deficiency payments) over and above the market access support. Thus, with this model, domestic price data is not required and transaction costs (such as wholesale and retail margins) are not taken into account. All protection measures are expressed in tariff equivalents.

To accommodate heterogeneous goods with one price, the approach adopted by this model is to estimate composite tariffs for determining the domestic consumption and production price.¹¹ To derive a composite price products are divided into three groups: imports; exports; and production supplied to the domestic market

¹¹ This is in contrast with other trade models that determine domestic demand with a nested import demand structure, which requires knowledge of import elasticities between all foreign goods, so called Armington elasticities. These elasticities are notorious for their importance in determining trade model outcomes but for which little detailed quantitative assessment has been done.

(S_d). First, a domestic market price wedge (t_d) is computed as the weighted average of two tariffs, the export tariff (t_x) and import tariff (t_m), where the weights are exports (X) and imports (M):

$$t_d = (X t_x + M t_m) / (M + X) \quad (8)$$

Then, a consumer price wedge is computed as the weighted average of the import tariff (t_m) and the domestic market price wedge (t_d), where the weights are imports (M) and domestic supply (S_d):

$$t_c = (M t_m + S_d t_d) / D \quad (9)$$

Similarly, a producer price wedge is computed as the weighted average of the export tariff (t_x) and the domestic market price wedge (t_d), where the weights are exports (X) and domestic supply (S_d) plus the domestic support tariff (t_p):

$$t_s = (X t_x + S_d t_d) / S + t_p \quad (10)$$

The consumer and producer price wedges are added to the border price to give domestic prices. These calculations are applied both to the baseline and the final tariffs. A feature of this structure is that if there are no exports, domestic producer prices are determined by the tariff plus the domestic support. If there are no imports the export subsidy effectively determines the producer price. Finally, if there is two-way trade the share of total production or consumption influences the importance of each tariff.¹²

Given limitations in the data and the abstract nature of such models as described above, the user should interpret the results with caution. However, the model has detailed commodity and country coverage and for the comparison of various policy scenarios, it can be very helpful in indicating the relative magnitudes of the effects of policy changes on welfare, trade and prices.¹³ The model can simulate agricultural policy changes common for all countries and commodities involved in these negotiations or policy changes specific to individual countries or groups of countries. Trade policy changes that can be simulated by the model are such as reduction of out-of-quota tariffs (either by a certain percentage or progressively using the so-called Swiss formula 1); reduction of within-quota tariffs by a certain percentage; reduction of the tariff equivalent of extra farm price support (over and above market-access measures) by a certain percentage; reduction in the tariff equivalent of export subsidies by a certain percentage; change in tariff quotas by a certain percentage; etc. In this study, the policy changes are out-of-quota tariff and within-quota tariff cuts to zero in both Indonesia and China.

¹² The need for a composite price such as this is the requirement for one price with essentially two goods. The heterogeneous nature of imports and exports also requires a means of specifying the volume of either imports or exports. In this model exports are specified as a proportion of domestic production in equation 12 and imports are determined as the residual of production, consumption and exports. An alternative and popular approach to heterogeneous goods in international trade is to use an Armington specification which requires elasticities of substitution between goods from different sources. See further Vanzetti, and Graham (2002), or other publications on this model in UNCTAD website.

¹³ See further Vanzetti, and Graham (2002), or handbook on the UNCTAD ATPSM in UNCTAD website..

The simulation results are presented in Table 12 regarding percentage changes in export, import and domestic production volumes in China and Indonesia. As can be seen, for more than half of the 15 items included in the analysis, Indonesian exports are expected to decline. Within those of which Indonesian exports are predicted to increase, the percentage increase of other tropical fruits is the highest. With respect to import, it will increase for the majority of the commodities with bananas as the highest percentage. Finally, as regard to domestic production, some are expected to increase while others will decline. However, the percentage changes on average are very small, meaning that the overall impact of the implementation of the tariff cuts through production effects will also small.

Table 12: Percentage Changes in Export, Import and Domestic Production in China and Indonesia due to Out-of-Quota Tariff and Within-Quota Tariff Cuts: Simulation Results.

Commodity	Export		Import		Domestic Production	
	China	Indonesia	China	Indonesia	China	Indonesia
Livestock	-1	-1	5,653	19	-1	-1
Bovine meat	-15	2	-70	2	-15	2
Sheepmeat	-2	-0.1	1,740	233	-2	-0.1
Pigmeat	-2	-0.1	590	1,319	-2	-0.1
Poultry	-3	-0.1	143	-15	-3	-0.2
Rice	25	-17	-100	1,803	0	-17
Maize	18	2	-100	-42	1	2
Pulses	-0.2	-1	14	26	-0.1	-1
Tomatoes	-0.1	-4	1,294	775	-0.2	-4
Roots & tubers	-2	0	6	-4	-2	0
Apples	-0.2	0	430	4	-0.2	0
Citrus fruits	-6	-6	1,014	58	-6	-6
Bananas	-4	-0.2	133	25,495	-4	-0.1
Other tropical fruits	-2	19	1,589	-100	-2	1
Vegetable oils	-1	1	25	-100	-1	0

Source: simulation using ATPSM

Part IV

CONCLUDING REMARKS

Probably it is not so difficult to expect that China will gain more benefit than Indonesia does from the implementation of the EHP for many reasons. First, for most commodities included in the program, the actual production level in China has always been much higher than that in Indonesia. This may suggest that Chinese agriculture has larger production capacity than that in Indonesia. Second, China exports more than Indonesia does for many agricultural commodities. Third, in agricultural trade between Indonesia and China, for many EHP commodities, such as fruits and vegetables, Indonesia imported more from than exported to China. Fourth, for many commodities, China is more competitive than Indonesia.

This expectation is also supported by an earlier study from Pambudi and Chandra (2006) using a CGE – based simulation approach which shows that due to the implementation of the EHP, Indonesian import will increase faster than the increase of its exports for the EHP commodities (i.e. vegetables, fruits, and fish), and thus Indonesia will experience deficits in its trade with respect to these commodities.

This does not say that the economic cooperation between China and ASEAN or with Indonesia in particular is not important for Indonesia. It is important as it create wider market opportunities for Indonesian exports. However, Indonesia needs to do capacity building to improve its production capacity as well as its regional or global competitiveness. In other words, to have a “win-win” solution of the ASEAN+China, Indonesia mush have relative competitiveness and production capacity compared to other ASEAN member countries and China.

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