

**Title: Economic Competition and Co-operation between ASEAN-5 and
China in Trade**

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May, 2004

Abstract

The emergence of China as a big trade nation creates both challenges and opportunities to its neighbor competitors. One of the concerns is that the world export markets of labor intensive goods will be threatened if China turns into the world low cost manufacturing place. Meanwhile, trade between China and ASEAN countries increased dramatically during the past decade, grew at an annual average of 15 percent. China's exports to ASEAN-5 grew from US \$ 2.3 billion in 1987 to US \$ 17.2 billion in 2000 while its imports from ASEAN grew from US \$ 2.1 billion in 1991 to US \$ 21.0 billion in 2000. Not surprisingly, China's accession to WTO and the future establishment of a Free Trade Area (FTA) between ASEAN and China will further change the trade relations between the two areas.

What are the opportunities and challenges to China and ASEAN countries once the FTA between the two is established? It is therefore of great importance to have a thorough investigation of the issue. We examine the above issue from two aspects: (1) looking at past trade pattern between China and ASEAN countries and find out the impact of the FTA to both sides, in particular, the impacts to trade volume due to tariff removing; (2) analyze the possible obstacles to trade expansion in teams of political, institutional and economic determinants.

To accomplish the first task, we estimate the effects of tariff cut on trade volume to both sides. The possible benefits of opening up markets to both sides are examined by adopting an empirical model, in which variables like exchange rate and tariff are included. The model is estimated by using SITC two digits historical data. It is found that the most beneficial ASEAN country from China's tariff cut could be Singapore, since only Singapore's exports have a significant response to China's tariff cut while the exports of other ASEAN countries are much less related to China's tariff cut. The expansion of China's exports to ASEAN countries is diversified in various categories, this could be attributed to the diversity of China's resource endowments and technology.

The most possible obstacles to the establishment of the FTA between China and ASEAN countries could be labor intensive industries. An evaluation of the affected industries will be done when this research is completed.

Economic Competition and Co-operation between ASEAN-5 and China in Trade

Introduction

During the last two decades, we have seen the acceleration of the process of globalization, the rise of regional trading arrangements, China's emergence as a global economic force and the growing interdependence between ASEAN (Association of Southeast Asian Nations) and China. ASEAN-China economic relations have grown dramatically, benefiting from the dynamism of their economies, the liberalization of their trade regimes and the changes in their trade structure.

China's entry into WTO¹ and the establishment of a Free Trade Area (FTA) between ASEAN and China will provide new opportunities for ASEAN-China trade relations. Foreign trade is an important driving force for the economic development of China and ASEAN. In the 1980s and 1990s, both China and ASEAN achieved high growth rates in foreign trade. During the decade from 1991 to 2000, China's foreign trade grew at an average annual rate of 15 per cent. In 2000, China's exports amounted to US \$249.3 billion and its imports totaled US \$206.1 billion. During the period from 1993 to 2000, ASEAN's foreign trade grew at an average annual rate of 10.9 percent, although the rate was lowered during the financial crisis. In 2000, ASEAN-5-China trade totaled US \$37.2 billion growing by an average of 55.3 percent annually since 1987 when overall trade amounted to only US \$ 4.3 billion. China's exports to ASEAN-5 grew from US \$ 2.3 billion in 1987 to US \$ 17.2 billion in 2000 while its imports from ASEAN grew from US \$ 2.1 billion in 1991 to US \$ 21.0 in 2000 (see table 1 and table 2).

We take ASEAN-5² as the representative of ten ASEAN nations to study the trade relation between ASEAN and China because these five nations are main trading partners of China. A brief review of trade records of China and ASEAN-5 should help us to have a clear picture of the current situation between China and ASEAN-5. Table 3 and 4 show the trade volume of China and ASEAN-5 from 1987 to 2000. During this period China's exports increased from \$39.4 billion to \$249.3 billion, with a 532 per cent growth rate. The total growth rate of exports for ASEAN-5 at this period is 401 per cent, slower than China's exports growth rate. Only Philippines got a faster export growth rate than that of China.

Referring to the GDP growth rates in table 5, ASEAN-5 export-oriented economies have achieved a strong performance before the 1997 Asian financial crisis, averaging 7.2 per cent per annum between 1987-1997. Total exports were growing rapidly, more than threefold from US \$ 81.2 billion in 1987 to US \$ 339.42 billion in 1997. Nevertheless, from 1987 to 2000, China's real GDP growth had averaged 9.3 per cent, the fastest rate

¹ WTO has ratified China's membership on 11 December 2001 at the 4th WTO Ministerial Conference in Doha, Qatar.

² ASEAN-5 consists of: Indonesia, Malaysia, Philippines, Singapore and Thailand.

of real GDP growth in the world. During the same period, China's exports grew fivefold from US \$ 39.4 billion in 1987 to US \$ 249.3 billion in 2000, making China the seventh largest exporter in the world. The dynamism of China's economy, its rise as a major exporter and as a magnet of FDI was in some sense similar to the experience of ASEAN-5, but it was occurring at a much faster pace and at a much larger scale.

Nominally China's exports accounted for 23 percent of its GDP in 2000. According to purchasing power parity estimation, this ratio might be even less. The ratio of exports to GDP of China and ASEAN-5 are shown in table 6, which should give us an idea of the importance of exports to each economy. Most of the ASEAN-5's ratios are very high. Obviously, the small and export-oriented ASEAN economies are vulnerable to changes of the outside world.

Besides the opportunities for ASEAN-China trade relations, it is also critical to note the possible challenges to ASEAN and China in third country markets as an outcome of the WTO accession of China and the establishment of a FTA between ASEAN and China. Current situation is that the bulk of ASEAN and China's exports are still largely focused on the major markets of the US, Europe and Japan. There is also considerable overlap in the composition of their major export items, particularly in textiles and apparel and other labor-intensive manufactures. As China's manufacturers climb the technology ladder, the overlap is spilling over into electrical and electronic products, where a number of ASEAN countries had initially established a lead.

Whether the WTO entry of China and the establishment of a FTA between ASEAN and China will provide good opportunities for ASEAN-5 or impart serious competition in the world market between two economies is an issue relevant to ASEAN-5. In this paper, we will examine the possible aspects of competition and co-operation in trade between China and ASEAN-5 in detail. Section 2 reviews the previous literatures that study the competition and co-operation between ASEAN and China. Section 3 provides the methodology to analyze the competitions between two economies by using a market share simple regression (MSSR) model and the co-operation and impact of China's WTO entry by using a trade-exchange rate-tariff model based on SITC two digits historical data. Section 4 analyzes the empirical regression results and provides some explanations to the competition and complementarity of Chinese and ASEAN-5. Conclusions are provided in section 5.

Literature Review

A number of studies have researched the issues of competition and co-operation between China and other developing countries in the aspects of international trade.

The emergence of China as an exporter of labor-intensive manufactures in the 1980s may present the ASEAN exporters with increasing competition. By using the Constant Market Share analysis, Tyers, Phillips and Findlay (1987) hypothesized that ASEAN may be crowded out of the labor-intensive manufactures (LIM) markets by China. When the Chinese exports are used as the standard, ASEAN LIM exports are shown to have been

relatively uncompetitive after 1978. This is due to China's competitiveness, which had permitted it to enter world LIM markets with export growth not achievable in the smaller, more steadily expanding economies of the ASEAN. Therefore, they concluded that China and ASEAN did compete directly for shares of LIM exports.

Herschede (1991) investigated the degree of direct competition among ASEAN, China, and the NICs, in the labor-intensive manufactures (LIM) markets by using Japan as the common market. He used the Shift-share analysis to measure the magnitude of Asian economic rivalry. The results showed that China enjoyed a significant competitive advantage relative to ASEAN. Due to its large, unfavorable industry mix and competitive disadvantage, ASEAN suffered the most from China's entry into the Japan import market of both primary and manufactured products.

Using the same methodology, Voon (1997) analyzed the changing patterns of export competitiveness among China and ASEAN-4³ in primary goods, labor-intensive and technology-intensive manufactures using U.S. market as the common market. Over the two time periods (1982-86 and 1990-94), it was found that China performed better than ASEAN-4 in the U.S. import market. This implies that ASEAN-4 experienced competitive pressure from China's exports. Comparing to other ASEAN-4 countries, Singapore experiences the most competitive pressure. However, despite the competition, ASEAN-4's total exports to U.S. had been increasing over the two time periods. It is expected that trade creation for China and ASEAN-4's combined exports to U.S. will be greater than trade diversion from China to ASEAN-4 in the long run.

Making use of the market share simple regression (MSSR) method and regression analysis based on two-digit historical data from SITC and using U.S. as the common market, Chew and Liu (1997) examined competition and complementarity in trade between China and ASEAN-5. They assumed that if competition exists between China and ASEAN-5, then ASEAN-5's market share in U.S. would decrease when China's market share increases, and vice versa. The study revealed that competition between ASEAN and China in the U.S. market largely occurs in the competition for the U.S. market in crude materials. On the whole, the degree of competition between China and ASEAN is currently negligible. There exists a large potential for economic cooperation between the two parties and benefits would arise from the mutual trade relationships.

Methodological Issue

We follow the market share simple regression (MSSR) model that described by Chew and Liu (1997) to assess the competition between ASEAN-5 and China in trade from 1987 to 1999. The MSSR model is as follow:

$$MS_i = a_i + b_i MS_c + u_i \quad (1)$$

³ Indonesia, Malaysia, Singapore and Thailand.

Where MS_i are Indonesia's, Malaysia's, Philippines', Singapore's, Thailand's and ASEAN-5's total market shares in the U.S. for a particular type of products respectively. MS_c is the China's market share in the U.S. for the same type of products. The first assumption is that the sign of parameter b_i should be negative if competition happened between ASEAN-5 and China for that particular type of products. If a positive sign appears for the parameter b_i , the assumption of competition of China and ASEAN-5 should not hold in that product. Statistically, the MSSR method should also overcome the possible problems of heteroscedasticity when different products are pooled into one group. Second assumption is that the sum of the market shares of the five ASEAN countries should be equal to the total market share of ASEAN-5. That can lead to the result that the sum of parameter b_i of individual ASEAN countries should equal to the parameter of ASEAN-5 as total. That means the magnitude of the parameter b_i of individual ASEAN countries could be a reflection of their volume of exports of a particular type of products, since the same independent variable is used for the regressions of ASEAN total and for each individual country. The market share data of 1-digit and 2-digit SITC export from ASEAN-5 countries and China to the U.S. is obtained from World Trade Analyzer CDROM through the period 1987 to 1999.

After studying the competition through MSSR approach, we use the following trade-exchange rate-tariff model to analyze the trade co-operation between ASEAN-5 and China and the impact of China's WTO entry.

$$EX_i = a_{0i} + a_{1i}ER_i + a_{2i}TR + a_{3i}YEAR + u_i \quad (2)$$

where EX_i = country i exports to China (in terms of \$000)

ER_i = exchange rate between China and country i

TR = China's import tariff rate

i = one of the ASEAN-5 country

Tariff and exchange rate are two of the many factors that influences trade. This model allows us to analyze the effect of changes in the two variables on trade. According to economic theory, both tariff and exchange rate share an inverse relationship with trade value. Therefore the sign of parameter of both tariff and exchange rate should be negative. Another variable added to our model is the year variable. This variable helps to account for changes in trade value that is attributed to economic factors other than tariff and exchange rate.

To analyze the trade co-operation on the various sectors between ASEAN-5 and China, we have to introduce dummy variables to our basic model. Equation (3) is for the primary sector and equation (4) is for manufacturing sector.

$$EX_i = a_{0i} + a_{1i}ER_i + a_{2i}TR + a_{3i}YEAR + a_{4i}D_2 + a_{5i}D_3 + a_{6i}D_4 + a_{7i}D_5 + u_i \quad (3)$$

$$EX_i = a_{0i} + a_{1i}ER_i + a_{2i}TR + a_{3i}YEAR + a_{4i}D_2 + a_{5i}D_3 + a_{6i}D_4 + u_i \quad (4)$$

Within the primary sector, there are 5 individual industries. Hence 4 dummy variables are introduced into the model. Dummy variables help to capture effects that are due to changes in any industries within the primary sector. Three dummy variables are also introduced to the manufacturing sector model for the same reason.

In our study we are more concerned with the magnitude of the tariff rate coefficient. China's entry to WTO will definitely lead to further reduction in tariff rate. The larger the tariff rate coefficient, the greater the impact it had on trade value. Our concern in this study is the magnitude of a_{2i} . With a 1% reduction in tariff rate, trade value will increase by a_{2i} %. This represents the opportunities available to the ASEAN countries with a reduction in China's import tariff rate.

The 1-digit and 2-digit SITC trade data is obtained from World Trade Analyzer CDROM as well. It consists of ASEAN-5 total exports to China and also the exports of individual ASEAN countries. However due to insufficient data on China's imports tariff rate, our analysis will only cover the following years, 1987, 1989, 1992, 1994, 1998 and 1999. Data on china's import tariff rate does not follow the Standard International Trade Classification method. China does not employ the normal SITC method to classify products. Instead she followed Harmonized System. Our data will be converted to SITC as this method is more commonly used and to make it compatible with our trade data. The general tariff rate will be used since there is no special trade policy or favored treatment between China and ASEAN. Exchange rate for the 5 ASEAN countries is obtained from International financial Statistics CDROM. Exchange rate between China and the individual ASEAN countries differ. Therefore there will be 5 different set of exchange rate for the 5 ASEAN countries and in the form of Yuan per the various ASEAN currencies.

Empirical Results

1.Competition between China and ASEAN-5 in world exporting markets

The U.S. is the biggest market in developed economies and both China and ASEAN-5 export a large percentage of their primary and manufactured products to the U.S., a closer look at US market for the possible two competitors in different products can provide some information about this issue. Table 7 and 8 show the exports volumes of China and ASEAN-5 to the U.S. It shows that the U.S. total import increased by 141.4 per cent from 1987 to 1999, while ASEAN-5 increased by 290 per cent and China increased by 1400 per cent. Both ASEAN-5 and China expanded their exports to the U.S. quickly, though China increased with a much faster speed.

The resulted competition matrix based on the regression of MSSR model is formed by the estimated parameters, b_0 to b_5 , shown in table 9. It is easy to see that in the category of SITC0-4, ASEAN-5 as a whole group are having a competition in primary goods in the U.S. market with China. But the individual country regressions show that

Indonesia, Singapore and Thailand are not having this problem. Malaysia and the Philippines are significantly having a competition in primary goods with China. From the magnitudes of the parameters we can also find that these two countries are the major competitors of China in primary goods.

However, the conflicting in primary goods does not mean ASEAN-5 are losing their market shares in every type of primary products at all. The breakdown analysis from the two digits regressions shows that the competitions in primary goods are mainly in crude materials. The estimated competition parameters for crude materials (SITC21-43) are significantly negative for the ASEAN-5 as a whole and Malaysia and negative too for Indonesia, Philippines, Singapore and Thailand, even though insignificantly. However, the magnitudes are very small. In food and beverages (SITC01-12) there is no competition appearing. Overall, there are some conflicts in trade in crude materials between ASEAN-5 and China. But the magnitudes are far from severe.

Competition cannot be seen between ASEAN-5 and China in manufactured products (SITC 5-9) except Singapore. Even for Singapore, the parameter is only significant at 10% and the magnitude is negligible. The breakdown analysis from the 2-digit regressions shows that the competition in manufactured products between Singapore and China are mainly in basic manufactures (SITC 61-69) and miscellaneous manufactured (SITC 81-89).

Taking into account of the large percentage of manufactured exports of both China and ASEAN-5, it can be seen that the conflict in trade between China and ASEAN-5 in primary goods is in a very limited magnitude and it does not form much harm to both sides at all. The overall conclusion is that through the period 1987 to 1998 the competition in trade between China and ASEAN-5 in developed economies was in a negligible level.

2.The co-operation in trade between ASEAN-5 and China and the impact of China's WTO entry

In this part, the possible existence of opportunity for ASEAN-5 to increase their export to China upon China's entry into the WTO is examined. A negative exchange rate coefficient means that as the Chinese Yuan appreciates, China will increase her import from ASEAN, and vice versa. A negative coefficient of tariff rate represents opportunities available to the ASEAN countries, with China's entry to WTO. The larger the coefficient, the greater the trade opportunities available for the ASEAN economies. We are concerned with the coefficients of tariff (Table 10) because the tariff cut is the direct effect of the accession to WTO of China.

The regression results for primary products (SITC 0-4) shows that except for Singapore and Malaysia whose estimated tariff rate coefficient are negatively significant, both Thailand and Philippines have negatively insignificant coefficient. Indonesia is the only country with a positive estimated tariff rate coefficient. One of the reasons for an insignificant tariff rate of Philippines and Thailand may be due to the fact that China does not impose tariff rate on raw materials especially to manufacture products that is to be

exported later. Hence with china's entry to WTO and further reduction in tariff rate, it is unlikely to affect Philippines and Thailand's primary exports to China. Another reason could be the existence of other variables such as import quotas and import licensing. Primary products that are subjected to import licensing include finished oil, grain, vegetable oil, and sugar. For Malaysia and Singapore, it seems to imply that there are opportunities in primary sector with china's entry to WTO. Indonesia's positive tariff rate coefficient may be because the products she exports to China are already subjected to minimal tariff rate. Hence, her export will not be affected after China enters the WTO.

The breakdown analysis from the 2-digit regressions shows that in the Food & Beverages (SITC 00-12) sector both Malaysia and Thailand are significantly negative, but insignificantly negative for Philippines and Singapore. Hence, there is more opportunity for Malaysia and Thailand in this industry when China lowers her tariff rate. According to the magnitude of coefficients, Thailand has more opportunity as compared to Malaysia. The agricultural products that Malaysia exports to China include rice and coffee. As for Thailand, rice shared 99.7% of the Chinese imported rice. Other major exports included sugar, frozen prawns, and tapioca products. At present, Thailand has abundant supplies of farm produce. The advantage of establishing additional food processing industries is, therefore, apparent. Large-scale commercial livestock production offers unlimited growth potential. Hence, Thailand and Malaysia will have much more opportunity in the Chinese market. Unlike other resource-rich ASEAN nations, Singapore is not endowed with any natural resources other than her strategic location. Therefore even if tariff rate for such primary products is to be reduced, Singapore may not be able to increase her primary exports because of her limited resource endowment. The only economy with a positive tariff rate coefficient is Indonesia. China does not import products of this category from Indonesia. Therefore, even if China lowers her tariff rate upon entering the WTO, there won't be any opportunity for Indonesia in this industry.

The regression results for Crude Materials (SITC 21-43) show that the estimated coefficients are insignificantly negative for Philippines, Singapore and Thailand whereas it is positive for both Indonesia and Malaysia. In Thailand, developments in mineral processing industries point to future expansion of zinc, rock salt and gypsum processing facilities. Other agro-based industries with good prospects include palm oil, vegetable oil, and paper pulp. Although there are good prospect in the crude materials industry of Thailand, the insignificant t-ratio shows that China's tariff rate does not affects Thailand's crude materials export to China by much. Hence, the opportunity in this industry for Thailand may be minimal.

From Table 8, we also see that there is no opportunity for both Indonesia and Malaysia in the Chinese market even if China lowers her tariff level. In the case of rough and worked wood, and metalliferous ores, both Indonesia and Malaysia expanded their exports to the U.S. All these growth in exports are target at the U.S. market instead of the Chinese market. Hence, these two ASEAN countries may be too engrossed in competing for the U.S. market share and ignored the Chinese market with potential. Other main export items of these two countries are petroleum and liquefied natural gas. It is reported that China's oil output has failed to keep up with rapidly growing domestic demand.

However, there is no opportunity for Indonesia and Malaysia because Middle East oil accounts for nearly half of China's imports, with Oman, Yemen, and Iran being the most important crude suppliers. It may be difficult for ASEAN countries to compete for a share in China's market with the countries mentioned above.

It is not surprising that the estimated coefficient for Singapore and Malaysia's manufacturing sector (SITC 5-9) turns out to be very significant. The estimated tariff rate coefficient is negatively insignificant for both Philippines and Thailand. Again, Indonesia is the only country with a positive tariff rate coefficient. As latecomers to industrialization, both ASEAN and China tend to specialize in the same basic manufactures and compete for same exports. While China is able to harness her vast pool of labor, ASEAN may not be able to compete based on costs. Basic manufacturing industry becomes very cost competitive.

Moreover, China imports high-technology products from the developed countries. Only countries such as Singapore and Malaysia, which have shifted towards technology-intensive production, will be able to compete with the developed countries. Hence from the table, we see that only these two countries have opportunity in the manufacturing market with China's entry to WTO. As mentioned earlier, Philippines and Thailand may not be able to compete with China based on cost for Basic manufacturing industry. Hence even a reduction in tariff rate does not warrant increase in their exports to China since these two countries do not have comparative advantage in manufacturing sector. As Indonesia exports were mainly primary goods and resources-based manufactures, hence there is no opportunity for her even when China reduces her tariff rate.

Once we examine the regression results for Chemical and Related products (SITC 51-59), Philippines' t-ratio of tariff rate for chemical industry is significant. This shows that opportunity does exist in Chemical industry for Philippines. With current market demand, the chemical products industry in Thailand is expected to expand rapidly over the next few years. Items in this group include herbicides, pesticides, acetylene black, glue gelatin and cellulose acetate. However, as can be seen from Table 8, the opportunity for both Thailand and Indonesia appear to be very insignificant. Some of the chemical and related products are not only subjected to tariff rate, they are also subjected to other trade barriers such as import licensing. Hence, these explained the insignificance of tariff rate to exports of this industry.

Regression results for Basic Manufactured (SITC 61-69) in table 8 show that except for Singapore, Malaysia and Philippines, all the other two ASEAN countries do not have any opportunity in the basic manufactured market in China. Although both Malaysia and Philippines have negative tariff rate coefficient, the t-ratios are insignificant while the t-ratio for Singapore is highly significant. At present, the potential for ASEAN countries to expand their exports of low and high technology manufactured products to China is limited since China import high-tech products mainly from the developed economies. It would be difficult for ASEAN countries to increase their exports of primary manufacture products into China because China has already established a comprehensive foundation of heavy and light manufacturing industries. Moreover, China, with her abundant labor

and land, is able to expand production of these resources-based manufactures without incurring much cost. Hence, Taiwan, Hong Kong, and many of the rapidly developing coastal provinces in China have already provided and are able to provide sufficient quantity of the current low-tech products for China's market.

Singapore has embarked on the path to industrialization earlier than other ASEAN nations. With the opening up of the Chinese economy and industrialization of other ASEAN nations, Singapore find its cost competitiveness in Basic Manufacturing eroded as China and other ASEAN nations produce the same goods at a lower cost. Hence Singapore turn to producing high value added and more sophisticated products. While our results show opportunities in this industry due to the significance of tariff rate coefficient, opportunities available to Singapore for this industry may be limited. The coefficient of tariff rate for Basic manufacturing is smaller than that of Machinery & Transportation Equipment as will be presented later. Moreover Singapore with limited human resources will not be able to compete with China for basic manufactures. On the whole, ASEAN-5 as a whole group does not have any significant opportunity in this industry.

Table 8 shows that the estimated tariff rate coefficient for Singapore, Thailand and Malaysia are negatively significant, but insignificantly negative for Indonesia and Philippines in the Machinery and Transport Equipment (SITC 71-79) sector. Singapore has very significant t-ratio for tariff rate coefficient for transport equipment industry. The coefficient of tariff rate for this industry is larger than that of Basic manufacturing. Hence we believe that there will be greater opportunity in Machinery & Transportation Equipment for Singapore. The coefficient for Machinery & Transportation and Equipment is 992.82. For every 1% reduction in tariff rate, trade value in that industry increases by \$992 820, which is more than 7 time the increase in Basic Manufacturing. As for Malaysia, electronics and electrical machinery constituted the main export items to China, with exports amounting to near half of the total exports. The increase in exports of manufactured goods were largely attributed to a strong demand for electrical and electronics products.

In Thailand, an impressive rate of export growth has occurred for electronic equipment. Intermediate products, among them machinery and electrical machinery also expanded rapidly. Although Thailand's major exports to China doesn't include machinery and transport equipment, but with the potential in their own industry, Thailand may be able to benefit from the lower tariff level upon China's accession to the WTO. On the whole, although machinery and transport equipment doesn't constitute a great proportion of ASEAN countries' (except for Singapore) exports to China, the regression results show that there are opportunities in the Chinese market for the ASEAN economies.

The regression results for Miscellaneous Manufactured Articles (SITC 81-89) show that the estimated tariff rate coefficient is negatively insignificant for all the ASEAN countries with the exception of Singapore and Malaysia. As Philippines and Indonesia's exports were mainly primary goods and resources-based manufactures, the regression

results show that there is no opportunity for them in this particular industry after China enters the WTO. With no natural resources, Singapore does not depend on primary exports for economic growth. Instead much of Singapore's economic growth is driven by her manufacturing sector. Hence t-ratio for tariff rate coefficients for most of her manufacturing industries are highly significant, representing opportunities in her manufacturing sector. Singapore has slowly moved away from labor intensive production and has set her eyes on R&D and new technologies in order to compete in the New Economy. Therefore the coefficient for her Machinery and Transport Equipment industry is the largest, relative to that of Basic Manufactures and Miscellaneous Manufactured Article.

Conclusion

According to our analysis, the competition between ASEAN-5 and China still exists because they rely on the same large markets, namely, the U.S., EU and Japan. In primary goods sector, especially crude materials, ASEAN-5 are having a conflict with China. However, taking into account of the large percentage of manufactured exports of both China and ASEAN-5, it can be seen that the conflict in trade between China and ASEAN-5 in primary goods is in a very limited magnitude and it does not form much harm to both sides at all. As for manufactured products, competition can not be seen between ASEAN-5 and China except Singapore. Even for Singapore, the magnitude of competition is very small. In addition, the market for manufactured products in the U.S. is so large and diversified that two small trade partners are hard to become competitors. The overall conclusion is that through the period 1987 to 1998 the competition in trade between China and ASEAN-5 in developed economies was in a negligible level.

Since the competition is in a negligible level, it seems that the opportunities are much larger than challenges for ASEAN-5 after the accession to WTO of China and the establishment of FTA between ASEAN and China. The pattern of China's trade with ASEAN-5 reflects the different endowment of resources and technology of the trading countries and their respective comparative advantages (see table 11 and table 12 for detailed information). Singapore, Malaysia and Thailand accounted for most of China's imports of machinery and electronic products from ASEAN-5. Hence, these three countries have the most opportunities in the machinery and transport equipment industry. Besides this industry, both Malaysia and Thailand also enjoy comparative advantage in the food and beverage industry. Other than the two industries mentioned above, Malaysia has an opportunity in the miscellaneous manufactured articles industry as well. As for Indonesia and Philippines, both economies have potential in the chemicals and related products industry in the Chinese market.

Referencdes

Annex Customs Import and Export Tariff of the People's Republic of China, "Regulation on Import and Export Tariff of the People's Republic of China", 1992

Chew S.B. and Liu Y.H., 1998, "Competition in Trade between China and ASEAN", *Advances in Pacific Basin Business, Economics and Finance (United States)*, Vol. 3, pp 141 - 159.

Customs General Administration of the People's Republic of China, "China Customs Statistics Yearbook 1999", People's Republic of China

Direction of Trade Statistics Yearbook, International Monetary Fund, 1994-2001

Herschede, F. , 1991, "Competition among ASEAN, China, and the East Asian NICs: A shift-share Analysis", *ASEAN Economic Bulletin* 7, No.3 :290-306

International Financial Statistics CDROM 2001, International Monetary Fund

Key Indicators of Developing Asian and Pacific Countries, 1999-2001, Asian Development Bank

Ministry of Foreign Trade and Economic Cooperation of People's Republic of China, "China Foreign Trade Statistical Yearbook 1999", People's Republic of China

Tyers, R., P. Phillips and C. Findlay. , 1987, "ASEAN and China Exports of Labour-intensive Manufactures", *ASEAN Economic Bulletin* 3, No.3: 339-367

Voon, J. P., 1998, "Export Competitiveness of China and ASEAN in the U.S. Market", *ASEAN Economic Bulletin* 14, No. 3: 273-291

World Trade Analyzer CDROM 1999, Statistics Canada International Trade Division

Appendix

Table 1 China's imports from ASEAN-5 in millions of US dollars

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN-5
1987	591	302	140	618	405	2056
1988	681	570	135	1018	633	3037
1989	582	692	83	1499	756	3612
1990	849	852	90	849	386	3026
1991	1403	804	130	1063	422	3822
1992	1554	830	155	1238	424	4201
1993	1446	1084	213	2647	601	5991
1994	1589	1623	272	2481	864	6829
1995	2053	2065	276	3398	1611	9403
1996	2289	2246	372	3613	1890	10410
1997	2674	2485	327	4385	2005	11876
1998	2462	2675	517	4226	2423	12303
1999	3051	3606	908	4061	2780	14406
2000	4402	5480	1677	5060	4381	21000
Total Increase Rate	644.8%	1714.6%	1097.9%	718.8%	981.7%	921.4%

Source: *Direction of Trade Statistics Yearbook*, International Monetary Fund, 1994-2001

Table 2 China's exports to ASEAN-5 in millions of US dollars

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN-5
1987	188	255	245	1323	301	2312
1988	236	309	268	1494	512	2819
1989	223	352	239	1692	500	3006
1990	401	370	205	2016	854	3846
1991	481	528	253	2014	848	4124
1992	471	645	209	2031	894	4250
1993	693	704	281	2245	750	4673
1994	1052	1118	476	2563	864	6073
1995	1438	1281	1030	3500	1611	8860
1996	1428	1374	1015	3753	1890	9460
1997	1844	1921	1334	4321	2005	11425
1998	1172	1594	1499	3901	2423	10589
1999	1779	1674	1379	4502	2780	12114
2000	3062	2565	1464	5761	4381	17233
Total Increase Rate	1528.7%	905.9%	497.6%	335.4%	1355.5%	645.4%

Source: *Direction of Trade Statistics Yearbook*, International Monetary Fund, 1994-2001

Table 3 ASEAN-5 and China's world total exports in billions of US dollars

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN-5	China
1987	17.14	17.96	5.68	28.69	11.73	81.20	39.44
1988	19.22	21.08	7.02	39.31	15.95	102.58	47.52
1989	22.16	25.05	7.77	44.66	20.08	119.72	52.54
1990	25.68	29.45	8.12	52.73	23.07	139.05	62.09
1991	29.14	34.35	8.80	58.97	28.43	159.69	71.91
1992	33.97	40.77	9.75	63.47	32.47	180.43	84.94
1993	36.82	47.13	11.13	74.01	36.97	206.06	90.97
1994	40.06	58.84	13.30	96.83	45.26	254.29	121.05
1995	45.42	73.91	17.50	118.27	56.44	311.54	148.80
1996	49.81	78.33	20.41	125.01	55.72	329.28	151.20
1997	53.44	78.74	24.88	124.99	57.37	339.42	182.88
1998	48.85	73.31	29.41	109.90	54.46	315.93	183.59
1999	48.67	84.46	36.58	114.68	58.44	342.83	195.15
2000	62.12	98.14	39.78	137.80	69.06	406.90	249.30
Total Increase Rate	262.43%	446.44%	600.35%	380.31%	488.75%	401.11%	532.10%

Source: International Monetary Fund, *International Financial Statistical (IFS) CDROM*, 2001.

Table 4 ASEAN-5 and China's world total imports in billions of US dollars

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN-5	China
1987	12.37	12.68	7.19	32.56	13.00	77.80	43.22
1988	13.25	16.51	8.73	43.86	20.29	102.64	55.27
1989	16.36	22.48	11.17	49.66	25.77	125.44	59.14
1990	21.84	29.26	13.04	60.77	33.05	157.96	53.35
1991	25.87	36.65	12.86	66.10	37.57	179.05	63.79
1992	27.28	39.86	15.46	72.17	40.69	195.46	80.59
1993	28.33	45.65	18.77	85.23	46.08	224.06	103.09
1994	31.98	59.60	22.64	102.67	54.46	271.35	115.68
1995	40.63	77.69	28.34	124.51	70.79	341.96	129.11
1996	42.93	78.42	34.13	131.34	72.33	359.15	138.94
1997	41.69	79.03	38.62	132.44	62.85	354.63	142.19
1998	27.34	58.32	31.50	104.72	42.97	264.85	140.31
1999	24.00	64.97	32.57	111.06	50.34	282.94	165.79
2000	33.51	82.20	33.81	134.55	61.92	345.99	206.13
Total Increase Rate	170.90%	548.26%	370.24%	313.24%	376.31%	344.72%	376.93%

Source: International Monetary Fund, *International Financial Statistical (IFS) CDROM*, 2001.

Table 5 Real GDP growth rate of ASEAN-5 and China (%)

	Indonesia	Malaysia	Philippines	Singapore	Thailand	China
1987	4.9	5.4	4.8	9.4	9.5	11.1
1988	5.8	8.9	6.3	11.1	13.3	11.3
1989	7.5	9.2	6.1	9.2	12.3	4.3
1990	7.1	9.7	2.7	8.3	11.6	3.9
1991	6.6	8.7	-0.7	6.7	7.9	8.0
1992	5.8	8.5	0.0	5.8	7.5	13.2
1993	5.9	8.4	1.0	9.9	7.7	13.5
1994	7.5	9.2	4.4	11.4	9.0	12.7
1995	8.2	9.8	4.7	8.0	9.3	10.5
1996	7.8	10.0	5.8	7.6	5.9	9.6
1997	4.7	7.3	5.2	8.5	-1.4	8.8
1998	-13.1	-7.4	-0.6	0.1	-10.8	7.8
1999	0.8	6.1	3.4	5.9	4.2	7.1
2000	4.8	8.3	4.0	9.9	4.4	8.0

Source: Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1999-2001*.

Table 6 The ratio of exports to GDP (%)

	Indonesia	Malaysia	Philippines	Singapore	Thailand	China
1987	21.90	55.81	17.11	140.60	23.21	12.46
1988	21.69	59.76	18.53	155.99	25.86	12.03
1989	21.84	64.49	18.25	149.68	27.79	12.01
1990	22.44	66.89	18.32	143.80	27.03	16.21
1991	22.74	69.91	19.38	137.77	28.94	17.99
1992	24.42	68.92	18.40	129.30	29.13	18.11
1993	23.30	70.45	20.47	128.44	29.53	15.19
1994	22.65	79.00	20.75	138.64	31.32	22.34
1995	22.47	83.20	23.61	141.83	33.54	21.24
1996	21.91	77.67	24.64	136.93	30.55	18.40
1997	24.77	78.58	30.21	132.12	37.96	20.24
1998	51.18	101.13	45.13	132.77	48.67	19.03
1999	34.44	107.10	48.03	136.78	47.88	19.69
2000	40.53	109.87	53.23	149.37	56.53	23.08

Source: Calculated based on International Monetary Fund, *International Financial Statistical (IFS) CDROM, 2001*.

Table 7 US imports from ASEAN-5 and China in billions US dollars

	World Total of US	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN- N-5	China
1987	424.44	3.99	3.12	2.48	7.33	2.28	19.20	3.13
1988	459.54	3.60	3.67	2.62	9.52	3.25	22.66	3.52
1989	492.92	4.26	4.86	3.31	10.74	4.54	27.71	4.71
1990	516.99	4.15	5.16	3.26	11.68	5.45	29.70	5.77
1991	508.36	4.19	6.01	3.28	11.93	6.28	31.69	6.78
1992	553.92	5.32	7.94	4.03	13.58	7.63	38.50	9.59
1993	603.44	6.14	10.18	4.58	15.10	8.27	44.27	18.38
1994	689.22	6.66	12.69	5.25	17.64	9.58	51.82	22.45
1995	770.85	7.47	15.66	6.36	21.16	10.30	60.95	26.04
1996	822.03	8.08	14.91	7.36	23.20	10.39	63.94	28.88
1997	899.02	8.51	15.21	9.16	23.11	11.77	67.76	35.36
1998	944.35	8.48	16.38	10.29	22.04	13.97	71.16	41.24
1999	1024.7	8.60	19.17	11.14	22.56	13.49	74.96	47.39

Source: *World Trade Analyzer (WTA) CDROM, 1999* and International Monetary Fund, *International Financial Statistical (IFS) CDROM, 2001*.

Table 8 Growth rate of imports of US from ASEAN-5 and China (%)

	World Total of US	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN- 5	China
1988	8.27	-9.77	17.63	5.65	29.88	42.54	18.02	12.46
1989	7.26	18.33	32.43	26.34	12.82	39.69	22.29	33.81
1990	4.88	-2.58	6.17	-1.51	8.75	20.04	7.18	22.51
1991	-1.67	0.96	16.47	0.61	2.14	15.23	6.70	17.50
1992	8.96	26.97	32.11	22.87	13.83	21.50	21.49	41.45
1993	8.94	15.41	28.21	13.65	11.19	8.39	14.99	91.66
1994	14.22	8.47	24.66	14.63	16.82	15.84	17.05	22.14
1995	11.84	12.16	23.40	21.14	19.95	7.52	17.62	15.99
1996	6.64	8.17	-4.79	15.72	9.64	0.87	4.91	10.91
1997	9.37	5.32	2.01	24.46	-0.39	13.28	5.97	22.44
1998	5.04	-0.35	7.69	12.34	-4.63	18.69	5.02	16.63
1999	8.50	1.41	17.03	8.26	2.36	-3.44	5.34	14.91

Source: Calculated based on *World Trade Analyzer (WTA) CDROM, 1999* and International Monetary Fund, *International Financial Statistical (IFS) CDROM, 2001*.

Table 9 Competition matrix for ASEAN-5 and China for different types of products in US market (1987-1999)

Products	N	ASEAN-5	Indonesia	Malaysia	Philippines	Singapore	Thailand
Primary goods (sitc 0,1,2,3,4)	65	-7.03 (2.76)	0.13 (0.39)	-4.01 (4.26)	-5.63 (4.21)	0.21 (4.63)	2.26 (9.48)
Manufactures (sitc 5,6,7,8,9)	65	-0.02 (0.10)	0.17 (5.13)	0.07 (2.20)	0.34 (2.10)	-0.09 (1.89)	0.17 (9.46)
Food & beverages (sitc 00-12)	156	3.67 (15.01)	0.44 (4.21)	0.09 (3.36)	0.44 (3.73)	0.21 (4.70)	2.48 (12.27)
Crude materials (sitc 21-43)	208	-0.92 (2.48)	-0.19 (1.07)	-0.41 (2.36)	-0.19 (1.70)	-0.07 (2.10)	-0.07 (1.24)
Chemical & related (sitc 51-59)	117	-0.05 (0.54)	-0.01 (0.55)	0.01 (0.40)	0.001 (0.07)	-0.08 (1.08)	0.02 (1.79)
Basic manufactures (sitc 61-69)	117	0.13 (0.62)	-0.05 (0.36)	0.03 (0.98)	0.02 (1.21)	-0.02 (2.98)	0.15 (3.28)
Machines, transport (sitc 71-79)	117	2.61 (6.15)	0.17 (11.50)	1.10 (8.58)	0.24 (6.06)	0.70 (2.35)	0.40 (8.60)
Miscellaneous manufactured (sitc 81-89)	104	0.16 (3.20)	0.13 (6.31)	-0.01 (0.81)	0.01 (0.69)	-0.05 (4.04)	0.08 (4.94)

Note: N is the number of observations; numbers in the parentheses below the estimators are t-values.

Table 10 Tariff-export matrix for different types of products in China market from ASEAN-5 (1987-1999)

Products	N	Indonesia	Malaysia	Philippines	Singapore	Thailand
Primary goods (sitc 0,1,2,3,4)	168	39.62 (4.81)	-4.41 (2.48)	-8.37 (1.01)	-142.36 (2.22)	-9.90 (0.27)
Food & beverages (sitc 00-12)	72	22.39 (1.30)	-14.42 (3.14)	-0.12 (0.02)	-25.67 (0.37)	-93.44 (1.77)
Crude materials (sitc 21-43)	96	101.48 (0.37)	527.19 (2.42)	-53.76 (1.51)	-416.62 (1.64)	-63.02 (0.99)
Manufactures (sitc 5,6,7,8,9)	210	49.60 (0.68)	-325.25 (2.92)	-9.26 (0.81)	-251.73 (3.02)	-19.88 (0.78)
Chemical & related (sitc 51-59)	54	-57.23 (1.05)	1.40 (0.04)	-99.08 (2.33)	-268.92 (0.89)	-60.49 (0.48)
Basic manufactures (sitc 61-69)	54	119.14 (0.21)	-11.18 (0.92)	-49.69 (1.68)	-127.13 (4.46)	133.42 (1.45)
Machines,transport (sitc 71-79)	54	-31.33 (1.18)	-256.57 (1.87)	-2.88 (0.07)	-992.82 (2.18)	-293.17 (1.76)
Miscellaneous manufactured (sitc 81-89)	48	38.31 (1.72)	-28.10 (1.77)	-0.56 (0.13)	-336.01 (3.43)	-21.50 (1.36)

Note: N is the number of observations; estimators are tariff's coefficients; numbers in the parentheses below the estimators are t-values.

Table 11 China's imports from ASEAN-5 by products in millions of US dollars

	Indonesia					
	SITC6342	SITC2312	SITC5621	SITC2483	SITC6413	SITC6415
1987	412.12	46.36	28.10	6.77	2.71	1.54
1988	399.21	47.64	46.87	13.89	.09	3.12
1989	204.52	2.71	38.33	2.35	.01	3.51
1990	362.67	4.45	49.12	.72	.00	3.01
1991	477.89	16.97	71.67	1.11	.38	11.97
1992	561.33	13.32	9.96	8.40	1.06	4.41
1993	516.46	10.76	12.97	5.24	.04	5.65
1994	419.87	49.69	4.83	3.30	.07	2.69
1995	421.04	58.82	36.53	4.82	4.74	9.22
1996	294.48	81.57	15.76	9.44	8.98	17.05
1997	328.15	41.63	8.27	11.09	10.46	48.35
1998	299.02	28.64	2.09	10.74	31.92	77.91
1999	222.98	31.63	2.56	30.42	41.13	92.58

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC6342: Densified wood and reconstituted wood; SITC2312: Natural rubber (other than latex), in primary forms or in plates, etc.; SITC5621: Mineral or chemical fertilizers, nitrogenous; SITC2483: Coniferous wood (including strips etc. for parquet flooring, unassembled), continuously shaped (grooved, etc.) along any of its edges or faces; SITC6413: Paper and paperboard, uncoated, for writing, printing, etc., punch card stock and punch tape paper, in rolls or sheets, handmade paper and paperboard; SITC6415: Paper and paperboard, uncoated, n.e.s, in rolls or sheets.

	Malaysia					
	SITC2312	SITC2473	SITC6342	SITC4229	SITC6341	SITC7649
1987	143.58	52.77	15.92	3.94	2.02	0.89
1988	157.79	44.01	27.94	69.17	1.70	0.27
1989	92.61	15.49	37.55	142.26	1.63	0.98
1990	71.21	39.64	44.93	282.92	2.55	3.92
1991	37.53	84.18	54.61	262.77	12.76	4.54
1992	23.44	109.32	80.18	191.02	51.45	7.43
1993	16.19	69.10	239.86	257.13	77.53	21.43
1994	66.86	44.03	399.31	596.29	66.90	21.38
1995	59.71	52.69	310.94	658.54	55.02	24.20
1996	107.33	36.57	362.31	449.70	80.53	24.59
1997	53.56	58.30	243.90	484.20	79.64	44.53
1998	30.20	63.01	148.59	491.06	68.02	81.61
1999	43.54	172.53	73.73	416.98	137.79	144.86

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC2312: Natural rubber (other than latex), in primary forms or in plates, etc.; SITC2473: Wood in the rough (whether or not stripped of bark or sapwood) or roughly squared, treated with paint, stains or other preservatives; SITC6342: Densified wood and reconstituted wood; SITC4229: Fixed vegetable fats (other than soft), crude, refined or fractionated; SITC6341 Veneer sheets and sheets for plywood and other wood sawn lengthwise, sliced or peeled, not over 6mm thick; SITC7649: Parts and accessories suitable for use solely or principally with the apparatus of telecommunications and sound recording and reproducing equipment.

Philippines						
	SITC6821	SITC0579	SITC9310	SITC7512	SITC3341	SITC3344
1987	.00	.00	.00	.00	.00	.00
1988	.00	2.90	.50	.00	.00	.00
1989	3.89	.11	.00	.00	.00	.00
1990	11.76	.15	1.45	.00	1.02	.00
1991	14.24	.11	2.21	.00	5.21	.00
1992	23.39	.13	5.41	.00	5.09	.00
1993	56.10	.97	3.95	.00	15.41	.00
1994	29.42	3.07	7.36	.07	10.56	.00
1995	21.03	20.40	9.55	.60	11.95	.64
1996	54.53	37.26	.00	29.58	9.70	2.30
1997	24.88	26.55	.05	7.16	5.27	30.06
1998	59.50	41.49	.02	41.98	1.79	4.35
1999	122.24	25.60	272.09	42.21	10.86	17.79

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC6821: Copper, refined and unrefined, copper anodes for electrolytic refining, copper alloys unwrought; SITC0579: Fruit, fresh or dried, n.e.s.; SITC9310: Special transactions and commodities not classified according to kind; SITC7512: Calculating machines, accounting machines, postage-franking machines, ticket-issuing mach and sim mach incorporating a calculating device, cash regist; SITC3341: Gasoline (motor spirit) and other light oils; SITC3344: Fuel oils, n.e.s.

Singapore						
	SITC3343	SITC4313	SITC9310	SITC7649	SITC3345	SITC3341
1987	169.95	66.20	43.90	3.11	1.95	1.76
1988	264.85	73.82	35.84	24.78	2.73	4.24
1989	493.05	120.91	12.68	19.28	3.24	185.79
1990	258.54	67.55	20.63	13.61	3.59	119.51
1991	309.67	64.78	9.58	15.10	7.95	230.86
1992	239.51	52.53	11.19	50.75	9.74	336.12
1993	533.87	25.64	19.00	134.95	34.03	755.04
1994	391.32	18.95	40.19	112.48	10.37	204.71
1995	N/A	34.77	116.17	237.31	N/A	N/A
1996	312.38	2.28	102.43	132.77	24.40	178.82
1997	701.52	1.64	112.60	132.39	75.97	50.77
1998	99.26	1.19	36.41	196.31	85.28	215.87
1999	3.78	1.09	28.72	125.83	116.36	299.32

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC3343: Gas oil; SITC4313: Fatty acids, acid oils and residues from the treatment of animal or vegetable waxes or fatty substances, degreas; SITC9310: Special transactions and commodities not classified according to kind; SITC7649: Parts and accessories suitable for use solely or principally with the apparatus of telecommunications and sound recording and reproducing equipment; SITC3345: Lubricating oils from petroleum or bituminous minerals (other than crude), and products therefrom containing 70% (WT) or more of these oils; SITC3341: Gasoline (Motor spirit) and other light oils.

Thailand						
	SITC0611	SITC2312	SITC0422	SITC6514	SITC6531	SITC6519
1987	123.62	119.83	58.03	9.04	2.31	1.44
1988	139.85	145.99	82.66	9.86	4.61	N/A
1989	83.29	178.21	260.09	0.57	4.86	0.28
1990	23.86	136.38	2.64	1.09	2.58	0.41
1991	29.18	146.79	19.77	1.13	5.30	1.00
1992	16.03	183.85	34.39	3.02	7.06	2.79
1993	5.95	169.00	43.01	6.21	9.83	1.39
1994	116.66	234.39	110.34	10.87	13.77	13.29
1995	289.22	215.74	362.10	13.20	20.99	21.42
1996	129.11	469.96	238.52	9.32	22.54	28.88
1997	51.26	284.32	168.00	9.67	29.10	32.21
1998	16.57	179.65	125.66	9.89	23.86	22.39
1999	1.28	152.28	77.73	13.94	14.43	27.69

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC0611: Sugars, beet or cane, raw, in solid form, not containing added flavoring or coloring matter; SITC2321: Natural rubber (other than latex), in primary forms or in plates, etc.; SITC0422: Rice husked but not further prepared (cargo rice or brown rice); SITC6514: Sewing thread of manmade fibers, packaged for retail sale or not; SITC6531: Woven fabrics of synthetic filament yarn (including fabric of monofilaments and strip of heading 651.88), except pile, chenille or narrow ETC. fabrics; SITC6519: Yarn or textile fibers, n.e.s. (including paper yarn and glass fiber yarn, silvers and rovings).

Table 12 China's exports from ASEAN-5 by products in millions of US dollars

Indonesia						
	SITC6522	SITC0013	SITC5231	SITC6512	SITC3510	SITC8451
1987	16.37	8.34	6.83	5.74	3.07	2.89
1988	10.90	8.77	5.07	2.42	3.49	0.76
1989	14.05	9.46	3.98	6.34	6.25	1.44
1990	22.83	9.42	16.52	7.03	7.80	1.34
1991	26.71	11.48	16.06	11.67	13.22	4.91
1992	26.64	14.10	35.96	24.63	7.11	27.13
1993	25.78	14.58	25.01	21.98	9.12	30.46
1994	29.30	16.92	30.97	24.76	10.35	30.50
1995	45.22	21.46	51.45	26.53	11.45	41.16
1996	45.86	25.14	54.74	34.29	12.28	41.46
1997	43.00	24.02	55.94	41.91	13.82	33.10
1998	51.40	24.74	50.36	35.07	15.66	40.21
1999	61.15	22.74	53.17	40.02	16.47	55.08

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC6522: Cotton woven fabrics, n.e.s., unbleached; SITC0013: Swine, live; SITC5231: Fluorides, fluorosilicates, fluoroaluminates and other complex fluorine salts; SITC6512: Cotton sewing thread, packaged for retail sale or not; SITC3510: Electric current; SITC8451: Babies' garments and clothing accessories of textile fabrics.

Malaysia						
	SITC6522	SITC5231	SITC6531	SITC8511	SITC6519	SITC0545
1987	12.25	5.86	5.17	3.36	4.39	4.67
1988	12.70	9.16	7.79	3.61	2.53	9.71
1989	10.27	9.64	11.88	4.31	7.49	10.03
1990	18.41	12.07	9.22	4.15	3.22	13.75
1991	23.52	20.71	7.04	4.79	4.91	16.50
1992	15.20	30.16	11.89	4.68	5.81	7.90
1993	19.76	30.46	7.62	6.79	10.81	6.12
1994	21.85	32.40	20.70	10.76	6.62	4.61
1995	30.91	45.72	15.00	12.68	10.43	9.10
1996	26.88	48.59	14.71	17.20	8.18	10.71
1997	20.87	45.61	28.15	21.98	7.20	12.33
1998	14.53	41.79	21.62	9.30	5.49	7.65
1999	15.27	48.98	28.11	20.47	14.44	12.30

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC6522: Cotton woven fabrics, n.e.s., unbleached; SITC5231: Fluorides, fluorosilicates, fluoroaluminates and other complex fluorine salts; SITC6531: Woven fabrics of synthetic filament yarn (including fabric of monofilaments and strip of heading 651.88), except pile, chenille or narrow etc. fabrics; SITC8511: Footwear, incorporating a protective metal toe-cap, not including sports footwear; SITC6519: Yarn of textile fibers, n.e.s. (including paper yarn and glass fiber yarn, slivers and rovings); SITC0545: Fresh or chilled vegetables, n.e.s.

Philippines						
	SITC3221	SITC5231	SITC3351	SITC6531	SITC6522	SITC2237
1987	35.81	2.44	2.72	1.70	2.72	0.77
1988	64.90	1.83	3.12	2.85	2.90	0.62
1989	68.47	1.81	3.13	3.09	7.21	2.87
1990	24.80	0.92	3.96	3.35	5.28	0.02
1991	6.91	2.91	3.43	2.38	6.52	0.01
1992	3.97	8.15	5.05	2.07	5.87	0.03
1993	5.08	9.31	3.81	1.31	5.38	0.51
1994	10.51	15.22	1.23	1.49	9.87	10.96
1995	10.98	31.54	2.34	4.28	14.96	15.82
1996	0.89	28.11	10.11	5.70	25.26	25.57
1997	7.96	29.08	4.68	16.62	23.50	9.15
1998	25.75	20.74	4.61	22.46	21.79	7.25
1999	14.69	30.92	5.16	17.05	11.32	17.50

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC3221: Briquettes, ovoids and similar solid fuels manufactured from coal; SITC5231: Fluorides, fluorosilicates, fluoroaluminates and other complex fluorine salts; SITC3351: Petroleum jelly, paraffin wax, microcrystalline petroleum wax, other mineral waxes, etc. obtained by synthesis or other process, colored or not; SITC6531: Woven fabrics of synthetic filament yarn (including fabric of monofilaments and strip of heading 651.88), except pile, chenille or narrow etc. fabrics; SITC6522: Cotton woven fabrics, n.e.s., unbleached; SITC2237: oil seeds and oleaginous fruits, n.e.s.

Singapore						
	SITC3330	SITC6522	SITC3341	SITC6531	SITC6584	SITC0545
1987	562.59	53.33	25.37	42.47	28.89	5.96
1988	427.34	46.20	84.37	42.78	23.53	17.45
1989	403.16	47.17	103.84	47.54	28.32	21.21
1990	454.86	55.35	194.92	52.68	30.82	21.70
1991	336.48	60.41	257.51	58.15	33.35	37.34
1992	246.76	61.03	196.22	45.85	41.35	31.64
1993	82.08	57.89	155.61	46.09	41.36	35.86
1994	47.88	55.43	115.43	62.59	41.33	21.33
1995	78.58	66.47	N/A	69.27	65.08	27.46
1996	50.66	32.52	20.96	70.15	62.32	28.88
1997	50.53	21.83	97.57	87.53	49.99	23.57
1998	57.98	12.62	79.93	56.56	23.38	18.90
1999	N/A	21.60	234.80	44.28	46.07	22.30

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC3330: Petroleum oils and oils from bituminous minerals, crude; SITC6522: Cotton woven fabrics, n.e.s., unbleached; SITC3341: Gasoline (motor spirit) and other light oils; SITC6531: Woven fabrics of synthetic filament yarn (including fabric of monofilaments and strip of heading 651.88), except pile, chenille or narrow etc. fabrics; SITC6584: Linens for the bed, table, toilet and kitchen; SITC0545: Fresh or chilled vegetables, n.e.s.

Thailand						
	SITC6519	SITC6531	SITC6522	SITC5231	SITC5331	SITC6712
1987	27.58	16.56	8.65	7.42	3.92	4.47
1988	29.67	7.28	13.22	9.64	5.58	17.20
1989	24.15	13.65	4.93	7.68	9.40	10.17
1990	30.63	7.24	10.93	9.95	11.28	6.94
1991	14.93	7.36	16.17	15.82	10.33	5.28
1992	19.75	5.22	10.30	19.25	11.22	20.47
1993	9.35	10.66	14.22	20.67	10.57	13.97
1994	13.27	16.62	15.03	22.38	10.52	27.55
1995	18.57	14.52	24.41	51.22	16.93	48.77
1996	10.55	21.91	19.29	41.05	15.72	37.71
1997	13.39	28.68	17.11	41.55	16.46	37.73
1998	13.98	31.43	17.98	33.77	14.10	11.20
1999	16.92	41.76	19.83	48.81	21.43	13.88

Source: *World Trade Analyzer (WTA) CDROM, 1999.*

Note: SITC6519: Yarn of textile fibers, n.e.s. (including paper yarn and glass fiber yarn, slivers and rovings); SITC6531: Woven fabrics of synthetic filament yarn (including fabric of monofilaments and strip of heading 651.88), except pile, chenille or narrow etc. fabrics; SITC6522: Cotton woven fabrics, n.e.s., unbleached; SITC5231: Fluorides, fluorosilicates, fluoroaluminates and other complex fluorine salts; SITC5331: Coloring matter n.e.s., preparations based on coloring matter, n.e.s., inorganic products used as luminophores; SITC6712: Pig iron and spiegeleisen in pigs, blocks and other primary forms.