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CHINA'S CHANGING TRADE PATTERNS: IMPLICATIONS FOR ASEAN-CHINA TRADE*

Ellen H. Palanca**

ABSTRACT

Economic reform in China and the economic prosperity that resulted have brought about tremendous growth and pattern changes in its external trade. In the last couple of decades, merchandise trade between China and all the ASEAN-5 countries, which started at relatively low levels, has grown at impressive rates. This is so despite the increasing similarity in the exports of China and the ASEAN-5 countries, except Singapore. Bilateral trade between China and the ASEAN-5 countries reflects intra-industry division of labor as well as trade of niche products.

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EXECUTIVE SUMMARY

This paper analyzes the changing trade patterns of China in the last couple of decades and explores how the Asean countries can continue to promote trade with China given the rapid changes in China's trade patterns and socio-economic conditions. Specifically, the objectives of this study are:

1. to identify the changes in China's domestic economy and society that have contributed to the changes in China's trade patterns and commodity structure;

2. to analyze the growth and volume of the merchandise trade between China and the Asean-5 as a whole, as well as those of China's bilateral trade with the Asean-5 countries;

3. to study the changes in the commodity trade structure between China and each of the Asean-5 countries as well as compare their revealed comparative advantage profiles; and

4. to identify opportunities for trade between China and each of the Asean-5 countries.

China's external trade volume and structure have changed tremendously since China opened up and undertook economic reform in 1978. The changes are due to the reforms that gradually liberalize trade and give more autonomy to the enterprises. The rapid flow of foreign direct investments also contributes significantly to China's export boom. The ensuing economic prosperity and the change in industrial structure have on the other hand affected import demand.

Merchandise trade between China and all the Asean-5 countries has been active and growing at high growth rates in the last couple of decades. As the fourth largest trading partner of China, following the U.S., Europe, and Japan, the Asean-5 bloc has found China a rapidly growing market. Exports to China for each of the Asean-5 countries have grown faster than the country's total exports. The growth of China's exports to the Asean-5 is slightly lower than its exports to the rest of the world.

For 1995, the correlation between the revealed comparative advantage indices of China and the Asean-5 is found to be significant for all Asean-5 countries except Singapore. Comparing 1987 and 1995 data, this study also found an increase in trade similarity with China for all Asean-5 countries over time.

Trade between China and the Asean countries is not simply based on the complementarity of broad product categories classified according to factor intensity. The trade pattern shows that trade is based also on complementarities within categories of products. Bilateral trade opportunities lie in the diversification of export items through intra-industry division of labor as well as in the identification of niche products. In this respect, mutual coordination and joint research to identify niches are needed to help promote trade efficiency and expansion.

TABLE OF CONTENTS

CHINA'S CHANGING TRADE PATTERNS: IMPLICATIONS FOR ASEAN-CHINA TRADE*

Ellen H. Palanca**

I. INTRODUCTION

Since China opened up its economy in late 1978, its external trade volume has grown at phenomenal rates. It has also diversified its trading partners from 173 countries in the late 1980s to 220 at present (*China Today,* November 1998, p.16). In the face of such developments, China has continuously fostered strong economic trade relations with the ASEAN-5 countries, namely, the Philippines, Singapore, Indonesia, Thailand, and Malaysia. China attaches great importance to the ASEAN due to its political and economic significance. Such attached importance is magnified with the formation of the ASEAN Free Trade Area or AFTA and also in the context of Asia-Pacific Economic Cooperation or APEC. The ASEAN countries, on the other hand, have increasingly recognized China not just as an emerging political force, but also as a huge growing market for their exports.

This paper analyzes the changing trade patterns of China and explores how the ASEAN countries can continue to promote trade with China as trade patterns and the socio-economic conditions in China are changing very rapidly. Specifically, the objectives of this study are:

1. to identify the changes in China's domestic economy and society that have contributed to the changes in China's trade patterns and commodity structure;

2. to analyze the growth and volume of the merchandise trade between China and the ASEAN-5 as a whole, as well as China's bilateral trade with the ASEAN-5 countries;

3. to study the changes in the commodity trade structure between China and each of the Asean-5 countries as well as to compare their revealed comparative advantage profiles; and

4. to identify trade opportunities between China and each of the ASEAN-5 countries.

The opening up of China and the economic reform it undertook have had a tremendous impact on China's foreign trade. In the domestic front, trade has been affected not only by the direct interventions done through institutional reforms and changes in the trade structures. Increasingly, much of the changes in trade pattern are due to the consequences of development on society and the economy. Trade and rural reforms, development plans and strategy, demographic and household income changes, all contribute, directly or indirectly, to China's structure of import demand and export products. These economic and structural development factors as well as

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their societal and economic consequences, have strong implications on its trade with the ASEAN countries as well as with the rest of the world.

In general, the ASEAN countries and China have similar resource endowments and economic development strategy. Following trade theories, this means that China and the ASEAN countries are competitive in the international market and trade opportunities between them are limited. However, despite these limitations, trade between them, which started at relatively low levels when China first opened up, has grown steadily and at impressive rates. The dynamic structural changes actually provide niches for trade between China and the ASEAN countries. Direct investment in China by the ASEAN countries, which is increasing rapidly in the last few years, has also given these investing countries trade opportunities.

Changing trade patterns can best be analyzed by looking at the changing comparative advantage profile over time. Responding to market-oriented reforms, China has gradually shifted its export and import structure to conform to its comparative advantage. Areas of trade with China for the ASEAN-5 countries can be explored by looking at their changing comparative advantage profiles and comparing them with China's. The time period under study is from 1980, when the effects of economic reforms started to be felt, to 1996, the latest year data are available.

China and the ASEAN countries, all relying on an export-oriented economic system, also compete with each other for their shares in the world market and in attracting foreign investment. The study, however, does not look at China's and the ASEAN's trade with other countries and so does not study their competition for export markets.

II. THE ASIAN MIRACLE

Following the globalization trend and the remarkable success of the newly industrialized economies in East Asia (both Northeast and Southeast), the last two decades saw the emergence of the Chinese and several ASEAN economies. After the economic success of Japan in the fifties and sixties, four economies, namely, Taiwan, Korea, Singapore, and Hong Kong, turned from backward conditions to become newly industrialized economies, or NIEs, in the seventies and eighties (Woronoff 1992). Other ASEAN countries—Malaysia and Thailand --followed suit by adopting the same growth strategy of open-trade industrialization. China took a similar course of development when it embarked on its economic reform program in 1978. Although these countries have not reached the NIE status, in the last few decades prior to the Asian crisis, they experienced very rapid economic growth. The Philippines, whose level of industrialization was comparable to Malaysia and Thailand during the early eighties, proceeded on the same track when its political and economic conditions stabilized in the early nineties. Although its economy had experienced high growth since the seventies, Indonesia started to open up its trade only recently.

Economic growth for China and most of the ASEAN countries has been impressive and stable, as can be seen in Table 1 where their average annual growth rate of GDP in the last few decades are presented. Except for the Philippines, the average growth rates of these countries have been much higher than the world

average. Following the economic model taken by the NIEs, China and the ASEAN countries adopted the export-oriented growth strategy. These emerging economies also benefited from the growth of the NIEs. A synergy of economic growth activities in the Southeast Asian region has resulted from the economic growth of the NIEs. Part of this synergy is the spillover effects of the industrial restructuring of these economies. China and the ASEAN countries (except for Singapore) are behind the NIEs in the formation of "flying geese pattern", the model illustrating the relay effect of development. While the emerging economies are now exporting labor-intensive manufactured products, the NIEs have moved on to capital- and then technology-intensive sectors. Japan, the leader among the flying geese, now focuses on more technologically advanced sectors.

Table 1. Average Annual Growth Rate of GDP: China and ASEAN-5, 1970-1996. (In per cent)

	1970-1980	1980-1990	1990-1996
China	5.5	10.2	12.3
Philippines	6.0	1.0	2.9
Singapore	8.3	6.6	8.7
Indonesia	7.2	6.1	7.7
Malaysia	7.9	5.2	8.7
Thailand	7.1	7.6	8.3
WORLD	*	3.1	2.2

* *No entry.*

Source: The World Bank, *World Development Report*, various issues.

In the last couple of decades, China and the ASEAN-5 countries have all been outward looking market economies, focusing on exports as their engine of growth. The countries all rank high among world economies in their exports of goods and commercial services, both in absolute values and in relative terms, i.e., as a percentage of their GDP levels. (See Table 2.) By value, China ranks eleven[1], much higher than any of the ASEAN countries. The ranking of China in export as a percentage of gross domestic product cannot as high as those of the ASEAN countries because of China's large internal market.

[1] More recent data show that for 1997, China occupies the 10th position in terms of export and total trade values among the world economies (*Beijing Review*, 30 March-5 April 1998, p.13). If we include the export of Hong Kong, which has been among the top ten, China's export would rank among the high top places.

Table 2. Export of Goods and Commercial Services: China and ASEAN-5, 1995.

	Value (in $US billion)	Ranking (relative to world)	% of GDP	Ranking (relative to world)
China	167.18	*11*	23.96	*34*
Philippines	26.75	*35*	36.08	*16*
Singapore	147.56	*13*	173.34	*1*
Indonesia	44.96	*28*	25.42	*31*
Malaysia	65.18	*23*	92.28	*4*
Thailand	71.14	*21*	43.24	*10*

Source: *The Competitiveness Yearbook*, International Institute for Management Development, 1997.

Table 3A shows the trade volume of China, the ASEAN-5, and the world for selected years for the period 1980-1996 while Table 3B shows the average growth rate of external trade for selected periods. Total trade volume of China and ASEAN-5 as a bloc grew at an average annual rate of 13.53 percent and 11.01 percent respectively during the 1980-1996 period, an average much higher than the 6.64 percent of the world. It is interesting to note the following regarding the growth rates of the ASEAN countries. First, although the ASEAN countries adopted the export-oriented outward-looking approach to economic growth much earlier than China, their trade growth rates were lower than that of China during the first half of the period. (Growth rates of Thailand and Singapore were quite high although still lower than that of China, which had a relatively low base to start with.) Second, trade growth accelerated significantly for China and all the ASEAN-5 countries from 1988 to 1996. Moreover, the ASEAN's trade growth was more rapid in the second half of the period, surpassing that of China for both export and import. These observations suggest that the rapid growth in China's foreign trade did not impede the growth of trade activities in the region. Instead, it seemed to have a stimulative effect on them, promoting economic development in the region.

During this period, China and Thailand experienced the highest growth rate in total trade and export volumes. Although the growth in imports was lower than that for exports for both countries, imports also increased at exceptionally high rates. It was highest for Thailand and third for China. Malaysia, with the fastest growth rate in trade during the 1988-1996 period, is third in rank for its total trade volume and second in rank for its import volume among these countries for the entire period. Singapore, being one of the NIEs and therefore had become a full-fledged industrialized country in the eighties, continues to experience high growth rate in trade, the sustaining force of its economic growth. The Philippines was able to really pursue this open-trade course of development only in the nineties because of its political turbulence in the eighties. Indonesia also started to open up its trade only recently. Rapid growth in trade started in 1992 for the Philippines and in 1994 for Indonesia.

Table 3A. Trade Volume: China, ASEAN-5, and World, 1980, 1988 and 1996. (In $US million)

	1980	1988	1996
China			
Total Exports	18139	47663	151197
Total Imports	19941	55278	138944
Trade Volume	38080	102941	290141
ASEAN			
Total Exports	66535	102780	329290
Total Imports	63124.9	102670.2	360295
Trade Volume	129659.9	205450.2	689585
Philippines			
Total Exports	5788	7034	20417
Total Imports	8295.3	8720.8	34122
Trade Volume	14083.3	15754.8	54539
Singapore			
Total Exports	19377	39318	125024
Total Imports	24003	43864	131338
Trade Volume	43380	83182	256362
Indonesia			
Total Exports	21909	19376	49814
Total Imports	10834	13249	42929
Trade Volume	32743	32625	92743
Malaysia			
Total Exports	12960	21096	78246
Total Imports	10779	16551	78422
Trade Volume	23739	37647	156668
Thailand			
Total Exports	6501	15956	55789
Total Imports	9213.6	20285.4	73484
Trade Volume	15714.6	36241.4	129273
World (In $US billion)			
Total Exports	*1883*	*2763*	*5290*
*Total Imports**	*1928*	*2771*	*5367*
Trade Volume	*3811*	*5534*	*10657*

Sources: International Monetary Fund, *Direction of Trade Statistics,* various issues, and The World Bank, *The World Development Report*, various issues.

* Total world exports plus freight and insurance approximate total world imports.

Table 3B. Trade Volume: Average Growth Rate, China, ASEAN-5, and World, 1980-1996. (In per cent)

	1980-1988	1988-1996	1980-1996
China			
Total Exports	12.84	15.52	14.17
Total Imports	13.59	12.21	12.90
Trade Volume	13.24	13.83	13.53
ASEAN			
Total Exports	5.59	15.67	10.51
Total Imports	6.27	16.99	11.50
Trade Volume	5.92	16.34	11.01
Philippines			
Total Exports	2.47	14.25	8.20
Total Imports	0.63	18.59	9.24
Trade Volume	1.41	16.79	8.83
Singapore			
Total Exports	9.25	15.56	12.36
Total Imports	7.83	14.69	11.21
Trade Volume	8.48	15.11	11.74
Indonesia			
Total Exports	-1.52	12.53	5.27
Total Imports	2.55	15.83	8.99
Trade Volume	-0.05	13.95	6.72
Malaysia			
Total Exports	6.28	17.80	11.89
Total Imports	5.51	21.47	13.21
Trade Volume	5.93	19.51	12.52
Thailand			
Total Exports	11.88	16.94	14.38
Total Imports	10.37	17.46	13.86
Trade Volume	11.01	17.23	14.08
World			
Total Exports	*4.91*	*8.46*	*6.67*
Total Imports	*4.64*	*8.61*	*6.61*
Trade Volume	*4.77*	*8.54*	*6.64*

Sources: International Monetary Fund, *Direction of Trade Statistics,* various issues, and The World Bank, *The World Development Report*, various issues.

III. CHINA'S TRADE TRENDS AND PATTERNS

A. *Trade Dependence*

From an almost autarkic economy before 1978, China has become very dependent on the world economy for markets as well as for inputs, products, and technology from abroad. Trade dependence has grown significantly since then (Table 4). The export dependence (ratio of total exports to nominal GDP) of Chinese economy increased from 9 percent in 1980 to more than 20 percent in the nineties.[2] As mentioned, due to its large internal market, China's dependence ratio cannot be as large as those of the ASEAN countries. The increase in import dependence ratio, i.e., import as a percentage of GDP, is just as dramatic—from 10 to 17 percent during the period

Table 3A shows that from a level of US$18B in 1980, China's export volume reached US$151 billion in 1996. On the other hand, imports rose from US$20B in 1980 to US$139 billion in 1996. Due to the favorable trade balance accumulated over the years as well as the large capital inflows from foreign direct investment, China's foreign reserves reached a level of US$140 billion in 1997.

With respect to its major trading partners, China has focused essentially on the developed countries--Japan, the United States, and the EU. In the eighties and the nineties, trade with the United States increased most rapidly. Exports to the U.S. grew at an annual rate of 23 percent during the period 1980-1996. In the last few years, China's trade with the Latin American and African countries rose rapidly as China intensified its effort to diversify its trading partners (*China Today,* November 1998, p.16).

B. *Changing Patterns*

China's trade commodity composition has transformed dramatically since the beginning of the reform in the late seventies. Table 5 presents the commodity structure of China's exports from 1980 to 1993. Export of primary products declined from a share of 50 percent in total exports to just 18 percent in 1993 while export of manufactured goods rose from 50 to 82 percent. During this period, labor-intensive exports continued to increase as the manufacturing sector took advantage of the low wage comparative advantage. The share of labor intensive exports in total exports grew at a phenomenal pace since reforms took place (Song 1996). This trend is expected to continue for several more decades. Although the wage rates in the coastal areas are likely to rise, labor in the inland is still cheap and foreign and domestic investments are moving further inland.

Table 6, which presents the composition of China's imports from 1980 to 1993, shows that since 1985, the distribution between primary products and manufactured products in total imports is more or less the same as for exports. In recent years, China demonstrated import dependence for its agricultural demand (Anderson 1990a).

[2] Export dependence ratio was only around 2 during the 1960s and 1970s.

Table 4. Exports and Imports Dependence Ratio: China and ASEAN-5, 1980-1996. (In per cent)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
A. Exports dependence ratio																	
China	8.97	11.20	10.84	9.76	9.76	9.05	10.62	14.73	15.46	15.16	17.28	18.72	20.31	21.07	22.38	21.33	18.31
Philippines	17.66	15.85	13.32	14.71	16.78	14.99	15.98	17.05	18.56	18.20	18.20	19.32	18.40	20.40	20.74	23.59	24.47
Singapore	165.56	151.22	136.25	125.41	128.37	128.88	126.75	141.85	159.15	153.36	144.62	139.56	128.28	128.81	139.25	141.31	130.32
Indonesia	28.07	24.11	23.54	24.82	25.03	21.33	20.15	22.58	21.96	21.88	22.46	22.74	24.42	23.30	22.82	22.93	21.90
Malaysia	53.09	47.19	44.78	46.80	48.90	49.36	49.76	56.64	60.81	66.28	68.73	72.91	70.66	74.94	83.04	86.78	77.30
Thailand	20.12	20.17	18.99	15.91	17.73	18.30	20.58	23.15	25.95	27.82	26.97	28.91	29.20	29.43	31.55	33.80	30.05
B. Imports dependence ratio																	
China	9.87	11.20	9.35	9.37	10.35	14.07	14.68	16.18	18.00	17.06	14.80	16.62	19.27	23.88	21.39	18.51	16.82
Philippines	25.54	23.79	22.14	24.00	20.47	17.76	18.06	21.54	23.02	26.26	29.32	28.20	29.06	34.55	35.15	38.20	38.07
Singapore	204.81	198.74	184.72	162.22	152.87	148.66	143.64	161.13	177.78	170.52	166.80	156.82	145.86	148.31	147.69	148.76	130.96
Indonesia	13.84	14.38	17.84	19.20	15.89	11.81	13.39	17.03	14.87	16.16	19.05	20.21	19.62	17.93	18.23	20.66	19.32
Malaysia	44.10	46.39	46.28	43.81	41.54	39.42	38.94	40.19	47.84	59.41	68.50	77.80	69.27	72.71	84.20	91.14	73.26
Thailand	28.47	28.58	23.37	25.72	24.88	23.75	21.28	25.72	32.92	35.71	39.00	38.27	36.57	36.98	38.07	42.37	38.90

Source: National Asia Pacific Economic and Scientific Database (NAPES).

Table 5. Commodity Structure of China's Merchandise Exports, 1980-1993. (In per cent)

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993
Primary products	50.3	50.5	36.4	33.5	30.3	28.7	25.6	22.5	20.0	18.2
Foodstuffs	16.5	13.9	14.4	12.1	12.4	11.7	10.6	10.1	9.8	9.2
Beverages and tobacco	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.7	0.8	1.0
Nonfood items	9.4	9.7	9.4	9.3	8.9	8.0	5.7	4.8	3.7	3.3
Mineral fuels	23.6	26.1	11.9	11.5	8.3	8.2	8.4	6.6	5.5	4.5
Animal and vegetable oils and fats	0.3	0.5	0.4	0.2	0.1	0.2	0.3	0.2	0.2	0.2
Manufactured products	49.7	49.5	63.6	66.5	69.7	71.3	74.4	77.5	80.0	81.8
Chemicals	6.2	5.0	5.6	5.7	6.1	6.1	6.0	5.3	5.1	5.0
Products classified by material	22.1	16.4	19.0	21.7	22.1	20.8	20.3	20.1	19.0	17.9
Of which: textiles	-	11.9	13.7	14.7	13.6	13.3	11.3	10.8	9.1	8.4
Machinery and equipment	4.7	2.8	3.5	4.4	5.8	7.4	9.0	10.0	15.6	16.7
Miscellaneous manufactures	15.7	12.8	16.0	15.9	17.4	20.5	20.4	23.1	40.3	42.3
Of which: clothing	-	7.5	9.5	9.5	10.3	11.7	11.0	12.5	19.9	20.0
Products not elsewhere classified	1.1	12.5	19.4	18.7	18.3	16.6	18.7	19.0	**	**

Source: Ho Yin-ping (1995), p.21.

Table 6. Commodity Structure of China's Merchandise Imports, 1980-1993. (In per cent)

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993
Primary products	34.8	12.5	13.1	16.0	18.2	19.9	18.5	17.0	16.4	13.7
Foodstuffs	14.6	3.7	3.8	5.6	6.3	7.1	6.3	4.4	3.9	2.1
Beverages and tobacco	0.2	0.5	0.4	0.6	0.6	0.3	0.3	0.3	0.3	0.2
Nonfood items	17.8	7.7	7.3	7.7	9.2	8.2	7.7	7.8	7.2	5.2
Mineral fuels	1.0	0.4	1.2	1.2	1.4	2.8	2.4	3.3	4.4	5.6
Animal and vegetable oils and fats	1.2	0.3	0.5	0.8	0.7	1.5	1.8	1.1	0.6	0.5
Manufactured products	65.2	87.5	86.9	84.0	81.8	80.1	81.5	83.0	83.6	86.3
Chemicals	14.5	10.6	8.8	11.6	16.5	12.8	12.5	14.5	13.9	9.3
Products classified by material	20.8	28.2	26.1	22.5	18.8	20.9	16.7	16.4	23.8	27.5
Machinery and equipment	25.6	38.4	39.1	33.8	30.2	30.8	31.6	30.7	38.9	43.3
Miscellaneous manufactures	2.7	4.5	4.4	4.3	3.6	3.5	3.9	3.9	6.9	6.2
Products not elsewhere classified	1.7	5.8	8.5	11.8	12.6	12.2	16.9	17.5	**	**

Source: Ho Yin-ping (1995), p.26.

Domestic production in China has replaced part of its labor-intensive imports (Song 1996). In the composition of import commodities, from 1978 to 1993, the share of agricultural and mineral intensive commodities declined. During this period, labor intensive imports, which initially increased in share, had declined in more recent years. Only capital intensive imports rose very rapidly. In 1993, they occupied 72 percent of total imports and 82 percent of manufactured imports (Song 1996). Import priorities essentially consist of technical and capital resources that can be directed to key sectors such as energy, transportation, and communication; inputs, technology and equipment for increasing production in the export sector.

IV. DOMESTIC FACTORS AFFECTING CHINA'S EXTERNAL TRADE

China's trade expansion and changing commodity structure can be attributed to several factors, most of which are related to its economic reform. Economic reform, which is market-oriented, has oriented the trade system towards trade based on comparative advantage. Rural reform and foreign direct investment promote export-oriented industrialization. Machinery and technology, as well as goods necessary to export manufactures, dominate imports. However, as economic prosperity continues and per capita income increases, demand for consumer goods imports has been on the rise.

A. *Rural Reform/Enterprise Empowerment*

Many rural areas in China were the first beneficiaries of its economic reform. Rural reform in China took on a comprehensive development program incorporating the agriculture, industry, and commerce sectors. The reform resulted in the growth of township and village enterprises (TVEs), which are established either by the local governments in the countryside or the peasant themselves. These rural enterprises were allowed to buy and sell their inputs and outputs in free markets after fulfilling a minimal plan obligation to the state. The result was better economic performance of these firms compared to the existing state-owned enterprises.

Table 7. Rural Enterprise Share of National Exports: China, 1985-1991.

	National Exports (In $US million)	Rural Enterprise Exports (In $US million)	Share (In per cent)
1985	27350	1325	5.0
1986	30940	2635	9.0
1987	39440	4290	11.0
1988	47520	7912	17.0
1989	52540	9839	19.0
1990	62060	9640	16.0
1991	71910	11173	16.0

Note: Rural enterprise exports in US$ are converted from renminbi by China's official exchange rates.
Source: Findlay et al. (1992). p. 20.

Rural reform was essentially in the form of rural industrialization. In 1991, seventy-four percent of rural enterprises' output value focused on the industrial sector, engaging in industries oriented to exports. The ratio was eighty-four percent for the non-state owned ones (TVEs) (Findlay, *et al.* 1992). Export earnings of the TVEs were reported to contribute to 16 percent of the total, increasing from a measly share of just 5 percent in 1985, with value increasing from US$1.3 billion in 1985 to US$11.2 billion in 1991. For 1991, another report put the share at 25 percent and still another put the value at US$13 billion (Findlay, *et al.* 1992). The abundance of labor in the countryside attracts investment of both local and foreign capital. Development over time also shows that the structure of rural enterprise exports has shifted towards capital-intensive production from natural resource- and labor-intensive ones (Table 8).

Since economic reform started in 1978, private enterprises, both in the rural and urban areas, have been allowed and encouraged. Rural reform and economic reform in general have empowered them and given them more autonomy. Managers of state-owned businesses now assume more responsibility for the profits and losses of their enterprises. Outward orientation of business firms resulted as enterprises became free to engage in export and import activities based on profitability in the international market.

B. *Trade System Reform*

As part of the economic reform taken in China, market liberalization policies were adopted for its foreign trade system. China's exports and imports, initially centrally managed, gradually conformed to the country's comparative advantage.

Further liberalization of the foreign trade system was implemented in 1994. The government relaxed the import plan, freeing more foreign exchange for non-mandatory imports. The local governments and exporting enterprises were given the privilege of retaining a share of the foreign exchange earned and, based on their export earnings, could purchase foreign exchange from the central bank. In 1991 mandatory export plan and export subsidies were abolished. This increased the competition among the foreign trade corporations in buying products and therefore created more attractive prices for exporters. Reforms in 1994 eliminated mandatory import planning and reduced quotas and licensing requirements. Tariff rates were reduced for a few products and non-tariff barriers were lowered.

With a gradualistic approach in the reform of its external sector, adopting trade reform measures, as well as the institutional changes necessary to implement them, China has managed to expand its external trade and change its composition without creating serious macroeconomic imbalances. It is expected that further trade liberalization will continue to lead to dynamic changes in its comparative advantage.

Table 8. Structure of Rural Enterprise Exports: China, Selected Years.

	1986		1987		1988		1989		1990	
	*(YM)**	*(%)*	*(YM)*	*(%)*	*(YM)*	*(%)*	*(YM)*	*(%)*	*(YM)*	*(%)*
Natural Resource Intensive	1163	*11.7*	2037	*12.6*	3059	*10.2*	4072	*11.0*	4900	*10.1*
Labour Intensive	8052	*80.9*	12549	*77.5*	24103	*80.7*	29214	*78.7*	38500	*79.4*
Capital Intensive	733	*7.4*	1609	*9.9*	2709	*9.1*	3858	*10.4*	5100	*10.5*
Total	9948	*99.99*	16195	*99.99*	29871	*100.00*	37144	*100.00*	48500	*100.00*

- Yuans in million.

Source: Findlay, *et al.* (1992). P. 25.

C. *Foreign Direct Investment*

Foreign direct investment increased in leaps and bounds in the last two decades. During the period 1979-1997, China accumulated foreign direct investments in the amount of US$223 billion (Wu 1998). The increase was most rapid in the early nineties when the annual growth rate was over 100 percent. Foreign direct investments make up most of China's large capital inflows. For the period 1993-1997, over 70 percent of the capital inflows were FDIs.

Most of foreign direct investments in China are in the export sector (Table 9). From very negligible levels in the eighties, the contribution of FDI enterprises to China's exports reached 40.7 percent in 1996. These foreign investments have expanded exports through importing advanced technology and equipment from abroad and conducting co-production with inland enterprises. In the special economic zones where foreign direct investments are concentrated in, priority is given to export-oriented enterprises. In Shenzhen, China's first special economic zone, exports of electrical products, textile products, and other light industries account for 83.9 percent of its total export value (Gao and Long 1996). Such export-oriented foreign capital investments not only diversify the local economy but at the same time reform the trade structure. They also provide better access to the outside world, particularly by linking firms in China to the export and marketing networks abroad. FDI was found to be a highly significant determinant of exports, both at the provincial and national level, in a study on the impact of FDI on promoting trade in China's provinces and China's bilateral trade with its trade partners in the world (Chen 1997).

Table 9. Foreign Direct Investment Exports of China, 1985-1996.

Year	China's FDI Exports (In $US million)	Growth Rate of FDI Exports (in %)	hare of FDI Exports to Total Exports
1985	320		1.1
1986	480	50.0	1.6
1987	1200	150.0	3.0
1988	2460	105.0	5.2
1989	4920	100.0	8.3
1990	7800	58.5	12.5
1991	12100	55.1	16.8
1992	17400	43.8	20.4
1993	25240	45.1	27.5
1994	34713	37.5	28.7
1995	46876	35.0	31.5
1996	61506	31.2	40.7

Source: Lardy (1996), Table 6, p.112 (for 1985-1993); *China Statistical Yearbook*, 1998.

D. *Industrial Infrastructure*

When China opened its foreign trade, it already had in place the infrastructure for extensive manufacturing. Due to its autarkic position then, it adopted early on (in the fifties) policies of industrialization which focused on heavy industries. This can probably explain why China's share of manufactured products in total exports was relatively higher than most of the ASEAN countries when it started to liberalize trade.

Table 10 shows the share of manufactured products in total exports for 1965, 1980, 1990, and 1995 for China and the ASEAN-5. Except for 1980, in all these years, the share of manufactured products in total exports of China is higher than those of the ASEAN countries. The existence of an industrial infrastructure explains why, although China started later in opening up and adopting the export-led growth strategy compared to most of the ASEAN countries, it has been able to contribute a large share of the manufactured goods supplied by the developing countries.

Table 10. Share of Manufactured Products in Total Exports: China and ASEAN-5, Selected Years. (In per cent)

	1965	1980	1990	1995
China	65.0	48.0	64.0	81.0
Philippines	5.0	37.0	52.0	56.0
Singapore	35.0	50.0	73.0	77.0
Indonesia	2.0	2.0	36.0	74.0
Malaysia	6.0	19.0	44.0	78.0
Thailand	3.0	28.0	64.0	60.0

Note: Manufactured exports are those of SITC Sections 5 to 8, excluding SITC 68 (non-ferrous metals). This definition excludes export of the food processing, beverages and a number of resource-processing industries.

Sources: The World Bank, *From Plan to Market-World Development Report*, Oxford University Press, 1966. *The Competitiveness Yearbook*, International Institute for Management Development, 1997.

Consistent with its modernization program that is an essential part of its reform, China continues to place great emphasis in building up its infrastructure and technological capability. Hence, the import of advanced technologies to upgrade its technological level and develop its communication and information industries is given high priority. Promotion of manufactured exports has been a strong mechanism for technological upgrading and thus a source of rapid productivity growth in the high performing economies of East Asia, including China. With its present technological state, China has been able to export low-level technologies based on its domestic practical situation (*Beijing Review*, 6-12 July 1998).

E. *Large Population and Change in Consumption Pattern*

China's large population has always been an attraction for exporters and investors. The increase in the ability to purchase of the people in recent years has accelerated China's import potentials.

The lives of the Chinese people have improved tremendously since Deng Xiao Ping decided in 1978 that China should open up its economy to the outside and undertook the necessary economic reform. Table 11 shows the striking improvement in the income and consumption of the Chinese people.[3] This increase in standard of living, together with the changing age distribution and educational status of households, has caused the household consumption pattern to change rapidly. Table 12 shows the average consumption pattern in households in China for 1997 and the changes from 1996. Changes are significant even in just a year's time. Percentage-wise, expenditures on household appliances and services, health care, transportation and communications, entertainment, education and culture, have increased, taking over the share of more basic necessities such as food and clothing. Expectedly, the demand for imports of quality and luxury goods as well as the demand for services will increase with such development.

Table 11. Standard of Living in China, 1978 and 1998.

	1978	1998
Annual Per Capita Income (in yuan)		
Rural	133.6	2,090.1
Urban	316.0	5,160.1
Average Annual Employee Salary (in yuan)	615.0	6,470.0
Annual Per Capita Consumption		
All	184.0	2,936.0
Farmers	138.0	1,930.0
Non-farm Residents	405.0	6,040.0
Average Living Space Per Person (in sq.m.)		
Countryside	8.1	22.4
Cities	3.6	8.8
Motorcycles Owned in Towns and Cities (per 100 households)	-	11.6
Public Buses in Towns and Cities (per 10,000 people)	3.3	8.6
Color TV Sets in Urban Areas (per 100 households)	-	100.5
TV Sets in Rural Areas (per 100 households)	-	92.4

Source: *China Today,* December 1998, p.16.

[3] The higher per capita consumption over per capita income observed in Table 12, particularly for the urban population, means that consumption is partly provided through government subsidies. The difference between per capita consumption and per capita income, plus saving from income, can be inferred as representing the magnitude of such subsidies and other government social welfare expenditures.

Table 12. Household Consumption Pattern in China, 1997.

Consumption Category	1997 %	Change from 1996 %
Food	43.7	-2.9
Clothing	11.7	-3.1
Household Appliances and Services	10.0	2.4
Health Care	4.6	0.8
Transportation and Communications	5.3	0.9
Entertainment, Education and Culture	13.6	1.4
Housing	5.4	0.4
Other Goods and Services	5.7	0.2
TOTAL	**100.0**	

Source: *China Today,* December 1998, p.16.

Aside from the growing standard of living, China's import demand for consumer goods has also been affected by the changing demographic structure as well as the rapid urbanization pace. Because of the strict implementation of the one-child policy in the last couple of decades as well as the longer lifespan brought about by better living conditions, China's population is aging quickly. Many of the children born during this period are now heads of households. Called the "little emperors" when small, these spoiled children have developed higher consumption standard and more fastidious tastes. With such developments, the demand for personal services, geriatric goods, household appliances, as well as quality food items, is expected to rise.

V. CHINA'S TRADE PATTERN WITH ASEAN-5

Trade between China and the Southeast Asian region started at low levels when China first opened up in the late seventies. This is due partly to the lack of complementarity in their exports, and partly to the low level of political relations between China and most of the countries in the region in the sixties and seventies. However, in the last few decades, the Southeast Asian region as a whole has been an important trading partner of China. In 1996, trade with the ASEAN-5 constituted six percent of China's total trade. On the other hand, the ASEAN countries, wanting to reduce their trade dependence on the developed countries, have increasingly been exploring China as an alternative market to the developed countries in the last couple of decades (Zhao 1997). Trade with China, particularly export, increased significantly. Hence, despite the seemingly similar resource endowment between China and the ASEAN, trade between them has been quite vigorous. It seems that by putting importance in engaging with each other economically in the past couple of decades, the ASEAN-5 countries have been able to sustain the growth in their respective bilateral trade with China by exploring diversity in their similar resource endowment and exploiting differences in their developmental needs.

A. *ASEAN-China Trade*

This section examines the total exports to China of the ASEAN-5 bloc and China's exports to the bloc. The data for them can be found in Tables 13 and 14. The trend of the export and import values for the 17-year period under consideration is depicted in Figure 1A. Figure 1B shows how ASEAN-5's exports fare as a percentage of the bloc's total exports and also as a percentage of China's total imports while Figure 1C shows the trend of China's exports as a percentage of ASEAN's imports and as a percentage of China's total exports. (Data on China's export to the ASEAN are considered their imports from China.)

Table 13. ASEAN-5's Export to China: Annual Values and Annual Growth rate, 1980-1996.

Year	ASEAN-5's Exports to China			
	Value (In $US million)	*Growth Rate*	*% of ASEAN Exports*	*% of China's Imports*
1980	693		1.04	3.48
1981	539	-22.22	0.78	2.49
1982	776	43.97	1.15	4.11
1983	575	-25.90	0.84	2.69
1984	659	14.61	0.88	2.54
1985	930	41.12	0.39	2.17
1986	1250	34.41	1.92	2.88
1987	1835	46.80	2.26	4.23
1988	2642	43.98	2.57	4.78
1989	2840	7.49	2.38	4.80
1990	2583	-9.05	1.86	4.84
1991	3151	21.99	1.96	4.94
1992	3781	19.99	2.10	4.69
1993	4955	31.05	2.40	4.81
1994	6544	32.07	2.59	5.66
1995	8445	29.05	2.73	6.54
1996	9553	13.12	2.90	6.88

Source: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Table 14. China's Export to ASEAN-5: Annual Values and Annual Growth Rates, 1980-1996.

Year	China's Exports to ASEAN-5			
	Value (In $US million)	*Growth Rate*	*% of China's Exports*	*% of ASEAN's Imports*
1980	1196		6.59	1.89
1981	1386	15.89	6.45	1.96
1982	1279	-7.72	5.85	1.72
1983	1140	-10.87	5.15	1.50
1984	1979	73.60	7.97	2.70
1985	2803	41.64	10.26	4.41
1986	1879	-32.96	5.99	3.05
1987	2312	23.04	5.86	2.95
1988	2789	20.63	5.85	2.72
1989	2898	3.91	5.60	2.31
1990	3846	32.71	6.12	2.43
1991	4124	7.23	5.73	2.30
1992	4250	3.06	4.97	2.17
1993	4673	9.95	5.10	2.08
1994	6368	36.27	5.27	2.35
1995	9001	41.35	6.05	2.61
1996	8829	-1.91	5.84	2.45

Source: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Figure 1A.
ASEAN-5's Export to China and China's Export to ASEAN-5, 1980-1996.

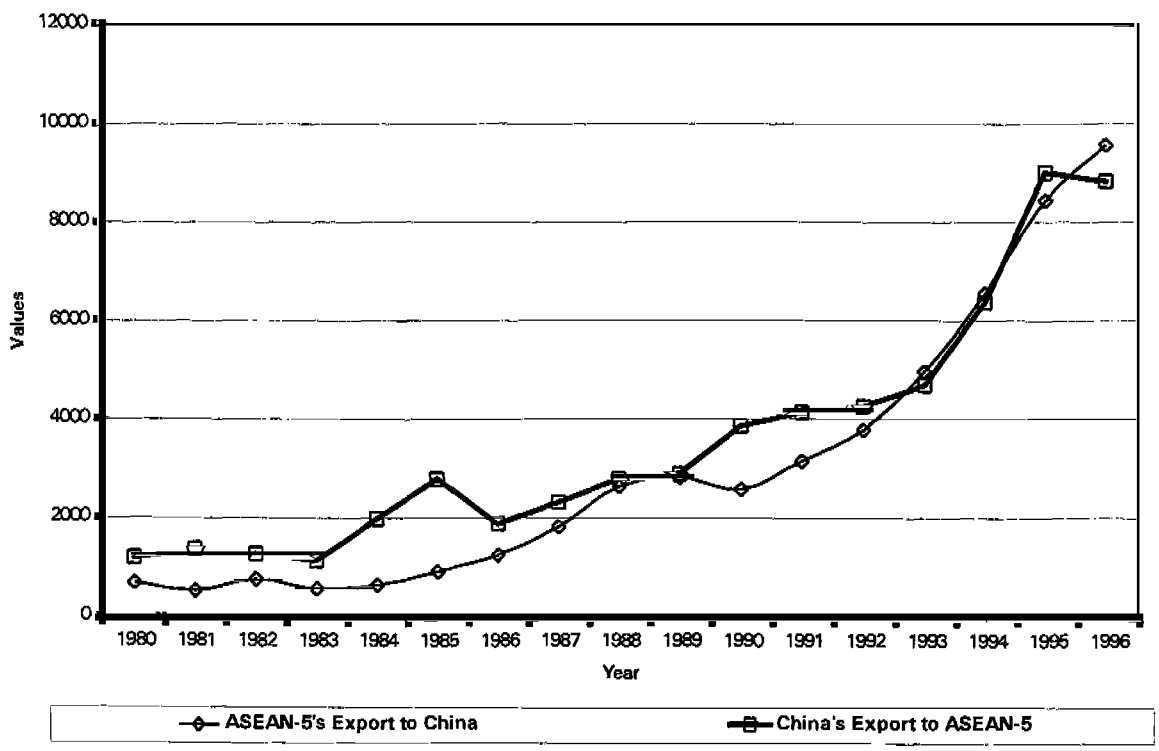


Figure 1B.
ASEAN-5 Exports to China: Values as % of ASEAN-5 Exports and as % of China's Imports, 1980-1996.

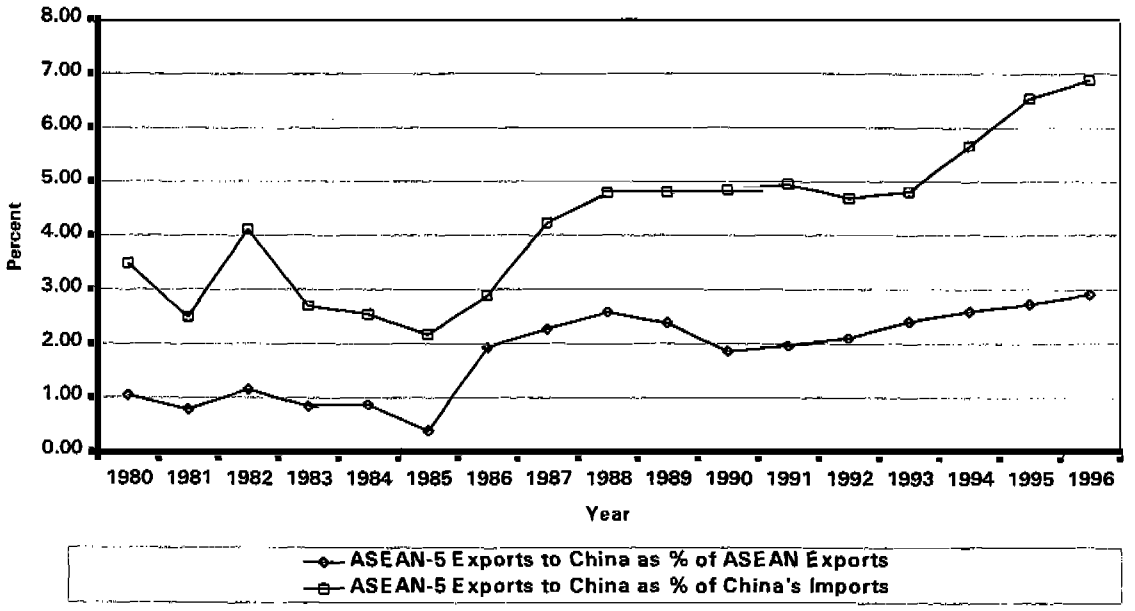
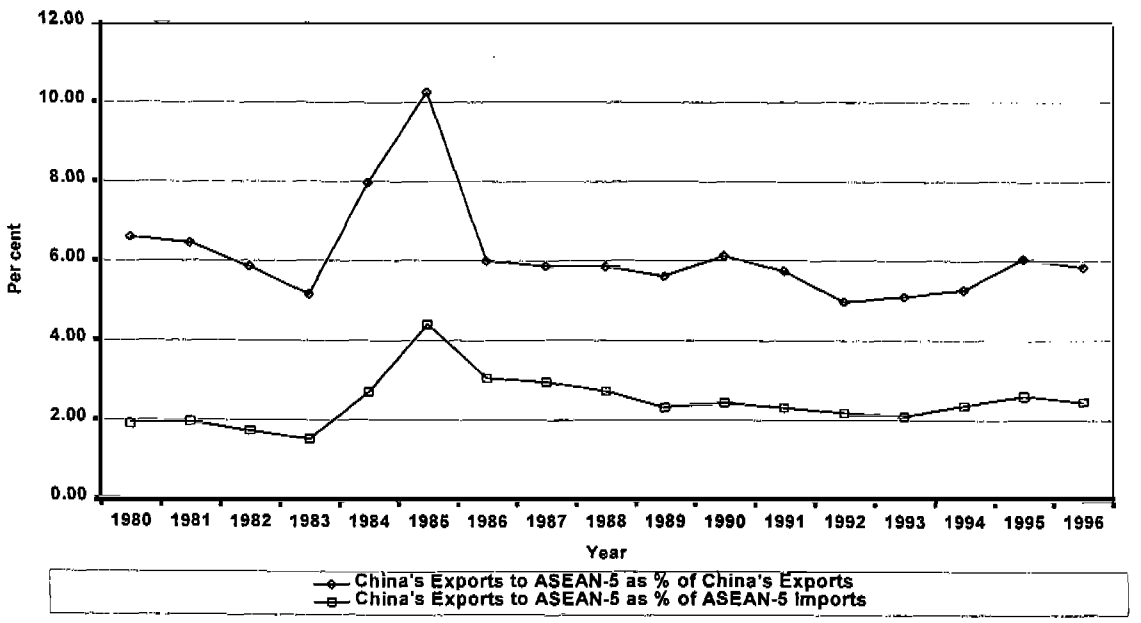


Figure 1C.
China's Exports to ASEAN-5: Values as % of China's Exports and as % of ASEAN-5 Imports, 1980-1996.



From the value trends, it is noted that the growth of both ASEAN's exports to China and China's exports to the ASEAN is generally in a hyperbolic fashion. Initially, in the eighties, China's exports to the ASEAN-5 as a whole were more than their exports to China. In 1993 and 1994 however, ASEAN's exports to China exceeded their imports from China slightly and in 1996, the surplus was rather significant. The increase in ASEAN's exports to China is due essentially to the bloc's rapid increase in total exports during the period. This can be inferred from the observation of a less steep trend of ASEAN's exports to China as a percentage of the

bloc's exports compared to ASEAN's exports to China as a percentage of China's imports (Figure 1B). On the other hand, China's export to the ASEAN-5 is relatively steadier, both as a percentage of China's exports and as a percentage of the ASEAN's imports (Figure 1C).

In terms of growth rates for the 1980-96 period, China's export to the ASEAN-5 countries fell slightly short of its export to the rest of the world. China's total export grew 734 percent, or an annual average of 14.2 percent while export to the ASEAN-5 grew 638 percent, averaging 13.3 percent annually. (See Table 15.) On the other hand, China as a market for ASEAN exports grew steadily during those 17 years (Table 16). For each of the ASEAN countries, export to China grew at much higher rates than its total export. The growth rate of the bloc's total export to China averages 16.7 percent annually for this period. The average annual growth rate for the ASEAN-5 ranges from a low of 12.4 percent for the Philippines to a high of 41.6 percent for Indonesia. Together, these countries supply about seven percent of China's import demand in 1996, which is a significant increase from the two to three percent share in the early eighties. From 1980 to 1996, total export of the ASEAN-5 countries grew at an annual average rate of 10 percent while their export to China grew by about an average of 17 percent per year.

Table 15. China's Export to ASEAN-5: Average Growth Rate, 1980-1988, 1988-1996, and 1980-1996. (In per cent)

	1980-1988	1988-1996	1980-1996
China's Export to ASEAN-5	11.16	15.49	13.31
China's Total Export	12.84	15.52	14.17
ASEAN'S Total Import	6.27	16.99	11.50
Philippines			
China's Export to Philippines	0.48	18.11	8.94
Philippines' Total Import	0.63	18.59	9.24
Singapore			
China's Export to Singapore	16.86	12.49	14.65
Singapore's Total Import	7.83	14.69	11.21
Indonesia			
China's Export to Indonesia	35.31	25.24	30.18
Indonesia's Total Import	2.55	15.83	8.99
Malaysia			
China's Export to Malaysia	6.69	20.50	13.39
Malaysia's Total Import	5.51	21.47	13.21
Thailand			
China's Export to Thailand	6.39	11.90	9.11
Thailand's Total Import	10.37	17.46	13.86

Source of data: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Table 16. ASEAN-5's Export to China: Average Growth Rate,1980-1988, 1988-1996, and 1980-1996. (In per cent)

	1980-1988	1988-1996	1980-1996
ASEAN-5's Export to China	18.21	17.43	17.82
ASEAN-5's Total Export	5.59	15.67	10.51
China's Total Import	13.59	12.21	12.90
Philippines			
Export to China	2.47	14.25	8.20
Total Export	5.10	21.96	13.22
Singapore			
Export to China			
Total Export	18.49	13.96	16.20
Indonesia			
Export to China	80.12[a]	19.75	41.56
Total Export	-1.52	12.53	5.27
Malaysia			
Export to China	8.44	20.80	14.46
Total Export	6.28	17.80	11.89
Thailand			
Export to China	18.28	18.67	18.47
Total Export	11.88	16.94	14.38

[a] The period covered is from 1981-1996.
Source of data: International Monetary Fund, *Direction of Trade Statistics, various issues.*

As a share in its total export, China's export to the ASEAN countries hovered around six percent during the period 1980-96 (except for 1985), with a very slight decline in the trend. On the other hand, there was a more substantial increase in the share of ASEAN-5's export to China in ASEAN-5 total export. The share was less than one percent for the most part of 1980 to 1985, but reached almost three percent in the mid-nineties. By 1996, imports from the ASEAN-5 countries accounted for close to 6 percent of China's total import while imports from China constituted two-and-a-half percent of total ASEAN-5's imports. For the individual countries, while the share of import from China to total country's import in 1980 for most is less than 1 percent; in 1996, this percentage ranges from a high of over 4.2 for Indonesia to a low of 1.6 for the Philippines.

It can be seen that trade between China and the ASEAN-5 started at a low base but has increased steadily and impressively. The ASEAN-5 bloc has found China a growing market for its export while the bloc as a whole continues to be China's fourth largest trading partner, following the U.S., Europe, and Japan.

B. *Trade Trend with Individual Countries*

The ASEAN-5 countries are far from homogenous in their patterns of trade with China. The bilateral trade of each country with China depends on the country's

level of economic development, trade policies, resource endowment relative to China's, as well as its diplomatic and economic ties with China. From the sixties to the early seventies, the ASEAN countries' major comparative advantage was in natural resource exports. For most of these countries, the expansion and improvement of basic education since the seventies has improved the work force thus realizing the potential comparative advantage of labor-intensive exports. Tables 17A to 17E show the bilateral trade volumes and growth rates of China with the ASEAN-5 countries for the period under study. Figures 2A to 2C show the comparative performance of the ASEAN-5 countries in their exports to China while Figures 3A to 3C show how they compared in their imports from China.

Singapore, accounting for a two-fifths share for both ASEAN-5's exports to and imports from China, is the leading trader among the Asean-5 countries. The high growth rate of its trade with China is due essentially to Singapore's very high trade volume during this period. Nevertheless, its trade with China grew at faster rate compared with its trade with the rest of the world.

Due to Singapore's large total trade volume, the share of its trade volume with China, even though substantial, to the country's total is small. During the period 1980-1995, export to China constitutes between one to three percent of Singapore's total export while import from China as a share of its total import is slightly higher. Although small, for most part of the period, these shares are highest for Singapore among the ASEAN countries. In more recent years, however, Indonesia and Thailand surpassed Singapore in the share of export to China in total country export. The share of import from China to total country import was higher in Indonesia in recent years and in the Philippines and Thailand in the early eighties.

Indonesia formally opened trade with China only in 1985. Trade between the two countries was practically nil until the mid-eighties. However, since then, Indonesia-China trade grew remarkably. In the early 1990s, Indonesia's share in total ASEAN-5 exports to China even exceeded Singapore among the ASEAN-5. Moreover, as mentioned earlier, with respect to share of exports and imports with China in the country's total exports and imports respectively, Indonesia's shares were the highest among the ASEAN-5 in the mid-nineties—exceeding four percent for exports and three percent for imports.

The Philippines consistently lagged behind the other ASEAN countries in its trade with China. Its growth rate in the value of trade with China had been the lowest for the 1980 to 1996 period. (See Tables 15 and 16.) This poor performance was due essentially to its weak external trade which was not growing as fast those of the other countries during this period. In addition, the export to China as a ratio of the country's total exports had always been poor for the Philippines compared to the other ASEAN countries. However, data for mid-nineties show that the Philippines increased its import from China significantly. In 1995 and 1996, its share in China's exports to the ASEAN-5 increased to 11.5 percent from the low five to six percent at the turn of the decade. Its export share in total ASEAN-5 exports to China remained at only around three percent since the late eighties.

Table 17A. Philippines' Bilateral Trade with China, 1980-1996.

Year	EXPORTS			IMPORTS		
	Values (In $US million)	*% of Total Exports*	*% of ASEAN's Exports to China*	*Values* (In $US million)*	*% of Total Imports*	*% of China's Exports to ASEAN*
1980	45	0.78	6.49	258	3.11	21.57
1981	78	1.36	14.47	255	3.01	18.40
1982	105	2.09	13.53	236	2.86	18.45
1983	22	0.45	3.83	143	1.79	12.54
1984	60	1.12	9.10	223	3.47	11.27
1985	81	1.76	8.71	314	5.75	11.20
1986	101	2.10	8.08	157	2.91	8.36
1987	88	1.54	4.80	245	3.43	10.60
1988	67	0.95	2.54	268	3.07	9.61
1989	50	0.64	1.76	239	2.14	8.25
1990	62	0.76	2.40	205	1.57	5.33
1991	128	1.45	4.06	253	1.98	6.13
1992	114	1.16	3.02	209	1.35	4.92
1993	167	1.48	3.37	281	1.50	6.01
1994	164	1.22	2.51	476	2.11	7.47
1995	216	1.25	2.56	1030	3.63	11.44
1996	328	1.61	3.43	1015	2.97	11.50

*Values are China's exports to the Philippines.
Source: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Table 17B. Singapore's Bilateral Trade with China, 1980-1996.

Year	EXPORTS			IMPORTS		
	Values (In $US million)	*% of Total Exports*	*% of ASEAN's Exports to China*	*Values* (In $US million)*	*% of Total Imports*	*% of China's Exports to ASEAN*
1980	307	1.58	44.30	421	1.75	35.20
1981	179	0.85	33.21	658	2.39	47.47
1982	240	1.15	30.93	648	2.30	50.66
1983	213	0.98	37.04	567	2.01	49.74
1984	243	1.01	36.87	1239	4.32	62.61
1985	333	1.46	35.81	2063	7.85	73.60
1986	571	2.54	45.68	1217	4.77	64.77
1987	737	2.57	40.16	1323	4.06	57.22
1988	1193	3.03	45.16	1464	3.34	52.49
1989	1199	2.68	42.22	1642	3.31	56.66
1990	799	1.51	30.93	2016	3.31	52.42
1991	858	1.45	27.23	2014	3.04	48.84
1992	1113	1.75	29.44	2031	2.81	47.79
1993	1905	2.57	38.45	2245	2.63	48.04
1994	2098	2.18	32.06	2563	2.50	40.25
1995	2759	2.33	32.67	3500	2.81	38.88
1996	3394	2.71	35.53	3753	2.86	42.51

*Values are China's exports to Singapore.
Source: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Table 17C. Indonesia's Bilateral Trade with China, 1980-1996.

Year	EXPORTS			IMPORTS		
	Values (In $US million)	*% of Total Exports*	*% of ASEAN's Exports to China*	*Values* (In $US million)*	*% of Total Imports*	*% of China's Exports to ASEAN*
1980	_			21	0.19	1.76
1981	8	0.03	1.48	54	0.41	3.90
1982	14	0.06	1.80	46	0.27	3.60
1983	27	0.13	4.70	49	0.30	4.30
1984	8	0.04	1.21	70	0.50	3.54
1985	84	0.05	9.03	124	1.21	4.42
1986	139	0.94	11.12	143	1.33	7.61
1987	343	2.00	18.69	188	1.46	8.13
1988	492	2.54	18.62	236	1.78	8.46
1989	534	2.43	18.80	208	1.27	7.18
1990	834	3.25	32.29	401	1.84	10.43
1991	1191	4.08	37.80	481	1.86	11.66
1992	1396	4.11	36.92	471	1.69	11.08
1993	1249	3.39	25.21	693	2.45	14.83
1994	1419	3.71	21.68	1052	3.29	16.52
1995	1866	4.31	22.10	1438	3.51	15.98
1996	2081	4.18	21.78	1428	3.33	16.17

*Values are China's exports to Indonesia.
_ no data.
Source: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Table 17D. Malaysia's Bilateral Trade with China, 1980-1996.

Year	EXPORTS			IMPORTS		
	Values (In $US million)	*% of Total Exports*	*% of ASEAN's Exports to China*	*Values* (In $US million)*	*% of Total Imports*	*% of China's Exports to ASEAN*
1980	217	1.67	31.31	184	1.71	15.38
1981	88	0.75	16.33	191	1.65	13.78
1982	110	0.91	14.18	181	1.46	14.15
1983	206	1.46	35.83	186	1.40	16.32
1984	165	1.00	25.04	196	1.39	9.90
1985	161	1.04	17.31	186	1.51	6.64
1986	163	1.17	13.04	203	1.88	10.80
1987	279	1.56	15.20	255	2.01	11.03
1988	415	1.97	15.71	309	1.87	11.08
1989	481	1.92	16.94	332	1.48	11.46
1990	619	2.10	23.96	370	1.26	9.62
1991	639	1.86	20.28	528	1.44	12.80
1992	772	1.90	20.42	645	1.62	15.18
1993	1204	2.55	24.30	704	1.54	15.07
1994	1933	3.29	29.54	1118	1.88	17.56
1995	1962	2.65	23.23	1281	1.65	14.23
1996	1882	2.41	19.70	1374	1.75	15.56

* Values are China's exports to Malaysia.
Source: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Table 17E. Thailand's Bilateral Trade with China, 1980-1996.

Year	EXPORTS			IMPORTS		
	Values (In $US million)	*% of Total Exports*	*% of ASEAN's Exports to China*	*Values* (In $US million)*	*% of Total Imports*	*% of China's Exports to ASEAN*
1980	124	1.91	17.89	312	3.39	26.09
1981	186	2.65	34.51	228	2.29	16.45
1982	307	4.42	39.56	168	1.97	13.14
1983	107	1.74	18.61	195	1.90	17.11
1984	183	2.47	27.77	251	2.41	12.68
1985	271	3.81	29.14	116	1.26	4.14
1986	276	3.11	22.08	159	1.73	8.46
1987	388	3.36	21.14	301	2.31	13.02
1988	475	2.98	17.98	512	2.52	18.36
1989	576	2.88	20.28	477	1.85	16.46
1990	269	1.17	10.41	854	2.56	22.20
1991	335	1.16	10.63	848	2.26	20.56
1992	386	1.19	10.21	894	2.20	21.04
1993	430	1.16	8.68	750	1.62	16.05
1994	930	2.02	14.21	1159	2.13	18.20
1995	1642	2.90	19.44	1752	2.37	19.46
1996	1868	3.35	19.55	1259	1.71	14.26

*Values are China's exports to Thailand.
Source: International Monetary Fund, *Direction of Trade Statistics*, various issues.

Figure 2A.
ASEAN-5 Country Exports to China: Values, 1980-1996.

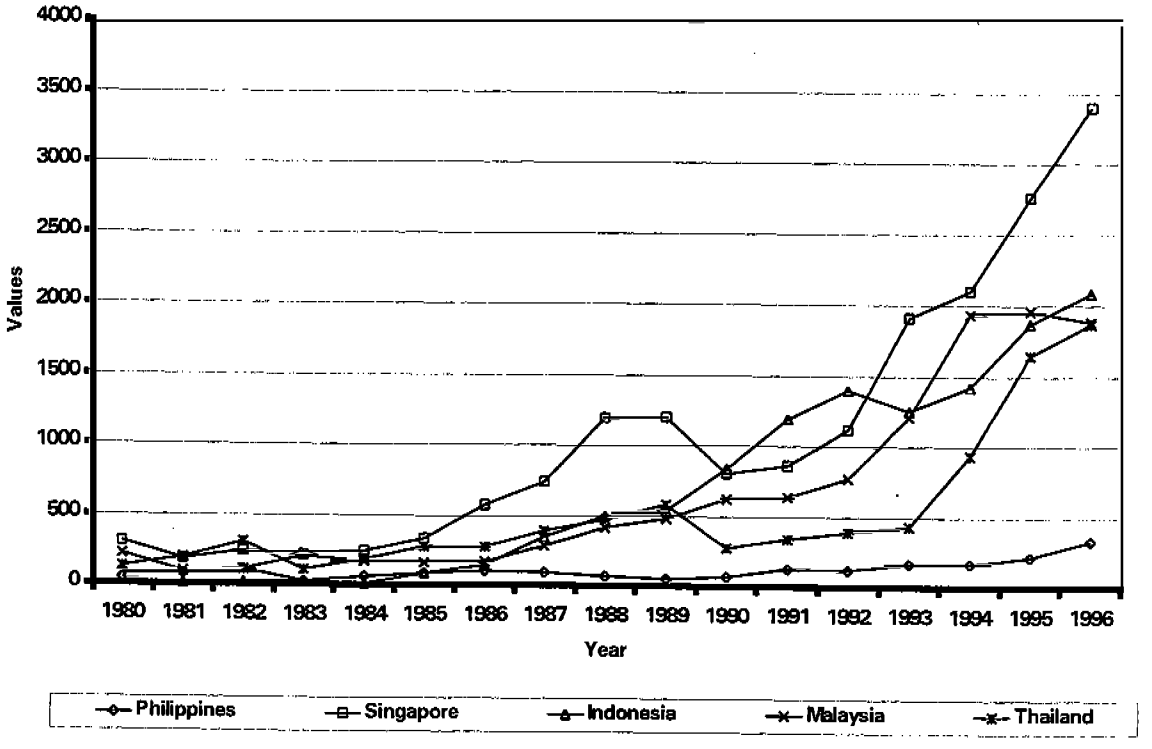


Figure 2B.
ASEAN-5 Country Exports to China: Values as % of Total Country Exports, 1980-1996.

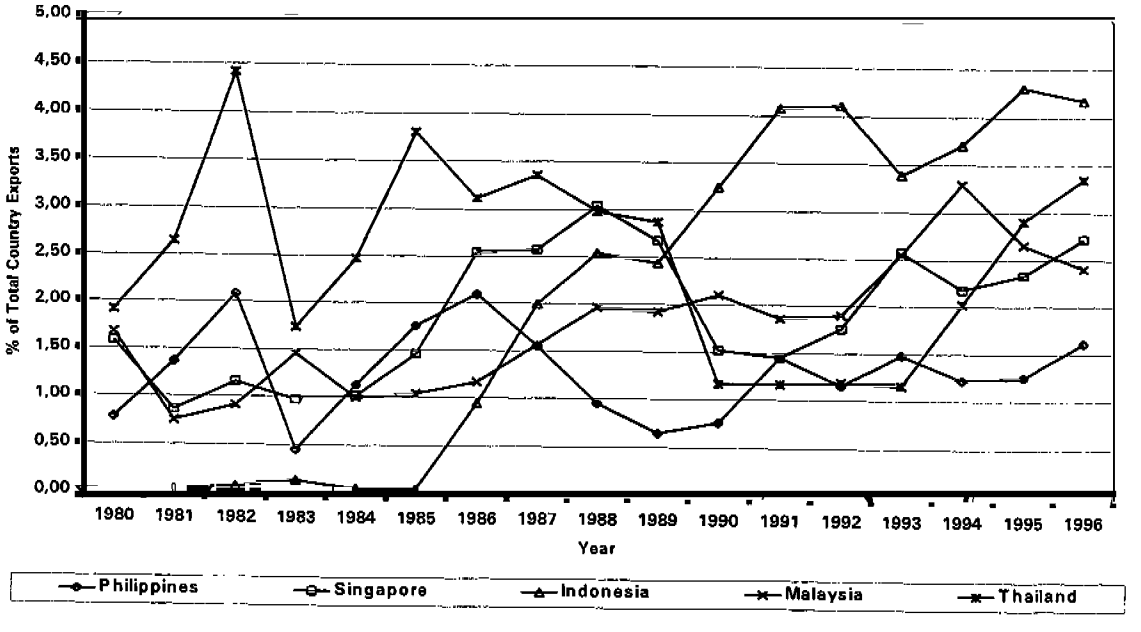


Figure 2C.
ASEAN-5 Country Export to China: Values as % of Total ASEAN Exports to China, 1980-1996.

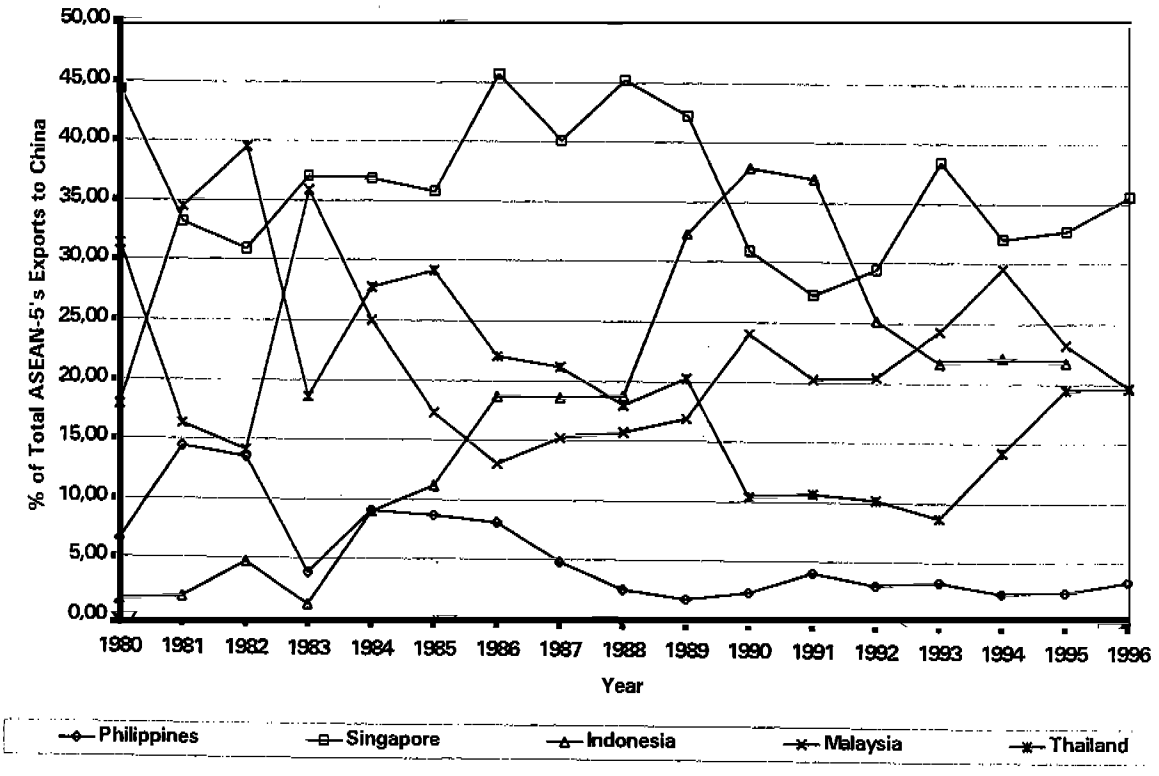


Figure 3A.
China's Exports to ASEAN-5 Countries: Values, 1980-1996.

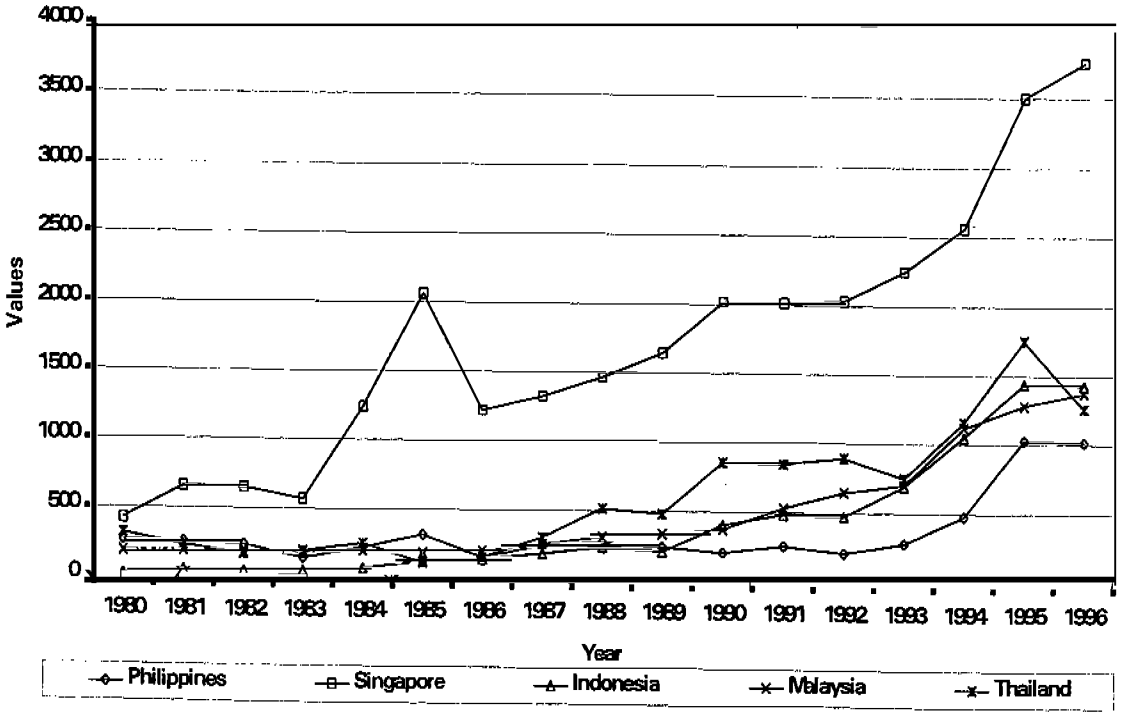


Figure 3B.
China's Exports to ASEAN-5 Countries: Values as % of Country Imports, 1980-1996.

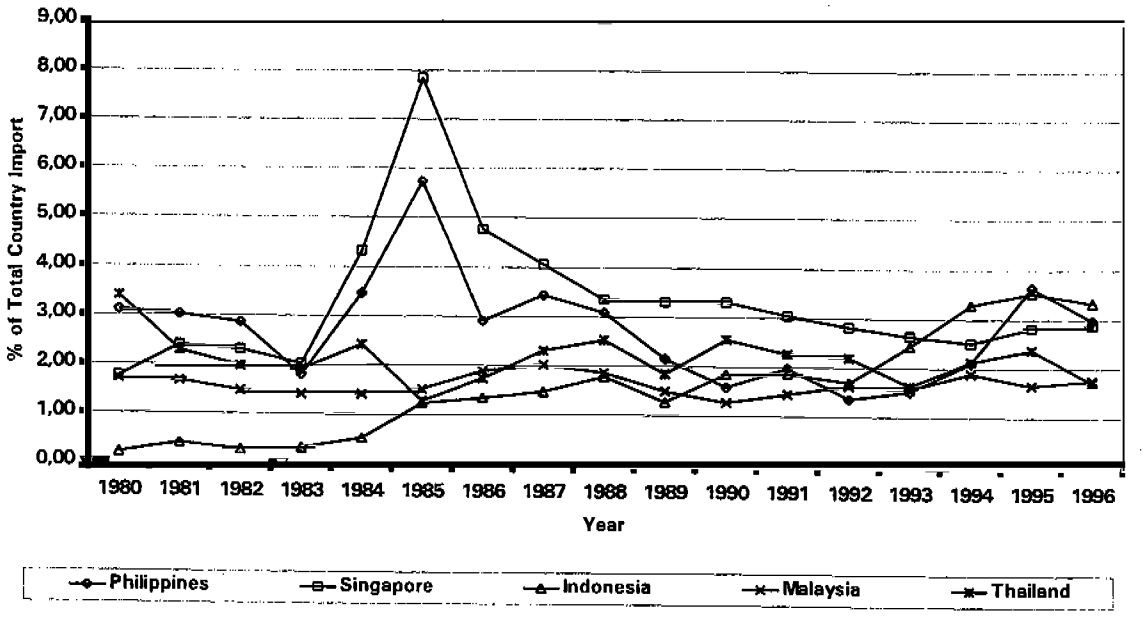
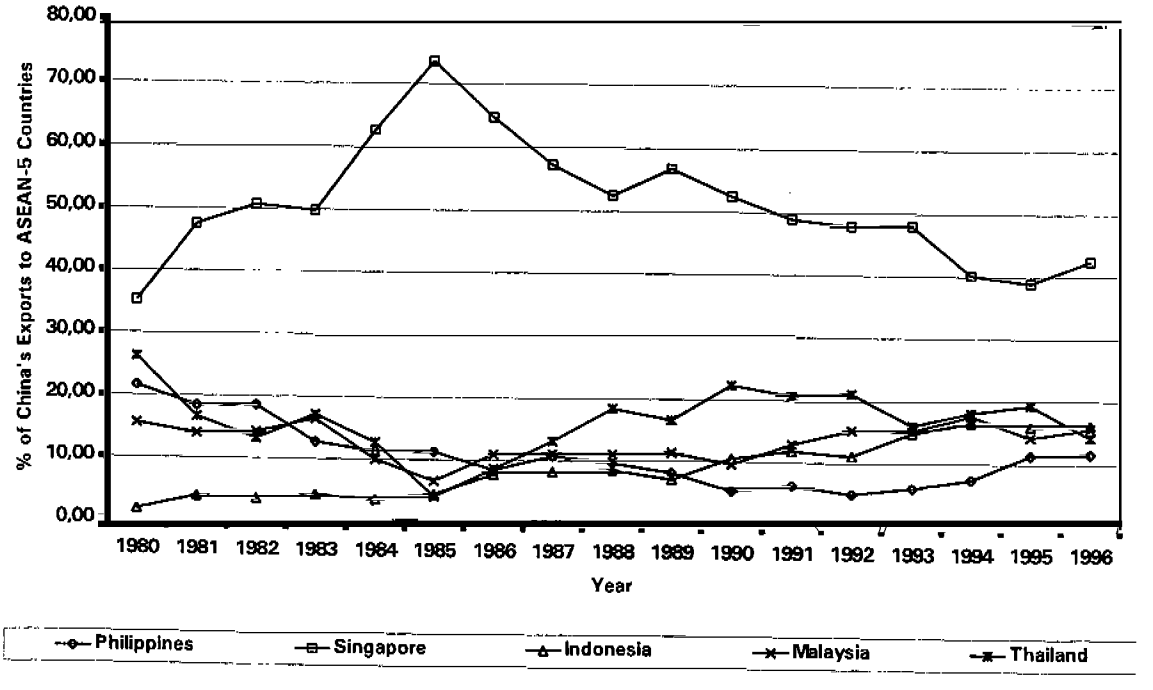


Figure 3C.
China's Export to ASEAN-5 Countries: Values as % of China's Exports to ASEAN-5.



Both Thailand and Malaysia have maintained relatively substantial trade shares and volumes with China. Volume-wise, Malaysia's trade with China has been on the rise rather steadily since 1982. On aggregate, during the last two decades, Malaysia's trade with China grew at about the same rate as its trade with the rest of the world (Table 15). For Thailand, on the other hand, both its export to and import with China had been quite erratic during the 17-year period. In more recent years, 1995 and 1996, its export volume grew significantly. In fact, excluding Indonesia, whose exports to China grew at fantastically high rate due to a very low base value for 1981, Thailand ranks first among the ASEAN-5 countries in terms of the growth rate of export to China during the period 1980-1996 (Table 16). Thailand's export to China grew at much higher rate than its total export. However, the growth of its import from China was less than its import from the rest of the world.

C. *Balance of Trade*

Table 18 shows the trade balance between China and the ASEAN-5 from 1980 to 1996. The balance of trade between China and the ASEAN-5 countries was in China's favor until the nineties. China started to experience trade deficit with the ASEAN-5 countries since 1992 (except for 1995), due to the substantial increase in import over export in its trade with Indonesia and Malaysia. From 1980 up to 1996, China's trade balance with the Philippines and Singapore had consistently been in China's favor.

In the case of Thailand, trade balance with China over the past one-and-a-half decades was less consistent. The volatility of trade balance between countries can perhaps be explained by the export similarity index between them. Table 19 shows the similarity indices for China's exports with each of the ASEAN-5 countries. The degree of export similarity is relatively higher between Thailand and China. Despite such similarity over the entire 17-year period, trade between the two countries was not sluggish but in fact, became more active in the latter part of the period. The high degree of export similarity, however, seems to make trade between them less predictable and consistent. The similarity trade indices with China for the other four countries are at relatively lower levels. This implies that these countries have greater degrees of complementarity with China and hence there was more consistency in the direction of their trade balance, whether positive or negative.

Table 18. Balance of Trade: China and ASEAN-5, 1980-1996. (In $US million)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
China																	
Export to ASEAN	1196	1386	1279	1140	1979	2803	1879	2312	2789	2898	3846	4124	4250	4673	6368	9001	8829
Import from ASEAN	693	539	776	575	659	930	1250	1835	2642	2840	2583	3151	3781	4955	6544	8445	9553
Balance of Trade	503	847	503	565	1320	1873	629	477	147	58	1263	973	469	-282	-176	556	-724
Philippines																	
Export to China	45	78	105	22	60	81	101	88	67	50	62	128	114	167	164	216	328
Import from China	258	255	236	143	223	314	157	245	268	239	205	253	209	281	476	1030	1015
Balance of Trade	-213	-177	-131	-121	-163	-233	-56	-157	-201	-189	-143	-125	-95	-114	-312	-814	-687
Singapore																	
Export to China	307	179	240	213	243	333	571	737	1193	1199	799	858	1113	1905	2098	2759	3394
Import from China	421	658	648	567	1239	2063	1217	1323	1464	1642	2016	2014	2031	2245	2563	3500	3753
Balance of Trade	-114	-479	-408	-354	-996	-1730	-646	-586	-271	-443	-1217	-1156	-918	-340	-465	-741	-359
Indonesia																	
Export to China	*a*	8	14	27	8	84	139	343	492	534	834	1191	1396	1249	1419	1866	2081
Import from China	21	54	46	49	70	124	143	188	236	208	401	481	471	693	1052	1438	1428
Balance of Trade		-46	-32	-22	-62	-40	-4	155	256	326	433	710	925	556	367	428	653
Malaysia																	
Export to China	217	88	110	206	165	161	163	279	415	481	619	639	772	1204	1933	1962	1882
Import from China	184	191	181	186	196	186	203	255	309	332	370	528	645	704	1118	1281	1374
Balance of Trade	33	-103	-71	20	-31	-25	-40	24	106	149	249	111	127	500	815	681	508
Thailand																	
Export to China	124	186	307	107	183	271	276	388	475	576	269	335	386	430	930	1642	1868
Import from China	312	228	168	195	251	116	159	301	512	477	854	848	894	750	1159	1752	1259
Balance of Trade	-188	-42	139	-88	-68	155	117	87	-37	99	-585	-513	-508	-320	-229	-110	609

a no data.

Source: International Monetery Fund, *Direction of Trade Statistics*, various issues.

Table 19. Export Similarity Indices: China and ASEAN-5, 1987, 1990, and 1995.

Country	1987	1990	1995
Philippines	0.66	0.58	0.54
Singapore	0.59	0.56	0.50
Indonesia	0.58	0.60	0.65
Malaysia	0.51	0.56	0.51
Thailand	0.73	*a*	0.72

a The similarity index for China and Thailand for 1987 could not be computed due to insufficient data.

Source of Data: United Nations, *International Trade Statistics,* New York, various issues.

VI. BILATERAL TRADE COMMODITY STRUCTURE

China's trade with the ASEAN-5 (except Singapore) has evolved from trade of primary products such as food and crude materials to trade in manufactured goods and machines and equipment from 1980 to 1996, reflecting the structural development of all six countries. In the case of Singapore, which also exports to China primary products-- rubber and petroleum, most of the major exports since 1980 have been machines and equipment. Basic manufactures and chemicals necessary for industrial activities have also dominated China's bilateral trade with the ASEAN-5 countries all through the period. Tables 20A to 20E present the top trade items (based on three-digit classification) of the trade between the ASEAN-5 countries and China for 1980, 1988, and 1996.

A. *The Philippines*

Mineral fuels in the form of crude petroleum, petroleum products, and coal dominated the Philippines' imports from China in the last couple of decades. Aside from mineral fuels and other primary products, other exports were chemicals and machines in 1980, basic manufactures in 1988, and machines and basic manufactures in 1996. In 1996, among the mineral fuels items, only crude petroleum was in the list of top ten China's exports to the Philippines list. Instead, mineral fuels in the form of natural gas constituted part of the Philippines' top exports to China in 1996.

Among the Philippines' top exports to China, vegetable oil continuously to be among the top ten for all three years. However, from the top position in 1980, it descended to the third in 1988 and the sixth in 1996. Food items, crude materials, and basic manufactures featured prominently in the Philippines' exports to China throughout the period. Fresh fruits and nuts have climbed up in position from 10 to 4

to 2. Other food items such as sugar and honey and meat and fish items are no longer in the 1996 list. Also disappearing from the list are crude materials which in 1980 included base metal ore concentrates, silver and platinum, and crude vegetable materials. No crude materials except for nonferrous base metal ore concentrates made it to the list in 1996. In 1988, chemicals in the form of fertilizers and plastic materials and basic manufactures like veneer plywood and structural parts were important exports by the Philippines to China. In recent years, due perhaps to its expanding industrial activities, China's demand for petroleum products and other primary raw materials has been on the increase. In 1996, the Philippines exported to China mineral fuels (gas and petroleum products), an item that ranked first in our imports from China two decades ago. In 1996, machines and equipment as an item were both imported and exported in 1996. Imports from China were non-electrical machines and telecommunication equipment while items exported to China were office and electrical machines.

B. *Singapore*

Singapore, being more developed than China but lacking in natural resources, traded mostly machines and equipment for China's primary exports in the last couple of decades. In 1980, China exported essentially food products, crude materials, petroleum products, and basic materials. In 1988, China and Singapore traded petroleum products. Other items which dominated the top ten list were basic manufactures for China's exports to Singapore and vegetable oils, chemicals, and machines for Singapore's exports to China. Food products declined in prominence in China's exports to Singapore. As in trade between the Philippines and China, by 1996, machines and equipment dominated the exports and imports of Singapore to and from China. In addition, other miscellaneous manufactured goods were exchanged between the two countries in 1996.

C. *Thailand*

In 1980, China's exports to Thailand consisted essentially of mineral fuels, machines, chemicals, and crude materials. In return, Thailand exported to China basic manufactures such as iron steel tubes and pipes, leather, and structural parts; as well as agricultural products like maize and rice, sugar, tobacco, and fresh and preserved vegetables. In 1988, China's exports consisted of more basic manufactures as well as crude materials while Thailand's exports to China consisted of mostly agricultural food products and basic manufactures. In 1996, dominating China's exports to Thailand were machines and basic manufactures. Thailand, on the other hand, continued to export rice, sugar, crude materials, and chemicals to China even as export of machines and equipment also took importance.

As has been mentioned, Thailand and China have very similar export profile in world trade. However, their bilateral trade structure shows that some diversity could be found within their similarities.

D. *Indonesia*

As noted earlier, trade between Indonesia and China did not start officially until 1985. There is no information on Indonesia's exports to China in 1980 in the

NAPES database. In 1980, top exports to Indonesia consisted of basic and other manufactures, machines, and chemicals. In 1988 and 1996, mineral fuels in crude petroleum and coal, coke, and briquette were exchanged between China and Indonesia. Other exchanges between the two countries were mostly in crude materials, basic manufactures and machines in 1988. However, in 1966, China exported more of machines and transport vehicles in exchange for basic manufactures such as plywood, paper products, and textile yarn and crude materials such as rubber and paper pulp. This reveals that, aside from the fact that the two countries have similar resources, China's industrial structure is more advanced compared to Indonesia's.

E. *Malaysia*

Malaysia's trade with China progressed from trade of crude materials and food items in 1980 to trade of basic manufactures and crude materials in 1988 and then to trade of machines and basic manufactures in 1996. Despite this general development, rubber and vegetable oil predominated its exports to China in all these years.

In 1980, exchanges between them were mostly primary products. China exported rice, fruits, vegetables, animal feed stuff, and spices to Malaysia while Malaysia exported rubber, wood, synthetic fiber, and wool to China. In addition, some basic manufactures were exchanged--paper products and woven cotton fabrics from China and aluminum and woven non-cotton textile from Malaysia. In 1988, food items from China declined in share. Instead there were more basic manufactures and chemicals traded for Malaysia's basic manufactures and machines. Trade in machines and transport vehicles between Malaysia and China increased in importance over the years.

Table 20A. Philippines-China Trade Commodity Structure, 1980, 1988, and 1996.

Rank	China's Top 10 Export Commodities to the Philippines 1980	1988	1996
1	331 CRUDE PETROLM ETC	321 COAL COKE BRIQ	122 TOBACCO MFRS
2	332 PETROLM PRODS	081 ANIMAL FEED STUFF	331 CRUDE PETROLM ETC
3	931 SPECL TRANSACTS	331 CRUDE PETROLM ETC	719 MACH NES NONELEC
4	512 ORGANIC CHEMICALS	652 COTTON FABRICS WOVEN	661 CEMENT ETC BLDG PROD
5	051 FRUIT FRSH NUTS FRSH DRY	671 PIG IRON ETC	652 COTTON FABRICS WOVEN
6	729 ELEC MACH NES	674 IRN STL UNIV PLATE SHEET	724 TELECOM EQPT
7	672 IRON STL PRIMARY FORMS	332 PETROLM PRODS	629 RUBBER ARTICLES NES
8	581 PLASTIC MATRLS ETC	653 WOVEN TEXTL NONCOT	221 OIL SEEDS NUTS KERNLS
9	514 OTHR INORGANIC CHEMLS	899 OTHER MANUFACT GOODS	722 ELEC PWR MACH SWITCH
10	715 METAL WORK MACH	263 COTTON	514 OTHR INORGANIC CHEMLS

Rank	The Philippines' Top 10 Export Commodities to China 1980	1988	1996
1	422 FIXED VEG OIL NONSOFT	561 FERTLZRS MANUFACT	341 GAS NAT MANUFACT
2	061 SUGAR HONEY	631 VENEERS PLYWOOD ETC	051 FRUIT FRSH NUTS FRSH DRY
3	283 NONFER BASE MTL ORE CONC	422 FIXED VEG OIL NONSOFT	682 COPPER
4	285 SILVER PLATINUM ORES	051 FRUIT FRSH NUTS FRSH DRY	714 OFFICE MACH
5	651 TEXTL YARN AND THREAD	581 PLASTIC MATRLS ETC	332 PETROLM PRODS
6	729 ELEC MACH NES	122 TOBACCO MFRS	422 FIXED VEG OIL NONSOFT
7	599 CHEMCLS NES	719 MACH NES NONELEC	283 NONFER BASE MTL ORE CONC
8	655 SPEC TEXTL ETC PROD	691 STRUCT PARTS NES	729 ELEC MACH NES
9	292 CRUDE VEG MATRLS NES	012 MEAT DRIED SALTD SMOKD	631 VENEERS PLYWOOD ETC
10	051 FRUIT FRSH NUTS FRSH DRY	031 FISH FRESH SIMPLY PRESVD	231 RUBBER CRUDE SYNTH

Source: NAPES Database.

Table 20B. Singapore-China Trade Commodity Structure, 1980, 1988, and 1996.

Rank	China's Top 10 Export Commodities to Singapore		
	1980	1988	1996
1	332 PETROLM PRODS	331 CRUDE PETROLM ETC	714 OFFICE MACH
2	656 TEXTL ETC PRODS NES	332 PETROLM PRODS	122 TOBACCO MFRS
3	653 WOVEN TEXTL NONCOT	081 ANIMAL FEED STUFF	724 TELECOM EQPT
4	652 COTTON FABRICS WOVEN	653 WOVEN TEXTL NONCOT	729 ELEC MACH NES
5	221 OIL SEEDS NUTS KERNLS	652 COTTON FABRICS WOVEN	722 ELEC PWR MACH SWITCH
6	055 VEG ETC PRSVD PREPD	283 NONFER BASE MTL ORE CONC	841 CLOTH NOT FUR
7	292 CRUDE VEG MATRLS NES	682 COPPER	653 WOVEN TEXTL NONCOT
8	051 FRUIT FRSH NUTS FRSH DRY	221 OIL SEEDS NUTS KERNLS	891 SOUND RECORDERS
9	054 VEG ETC FRSH SMPLY PRSVD	651 TEXTL YARN AND THREAD	897 GOLD SILVER JEWELRY
10	512 ORGANIC CHEMICALS	656 TEXTL ETC PRODS NES	652 COTTON FABRICS WOVEN

Rank	Singapore's Top 10 Export Commodities to China		
	1980	1988	1996
1	231 RUBBER CRUDE SYNTH	332 PETROLM PRODS	332 PETROLM PRODS
2	735 SHIPS BOATS	422 FIXED VEG OIL NONSOFT	714 OFFICE MACH
3	931 SPECL TRANSACTS	581 PLASTIC MATRLS ETC	729 ELEC MACH NES
4	724 TELECOM EQPT	231 RUBBER CRUDE SYNTH	719 MACH NES NONELEC
5	718 MACH FOR SPCL INDUST	724 TELECOM EQPT	581 PLASTIC MATRLS ETC
6	561 FERTLZRS MANUFACT	719 MACH NES NONELEC	722 ELEC PWR MACH SWITCH
7	631 VENEERS PLYWOOD ETC	729 ELEC MACH NES	724 TELECOM EQPT
8	673 IRON STEEL SHAPES	512 ORGANIC CHEMICALS	718 MACH FOR SPCL INDUST
9	729 ELEC MACH NES	732 ROAD MOTOR VEH	891 SOUND RECORDERS
10	733 ROAD VEH NONMTR	421 FIXED VEG OILS SOFT	599 CHEMCLS NES

Source: NAPES Database.

Table 20C. Indonesia-China Trade Commodity Structure,1980, 1988, and 1996.

Rank	China's Top 10 Export Commodities to Indonesia		
	1980	1988	1996
1	061 SUGAR HONEY	221 OIL SEEDS NUTS KERNLS	331 CRUDE PETROLM ETC
2	512 ORGANIC CHEMICALS	263 COTTON	719 MACH NES NONELEC
3	651 TEXTL YARN AND THREAD	081 ANIMAL FEED STUFF	514 OTHR INORGANIC CHEMLS
4	717 TEXTL LEATHER MACH	321 COAL COKE BRIQ	724 TELECOM EQPT
5	641 PAPER PAPERBRD	512 ORGANIC CHEMICALS	672 IRON STL PRIMARY FORMS
6	514 OTHR INORGANIC CHEMLS	671 PIG IRON ETC	711 POWER MACH NONELEC
7	581 PLASTIC MATRLS ETC	717 TEXTL LEATHER MACH	512 ORGANIC CHEMICALS
8	711 POWER MACH NONELEC	061 SUGAR HONEY	121 TOBACCO UNMFD
9	698 METAL MANUFACT NES	674 IRN STL UNIV PLATE SHEET	733 ROAD VEH NONMTR
10	899 OTHER MANUFACT GOODS	264 JUTE	054 VEG ETC FRSH SMPLY PRSVD

Rank	Indonesia's Top 10 Export Commodities to China	
	1988	1996
1	631 VENEERS PLYWOOD ETC	331 CRUDE PETROLM ETC
2	292 CRUDE VEG MATRLS NES	631 VENEERS PLYWOOD ETC
3	561 FERTLZRS MANUFACT	641 PAPER PAPERBRD
4	231 RUBBER CRUDE SYNTH	251 PULP WASTE PAPER
5	732 ROAD MOTOR VEH	422 FIXED VEG OIL NONSOFT
6	674 IRN STL UNIV PLATE SHEET	231 RUBBER CRUDE SYNTH
7	243 WOOD SHAPED	651 TEXTL YARN AND THREAD
8	331 CRUDE PETROLM ETC	581 PLASTIC MATRLS ETC
9	283 NONFER BASE MTL ORE CONC	243 WOOD SHAPED
10	051 FRUIT FRSH NUTS FRSH DRY	653 WOVEN TEXTL NONCOT

Source: NAPES Database.

Table 20D. Malaysia-China Trade Commodity Structure, 1980, 1988, and 1996.

	China's Top 10 Export Commodities to Malaysia		
Rank	**1980**	**1988**	**1996**
1	292 CRUDE VEG MATRLS NES	221 OIL SEEDS NUTS KERNLS	722 ELEC PWR MACH SWITCH
2	054 VEG ETC FRSH SMPLY PRSVD	081 ANIMAL FEED STUFF	891 SOUND RECORDERS
3	013 MEAT TINNED NES OR PREPD	321 COAL COKE BRIQ	719 MACH NES NONELEC
4	641 PAPER PAPERBRD	044 MAIZE UNMILL	729 ELEC MACH NES
5	042 RICE	652 COTTON FABRICS WOVEN	661 CEMENT ETC BLDG PROD
6	081 ANIMAL FEED STUFF	641 PAPER PAPERBRD	514 OTHR INORGANIC CHEMLS
7	051 FRUIT FRSH NUTS FRSH DRY	653 WOVEN TEXTL NONCOT	724 TELECOM EQPT
8	652 COTTON FABRICS WOVEN	541 MEDICL ETC PRODS	673 IRON STEEL SHAPES
9	075 SPICES	283 NONFER BASE MTL ORE CONC	652 COTTON FABRICS WOVEN
10	653 WOVEN TEXTL NONCOT	514 OTHR INORGANIC CHEMLS	715 METAL WORK MACH

	Malaysia's Top 10 Export Commodities to China		
Rank	**1980**	**1988**	**1996**
1	231 RUBBER CRUDE SYNTH	231 RUBBER CRUDE SYNTH	422 FIXED VEG OIL NONSOFT
2	242 WOOD ROUGH	242 WOOD ROUGH	631 VENEERS PLYWOOD ETC
3	422 FIXED VEG OIL NONSOFT	422 FIXED VEG OIL NONSOFT	729 ELEC MACH NES
4	266 SYNTH REGEN FIBRE	631 VENEERS PLYWOOD ETC	231 RUBBER CRUDE SYNTH
5	684 ALUMINIUM	732 ROAD MOTOR VEH	651 TEXTL YARN AND THREAD
6	332 PETROLM PRODS	652 COTTON FABRICS WOVEN	581 PLASTIC MATRLS ETC
7	243 WOOD SHAPED	331 CRUDE PETROLM ETC	719 MACH NES NONELEC
8	262 WOOL ANIMAL HAIR	243 WOOD SHAPED	714 OFFICE MACH
9	729 ELEC MACH NES	072 COCOA	242 WOOD ROUGH
10	653 WOVEN TEXTL NONCOT	719 MACH NES NONELEC	653 WOVEN TEXTL NONCOT

Source: NAPES Database.

Table 20E. Thailand-China Trade Commodity Structure, 1980, 1988, and 1996.

	China's Top 10 Export Commodities to Thailand		
Rank	**1980**	**1988**	**1996**
1	331 CRUDE PETROLM ETC	081 ANIMAL FEED STUFF	719 MACH NES NONELEC
2	332 PETROLM PRODS	674 IRN STL UNIV PLATE SHEET	653 WOVEN TEXTL NONCOT
3	061 SUGAR HONEY	651 TEXTL YARN AND THREAD	672 IRON STL PRIMARY FORMS
4	717 TEXTL LEATHER MACH	282 IRON STEEL SCRAP	673 IRON STEEL SHAPES
5	512 ORGANIC CHEMICALS	263 COTTON	671 PIG IRON ETC
6	264 JUTE	719 MACH NES NONELEC	512 ORGANIC CHEMICALS
7	292 CRUDE VEG MATRLS NES	671 PIG IRON ETC	724 TELECOM EQPT
8	581 PLASTIC MATRLS ETC	332 PETROLM PRODS	722 ELEC PWR MACH SWITCH
9	719 MACH NES NONELEC	211 HIDES SKINS UNDRSD	729 ELEC MACH NES
10	651 TEXTL YARN AND THREAD	653 WOVEN TEXTL NONCOT	513 INORG ELEMNTS OXIDES ETC

	Thailand's Top 10 Export Commodities to China		
Rank	**1980**	**1988**	**1996**
1	678 IRON STL TUBES PIPES ETC	061 SUGAR HONEY	231 RUBBER CRUDE SYNTH
2	231 RUBBER CRUDE SYNTH	231 RUBBER CRUDE SYNTH	042 RICE
3	044 MAIZE UNMILL	042 RICE	714 OFFICE MACH
4	061 SUGAR HONEY	655 SPEC TEXTL ETC PROD	061 SUGAR HONEY
5	054 VEG ETC FRSH SMPLY PRSVD	732 ROAD MOTOR VEH	581 PLASTIC MATRLS ETC
6	651 TEXTL YARN AND THREAD	631 VENEERS PLYWOOD ETC	512 ORGANIC CHEMICALS
7	121 TOBACCO UNMFD	719 MACH NES NONELEC	651 TEXTL YARN AND THREAD
8	042 RICE	581 PLASTIC MATRLS ETC	266 SYNTH REGEN FIBRE
9	611 LEATHR	081 ANIMAL FEED STUFF	719 MACH NES NONELEC
10	691 STRUCT PARTS NES	121 TOBACCO UNMFD	729 ELEC MACH NES

Source: NAPES Database.

VII. COMPARATIVE ADVANTAGE

A. *Concept and Measure*

Based on the principle of dynamic comparative advantage, it is expected that international division of labor constantly change in response to changes in the demand and supply factors of the commodities traded. Hence, a country's comparative advantage profile can change as a result of changes in resource and factor endowments, technology, cost of production, and consumption. Following this principle, in the last few decades, East Asian NIEs have gone through different stages of exports—from mainly resource-intensive to labor-intensive and on to capital-intensive products. Indeed the phenomenon of flying geese pattern is due to changes in comparative advantage of developing countries.

To measure comparative advantage, this study adopts Balassa's concept of revealed comparative advantage. A country's revealed comparative advantage in the trade of a product is measured by the product's share in the country's exports relative to its share in world trade.[4] It should be cautioned that such a measure is based on post-trade data, which means that the RCA indices are affected by distortions due to policies (Ariff 1987).

B. *Factor Intensity*

The revealed comparative advantage for broad commodity groups based on factor intensities of China and the ASEAN-5 countries are shown in Table 21. China, the Philippines, and Singapore have declined sharply their exports of agricultural-intensive commodities relative to the world's total. China, the Philippines, Indonesia, and Thailand have high and increasing revealed comparative advantage in labor-intensive products. High RCAs for capital intensive commodities are seen for Singapore, Malaysia, and the Philippines. By 1996, only Indonesia has comparative advantage in the production of mineral intensive goods.

It can also be inferred from Table 21 that China and the ASEAN-5 countries are following a similar growth strategy. Although in varying degrees, over time, the comparative advantage in agricultural exports for China and most of its Southeast Asian neighbors has been decreasing while the comparative advantage in labor-intensive exports has been increasing. These countries have all focused on promoting labor-intensive manufactured exports, making such industrialization the engine of their growth. The result is that these countries have become more similar in their export profile. This has been confirmed in our analysis of the commodity structure of bilateral trade between China and the ASEAN-5 countries. The commodities topping the exports of these bilateral exchanges are converging towards manufactured products. With focus on industrialization, these countries are moving away from agricultural production to manufacturing activities. Most countries have developed comparative advantage in the export of machines and basic manufactures.

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[4] $RCA_{ij} = (x_{ij}/X_{ij}) / (X_{iw}/X_{tw})$ where xij refers to the product *j* exported by country *i*, and X_{ij} the country's total exports while *w* subscripts refer to world totals.

Table 21. Revealed Comparative Advantage: By Factor Intensity Groups, China and ASEAN-5, Selected Years.

	China				Philippines				Singapore			
	1970	*1980*	*1990*	*1996*	*1970*	*1980*	*1990*	*1996*	*1970*	*1980*	*1990*	*1996*
Agriculture Intensive	23.1	16.8	12.5	0.9	33.5	28.9	17.2	1.0	20.9	12.6	0.62	0.37
Capital Intensive	0.3	0.4	0.5	0.6	0.0	0.1	0.3	10.5	0.38	0.86	11.1	13.1
Labour Intensive	25.2	33.5	31.6	36.0	0.1	12.7	14.4	16.8	0.72	0.9	0.65	0.4
Minerals Intensive	0.3	0.9	0.8	0.6	12.3	0.7	0.7	0.4	13.5	0.92	12.4	0.75

	Indonesia				Malaysia				Thailand			
	1970	*1980*	*1990*	*1996*	*1970*	*1980*	*1990*	*1996*	*1970*	*1980*	*1985*	*1996*
Agriculture Intensive	24.8	14.2	21.1	21.4	29.2	30.6	20.1	13.5	35.1	38	39	20.5
Capital Intensive	0.01	0.02	0.11	0.32	0.07	0.32	0.73	10.6	0.02	0.23	0.29	0.88
Labour Intensive	0.02	0.08	13.4	18.7	0.08	0.36	0.79	0.74	0.14	12.6	17	13.6
Minerals Intensive	23.8	24.7	30.7	24.1	16.2	11.4	13.4	0.75	0.89	0.54	0.41	0.32

Source: NAPES Database.

Another confirmation of this similar export profile phenomenon is the increase in the degree of correlation of these countries' revealed comparative advantage indices. Table 22 shows that, based on the RCAs of the three-digit classification categories for 1987, 1990, and 1995, the rank correlation coefficients between China's and the ASEAN-5's RCAs have generally increased over the years. In 1995, except for Singapore, which is scarce in labor, the correlation of the comparative advantage indices for all the other ASEAN countries with China is found to be positive and significant. For all the ASEAN countries, the degree of correlation of their exports with China's has increased over time, except for the decline in 1990 for the Philippines and Singapore.

Table 22. Spearman Correlation Coefficients between China's Revealed Comparative Advantage Indices and Those of ASEAN-5: 1987, 1990, 1995.

ASEAN Countries	*Spearman's Rank Correlation Coefficient*		
	China 1987	**China 1990**	**China 1995**
Philippines	**0.17***	0.09	**0.27****
Singapore	0.05	-0.06	0.12
Indonesia	**0.19***	**0.26****	**0.38****
Malaysia	0.03	0.08	**0.20****
Thailand	**0.33****	**0.41****	**0.45****

* *Statistically significant at 0.05 level*
** *Statistically significant at 0.01 level*
Source of data: RCAs data from NAPES.

C. Trade Niches

Despite the growing similarity in trade profile of the ASEAN-5 and China, bilateral trade between China and these ASEAN countries, as has been discussed earlier, has grown rather impressively over the last couple of decades. The growth has in fact been more significant for Thailand and Indonesia, whose export profiles are most similar to that of China. Growth is in particular most spectacular for Thailand's exports to China, which grew at 17 percent for the period 1980-1996 and, in the nineties, grew at an average of more than 30 percent per year. It is evident here that even in situations where resource endowment and industrial structure are similar, trade opportunities do exist and specialization can take place. Identifying and concentrating on the trade niches and opportunities are needed to sustain trade activities.

A comparison of the RCA indices of China and the ASEAN-5 countries based on the three-digit classifications shows the general categories for trade between them.

Based on the 1995 list, the following are commodities which China has comparative advantage over *all* the ASEAN-5 countries.

0 Food and Live Animals
Dried Fruits

1 Beverage and Tobacco
Nonalcoholic beverages

2 Crude Materials
Oil seed nuts kernels
Silk
Wool
Fertilizers (crude)
Other crude minerals
Crude animal matter

3 Mineral Fuels, etc.
Electric energy

5 Chemicals Related Products
Inorganic chemicals
Inorganic Synthetic dyes
Radioactive materials
Explosives pyrotech products

6 Basic Manufactures
Fur skins
Cotton fabrics
Other textile products
Floor covering, tapestry, etc.
Cement, building products
Pottery
Iron and steel
Pig iron, etc.
Lead
Wire products
Tools and cutlery
Base metal household eqpt.
Other metal manufactures

7 Machine Transport and Eqpt.
Electric power machine switch
Domestic electrical eqpt
Railway vehicles
Nonmotorized road vehicles

8 Miscellaneous Mfd Goods
Plumbing, heat, light eqpt.
Travel goods, handbags
Clothes and fur products
Footwear
Articles of plastics
Office supplies
Toys, sporting goods, etc.
Gold, silverware, jewelry

The categories of commodities in the above list are those which China's comparative advantage index is higher in value than that of any of the ASEAN-5 countries. Indeed China has many products the world can buy from. For trade possibilities specific to a bilateral trade (between China and one of the ASEAN-5), this study identifies as export niches those categories where the RCAs of the country is greater than one and is significantly higher than China's. It identifies as import niches, aside from those listed above, those categories where the RCAs of China is greater than one and much higher than that of the country. These are summarized below.

	EXPORT NICHES	IMPORT NICHES
Philippines	Fresh fruits and dried or fresh nuts Shellfish and fish (fresh and tinned) Preserved fruits Sugar and honey Animal feed stuff Tobacco (unmanufactured) Fuel wood charcoal* Vegetable fiber (excl. Cotton jute)* Iron ore concentrate Nonferrous base metal ore conc. Nonferrous metal scrap Silver, platinum ores Fixed vegetable oil nonsoft Processed animal/vegetable oil Copper Office machines Electrical distribution machines Electrical machines Telecom equipment Furniture Developed cinema film	Live animals Meat (tinned) Eggs Vegetables (fresh and preserved) Tea Spices Tobacco manufactures Natural abrasives Coal, coke briquettes Leather (mfd) Textile yarn and thread Textile fabrics Zinc Tin Electric power machine switch Footwear Articles of plastics Gold, silverware, jewelry
Singapore	Cocoa Spices Margarine, shortening Tobacco (manufactured) Rubber Waste textile products Natural abrasives Refined petroleum Processed animal/vegetable oil, etc. Silver, platinum Office machines TV receivers Telecom equipment Electrical machinery Photo cinema supplies Sound recorders Printed matters	Live animals Meat (tinned) Fish and shellfish Dried and preserved fruits Fresh and preserved vegetables Tea Oil seeds, nut kernels Fuel wood, charcoal Silk Wool Jute Vegetable fiber, excl cotton/jute Crude vegetable materials Leather manufactures Wood manufactures Woven textile noncotton Furniture Garments and clothing items Articles of plastics Gold and silver jewelry Zoo animals, pets

Indonesia	Fish and shell fish Sugar preparations Coffee Cocoa Spices Crude rubber Fuel wood, charcoal Wood Pulp waste paper Synthetic fiber & fabric Stone, sand, grave Non-ferrous base metal ore conc. Coal, coke briquette Petroleum, crude and refined Gas Fixed vegetable oil nonsoft Processed animal & vegetable oil Soaps Fertilizers, manufactured Veneers, plywood, etc. Wood manufactures Paper Glassware Tin Furniture	Live animals Meat, tinned Vegetables, fresh & preserved Tobacco manufactures Vegetable fibers Lime, cement building products Leather manufactures Zinc Telecom eqpt parts, TV receivers Watches, clocks Gold & silver jewelry Articles of plastics
Malaysia	Cocoa Margarine, shortening Crude rubber Wood Uranium, thorium ore conc. Gas Fixed vegetable oils nonsoft Processed animal & vegetable oil Materials of rubber Veneers, plywood, etc. Non-metal mineral manufactures Tin Automatic data processing ADP machine parts and accessories TV receivers Radio receivers Sound recorders, phonographs Telecom equipment parts Electrical machines Aircraft, etc.	Meat, tinned Fish and shellfish Vegetables, fresh & preserved Tea Spices Tobacco manufactures Vegetable fibers, incl jute Natural abrasives Leather manufactures Textile yarn & thread Woven textile & fabric Textile products Zinc Garments and clothing Watches and clocks Gold & silver jewelry Zoo animals, pets

Thailand	Shellfish and fish Rice Non-wheat meal flour Fruits and vegetables Sugar and honey Coffee Crude rubber Synthetic fibers Stone, sand, gravel Pigment paints, etc. Leather & leather manufactures Rubber articles Pearls and precious stones Office machines Automatic data processing TV receivers Electrical distribution equipment Electrical machines Plastics Gold & silver jewelry	Live animals Tea Spices Tobacco manufactures Fuel wood, charcoals Vegetable fibers, excl cotn &jute Natural abrasives Crude vegetable materials Zinc Tin Electrical distribution mach Electrical machines Zoo animals, pets

To some extent, complementarity in primary products continues to exist between the ASEAN-5 countries and China. The geographical conditions and natural environment are not similar for all countries. China's demand for imports of agricultural products is also increasing as it focuses on industrialization, which has extended to the rural areas. Food and industrial raw materials now constitute a substantial part of China's imports. This dependence on imported agricultural and other primary products such as minerals and non-coal energy is expected to rise in the future as manufacturing takes center stage in China's production structure.

More trade possibilities can perhaps be identified by examining the items in the four and five-digit classifications. Items under categories which as a whole do not reveal trade opportunities may be beneficial trade niches. Moreover, as China and the ASEAN countries follow the same growth strategy and converge to a similar industrial structure, intra-industry trade possibilities and specialization are the order of the time.

D. *Changes in China's Revealed Comparative Advantage*

As the trade structure of an economy matures, the range of its RCA indices narrows. Data on China's RCAs over time show that this is true for its export commodities. This means more diversification of exports, which has come about as a result of industrialization. (This is also true for the ASEAN-5 countries.)

The impact of China's market-oriented reforms on the trade sector is very evident. With trade liberalization policies and institutional changes, the demand for economic efficiency has gradually moved its trade pattern towards conforming to its resource structure. Increasingly exports and imports are responses to price signals in both the domestic and international markets. China now produces for its exports those products in which it has higher comparative advantage. This has been found in a study

(Zhang 1996, cited in East Asia Analytical Unit 1997) which compares the domestic resource productivity and the net export performance ratio of China's exports.[5] The study shows that China's trade commodity structure is closely correlated with its international comparative advantage and that this correlation has improved over the last couple of decades.

Changes in trade structure over time are due to the adjustment of exports and imports to the changing comparative advantage situation the country faces. In the case of China, the dynamic transformation in its competitive advantage profile has been due to the development in its economic structure as well as the trade liberalization approach undertaken by China and most of its trading partners. Over the last couple of decades, China experienced sharp decline in the revealed comparative advantage indices for agricultural and mineral intensive products while those for labor intensive products have increased significantly. There has also been a slight increase in the comparative advantage for capital intensive products (Song 1997).

VIII. BILATERAL TRADE AND DIRECT INVESTMENTS IN CHINA

This paper has discussed how direct foreign investments have contributed to China's exports. Direct investment in China is mostly in the manufacturing sector. The investing countries can expect more export to China for the operations of their companies. Natural resources, machinery, equipment, and other supplies are usually from the investing countries.

In Table 2.3 we show the direct investment values of the five ASEAN countries in China for 1993 and 1996. Singapore invested the most in both years. Malaysia and Thailand are next in rank while the Philippines and Thailand, whose investments were about the same amount, invested the least.

A simple exercise based on the five ASEAN countries is done to test the correlation between a country's direct investment in China and its export level for the period 1993 to 1996. It found strong correlation between investment in China and export to China. The Pearson coefficient and Spearman rank correlation coefficient are 0.902 and 0.900 respectively. It seems that the relatively high investment of Thailand in China in the nineties can to some extent explain the surge in export to China during those years. It is expected that China's exports to the different ASEAN-5 countries can partly be explained by its investment in them.

[5] Domestic resource productivity, DRP, is the amount of foreign exchange earned for a dollar of domestic resources employed while net export performance ratio, NEPR, is the contribution of a country's net exports of a commodity to total world exports of that commodity, compared with the country's contribution to world trade.

Table 23. ASEAN-5's Investments in China: 1993 and 1996. (In $US million)

	1993	1996	*SUM*
Philippines	122	56	*178*
Singapore	492	2247	*2739*
Indonesia	66	94	*160*
Malaysia	91	460	*551*
Thailand	234	328	*562*

Source: *China Statistical Yearbook*, 1998.

IX. CHINA AFTER THE ASIAN ECONOMIC CRISIS

China has been fortunate to be spared from being hit directly by the Asian economic crisis which devastated the Southeast Asian economies. Although China's financial and banking systems are also weak and vulnerable, its nonconvertibility of the *renminbi*, good macroeconomic policies, and strong reserve position have buffered its economy from the ill effects of the crisis. The Asian crisis in turn offered China many valuable lessons. China is now more aware of the danger of combining a fixed-exchange-rate policy with a weak banking system is a context of convertible until the banking system's bad debts have been eliminated and bank supervision strengthened. China realized from the experience of its neighbors that it has to focus on reforms to correct its institutional and structural weaknesses. It becomes more aware of the need to address the monstrous problem of state-owned enterprises (SOEs), difficult and delicate as the problem may be. These reforms will improve its efficiency and productive capability. Lastly, with a relatively higher exchange rate compared to the other Asian countries directly affected by the crisis, China has been pressured to develop non-price strategies to make its products more competitive.

Therefore the Asian economic crisis should have its effect on China's competitiveness. Given the lessons provided by the crisis, we can expect that China will have undertaken financial and institutional reforms when the Asian economies have recovered from the crisis. With regard to its products, it will have sharpened its competitiveness based on non-price aspects, e.g., innovativeness, packaging, etc. The crisis will definitely improve China's economic stability, efficiency, and productive capability.

However, with respect to its currency, the *renminbi*, there are pressures for China to devalue it. There is pressure to print more money due to the liabilities posed by state firms bankruptcies and insolvency of banks.[6] The pressure coming from the external sector is also strong as China's trade surplus is decreasing. This pressure will be even stronger when China joins the WTO and Chinese companies will face more competition with reduced import tariffs.

[6] Ninety percent of all mainland banking system are state-owned companies.

X. SUMMARY AND CONCLUSIONS

China's external trade volume and structure have changed tremendously since China opened up and undertook economic reform in 1978. These changes are due to the reforms which liberalize trade and give more autonomy to the enterprises. The rapid flow of foreign direct investments also contributes significantly to China's export boom. The ensuing economic prosperity and change in industrial structure have had impact on import demands and will continue to do so.

China's open-door policy has stimulated merchandise trade between China and all the ASEAN-5 countries. These countries registered very rapid growth in their trade with China as well as with the rest of the in the last couple of decades. However, exports to China for each of the ASEAN-5 countries have grown faster than the country's total exports. Complementarity exists only between China and Singapore, due to the difference in their level of economic development and the difference in factor availability, particularly labor. China's export profile is highly similar to Thailand's and Indonesia's. It is also similar to those of the Philippines and Malaysia, although to a lesser extent.

Despite the similarity, China's bilateral trade with Thailand and Indonesia has increased most rapidly among the ASEAN-5 since 1980. Trade between China and these ASEAN countries is not just based on complementarity of broad product categories classified according to factor intensity, but also on complementarities within categories of products. Diversification of export items through intra-industry division of labor as well as identification of niche products can provide bilateral trade opportunities. In this respect, mutual coordination and joint research to identify niches are needed to help promote trade efficiency and expansion.

The trade structure of China and countries in the Southeast Asian region is changing rapidly. The share of manufactured goods within total exports has grown substantially for these industrializing countries. They have all utilized their low-cost labor comparative advantage in manufactured exports. Moreover, in manufacturing, complementarities have been exploited in intra-industry or horizontal division of labor between China and the ASEAN countries. In mid-nineties, different classifications of machines, transport, and equipment are major items being traded between China and all of the ASEAN countries except Indonesia. This concentration of exports in the same sector for China and most of the ASEAN countries has not stunted trade between them. Instead, this kind of trade was accompanied by higher trade volume and growth rate.

This study also provides some evidence that economic cooperation in the form of direct investment stimulates and promotes cooperation in trade.

As mentioned at the beginning of this paper, this study does not look at the competition for the world market between China and some of the ASEAN countries. Such competition is expectedly more keen among countries with similar resource endowment and production structure. The conclusion from this study on trade between similar countries can be extended to cover their competition for markets. The cooperation between China and the ASEAN countries in their trade with each other, which is based on horizontal division of labor, can also apply to their trade with other countries.

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Appendix 1. Revealed Comparative Advantage Indices of China and Asean-5: One-Digit Classification, 1995.

	CH	PH	SI	IN	MA	TH
001 LIVE ANIMALS	*1.52*	0.00	0.02	0.18	*1.42*	0.06
011 MEAT FRSH CHILLD FROZN	0.83	0.00	0.03	0.09	0.03	0.89
012 MEAT DRIED SALTD SMOKD	0.26	0.00	0.02	0.01	0.07	0.02
013 MEAT TINNED NES OR PREPD	*1.84*	0.03	0.07	0.05	0.09	*2.00*
022 MILK CREAM	0.06	0.00	0.25	0.05	0.29	0.20
023 BUTTER	0.00	0.00	0.13	0.00	0.01	0.00
024 CHEESE CURD	0.00	0.01	0.01	0.00	0.00	0.00
025 EGGS	*1.13*	0.07	0.99	0.83	*1.87*	0.63
031 FISH FRESH SIMPLY PRESVD	*1.66*	*2.49*	0.55	*4.13*	0.35	*6.06*
032 FISH ETC TINNED PREPARED	*2.85*	*5.45*	0.19	*1.16*	0.83	*15.20*
041 WHEAT ETC UNMILL	0.00	0.00	0.00	0.00	0.00	0.00
042 RICE	0.08	0.04	0.01	0.00	0.01	*25.13*
043 BARLEY UNMILL	0.00	0.00	0.00	0.00	0.00	0.00
044 MAIZE UNMILL	0.04	0.03	0.03	0.11	0.01	0.17
045 CEREALS NES UNMILL	0.85	0.00	0.00	0.01	0.01	0.28
046 WHEAT ETC MEAL OR FLOUR	0.73	0.00	0.48	0.00	0.62	0.22
047 MEAL FLOUR NONWHEAT	0.47	0.03	0.10	0.89	0.23	*10.50*
048 CEREAL ETC PREPS	0.44	0.38	0.50	0.29	0.82	0.71
051 FRUIT FRSH NUTS FRSH DRY	0.46	*6.54*	0.24	0.29	0.24	0.43
052 DRIED FRUIT	*1.68*	0.11	0.34	0.17	0.02	0.67
053 FRUIT PRSRVD PREPD	*1.15*	*5.85*	0.30	0.59	0.24	*3.97*
054 VEG ETC FRESH SMPLY PRSVD	*1.85*	0.45	0.18	0.49	0.11	*1.94*
055 VEG ETC PRSVD PREPD	*5.54*	0.30	0.25	0.77	0.22	*3.41*
061 SUGAR HONEY	0.65	*1.53*	0.05	0.26	0.22	*7.40*
062 SUGAR PREPS NONCHOC	0.29	0.70	0.23	*1.16*	0.51	0.87
071 COFFEE	0.02	0.21	0.72	*4.07*	0.07	*1.01*
072 COCOA	0.21	0.97	*1.38*	*6.21*	*2.87*	0.18
073 CHOC AND PRODS	0.04	0.04	0.28	0.10	0.19	0.03
074 TEA MATE	*4.49*	0.00	0.47	*4.70*	0.04	0.04
075 SPICES	*3.36*	0.08	*4.97*	*14.09*	*1.58*	0.54
081 ANIMAL FEED STUFF	0.55	*1.15*	0.16	0.73	0.41	0.98
091 MARG SHORTNG	0.02	0.10	*1.26*	0.35	*3.52*	0.01
099 FOOD PREPS NES	0.47	0.49	0.49	0.07	0.32	*1.35*
111 NONALC BEVRGS NES	*1.68*	0.16	0.80	0.18	0.46	*1.38*
112 ALC BEVRGS	0.17	0.12	0.78	0.00	0.14	0.05
121 TOBACCO UNMFD	0.64	*1.49*	0.06	*1.30*	0.00	0.96
122 TOBACCO MFRS	*1.70*	0.39	*2.38*	0.78	0.26	0.01
211 HIDES SKINS UNDRSD	0.28	0.01	0.11	0.00	0.02	0.05
212 FUR SKINS UNDRSD	0.10	0.00	0.00	0.00	0.00	0.00
221 OIL SEEDS NUTS KERNLS	*1.33*	0.33	0.14	0.09	0.05	0.07
231 RUBBER CRUDE SYNTH	0.11	0.79	*2.10*	*15.49*	*7.85*	*15.64*
241 FUEL WOOD CHARCOAL	*1.24*	*6.14*	0.82	*7.82*	*1.39*	0.50
242 WOOD ROUGH	0.15	0.04	0.07	0.00	*5.89*	0.01
243 WOOD SHAPED	0.29	0.45	0.25	*1.28*	*4.58*	0.29

244 CORK RAW AND WASTE	0.22	0.00	0.01	0.03	0.00	0.01
251 PULP WASTE PAPER	0.03	0.32	0.10	***1.95***	0.03	0.24
261 SILK	***24.89***	0.07	***1.08***	0.01	0.09	0.81
262 WOOL ANIMAL HAIR	***1.26***	0.00	0.00	0.01	0.54	0.64
263 COTTON	0.15	0.01	0.08	0.18	0.07	0.05
264 JUTE	***1.21***	0.11	0.03	0.11	0.35	***1.34***
265 VEG FIBRE EXCL COTN JUTE	***1.13***	***14.14***	0.04	0.14	0.03	0.23
266 SYNTH REGEN FIBRE	0.14	0.18	0.05	***1.08***	0.40	***1.92***
267 WASTE TEXTL FABRICS	0.16	0.64	***1.87***	0.02	0.70	0.05
271 FERTLZRS CRUDE	***1.12***	0.03	0.03	0.26	0.13	0.00
273 STONE SAND GRAVEL	0.97	0.85	0.15	***2.44***	0.63	***2.39***
274 SULPHUR ETC	0.05	0.00	0.22	0.00	0.00	0.01
275 NAT ABRASIVS	***1.22***	0.06	***2.01***	0.81	0.01	0.43
276 OTHER CRUDE MINRLS	***3.57***	0.52	0.11	0.33	0.12	0.41
281 IRON ORE CONC	0.00	***5.43***	0.00	0.00	0.00	0.00
282 IRON STEEL SCRAP	0.07	0.22	0.34	0.12	0.07	0.58
283 NONFER BASE MTL ORE CONC	0.18	***4.17***	0.06	***12.64***	0.35	0.06
284 NONFER METAL SCRAP	0.19	***1.39***	0.85	0.05	0.44	0.24
285 SILVER PLATINUM ORES	0.00	***6.74***	0.01	0.01	0.07	0.19
286 URANIUM THORIUM ORE CONC	0.22		0.77		***3.54***	
291 CRUDE ANIMAL MATTER NES	***6.10***	0.54	0.15	0.22	0.10	0.68
292 CRUDE VEG MATRLS NES	***1.44***	***1.65***	0.53	0.46	0.13	0.54
321 COAL COKE BRIQ	***2.39***	0.00	0.01	***4.83***	0.01	0.00
331 CRUDE PETROLM ETC	0.39	0.02	0.00	***2.93***	0.94	0.00
332 PETROLM PRODS	0.35	0.33	***3.51***	***1.50***	0.70	0.23
341 GAS NAT MANUFACT	0.01	0.82	0.17	***12.16***	***2.77***	0.37
351 ELEC ENERGY	***1.69***			0.00		0.00
411 ANIMAL OILS FATS	0.03	0.02	0.04	0.05	0.01	0.04
421 FIXED VEG OILS SOFT	0.58	0.01	0.31	0.06	0.66	0.00
422 FIXED VEG OIL NONSOFT	0.96	***23.88***	0.57	***13.64***	***31.10***	0.11
431 PROCESD ANML VEG OIL ETC	0.09	***2.84***	***2.68***	***7.65***	***15.03***	0.22
512 ORGANIC CHEMICALS	0.68	0.13	0.88	0.48	0.30	0.19
513 INORG ELEMNTS OXIDES ETC	***1.74***	0.09	0.24	0.36	0.10	0.20
514 OTHR INORGANIC CHEMLS	***2.83***	0.17	0.32	0.13	0.05	0.15
515 RADACTVE ETC MATRL	***1.47***	0.00	0.02	0.00	0.00	0.00
521 COAL PETROLEUM ETC CHEMS	0.24	0.23	***1.07***	0.01	0.01	0.05
531 SYNT DYE NAT INDGO LAKES	***1.60***	0.02	0.61	0.31	0.02	0.39
532 DYES NES TANNING PRODS	0.37	0.06	0.40	0.74	0.01	0.46
533 PIGMENTS PAINTS ETC	0.43	0.09	0.84	0.06	0.45	***1.88***
541 MEDICL ETC PRODS	0.72	0.05	0.34	0.06	0.07	0.15
551 ESSENTL OIL PERFUME ETC	0.74	0.12	0.73	0.71	0.02	0.31
553 PERFUME COSMETICS ETC	0.24	0.09	0.87	0.25	0.18	0.34
554 SOAPS CLEANING ETC PREPS	0.35	0.23	0.51	***1.03***	0.83	0.41
561 FERTLZRS MANUFACT	0.24	0.42	0.03	***1.65***	0.44	0.02
571 EXPLSVS PYROTECH PROD	***3.64***	0.48	0.16	0.05	0.11	0.04
581 PLASTIC MATRLS ETC	0.24	0.14	0.63	0.31	0.34	0.59
599 CHEMCLS NES	0.43	0.26	0.74	0.17	0.74	0.59

611 LEATHR	0.80	0.20	0.24	0.33	0.20	***1.64***
612 LEATHR ETC MANUFACT	***2.86***	0.44	0.07	***1.11***	0.11	***3.16***
613 FUR SKINS TAN DRSD	***2.45***	0.03	0.01	0.07	0.00	0.04
621 MATRLS OF RUBBER	0.35	0.03	0.35	0.46	***2.15***	0.82
629 RUBBER ARTICLES NES	0.63	0.20	0.37	0.69	0.37	***1.00***
631 VENEERS PLYWOOD ETC	0.49	0.21	0.34	***24.22***	***6.56***	0.26
632 WOOD MANUFACT NES	***2.03***	***2.01***	0.25	***6.56***	***1.05***	***1.66***
633 CORK MANUFACT	0.10	0.02	0.03	0.01	0.00	0.00
641 PAPER PAPERBRD	0.16	0.05	0.20	***1.09***	0.17	0.16
642 ARTCLS OF PAPER ETC	0.80	0.54	0.40	0.73	0.51	0.76
651 TEXTL YARN AND THREAD	***2.17***	0.32	0.35	***2.76***	***1.03***	***1.40***
652 COTTON FABRICS WOVEN	***5.69***	0.08	0.35	***1.75***	0.45	***1.17***
653 WOVEN TEXTL NONCOT	***2.78***	0.19	0.64	***2.46***	0.51	***1.11***
654 LACE RIBBONS TULLE ETC	***1.75***	0.50	0.39	***1.28***	0.13	***1.43***
655 SPEC TEXTL ETC PROD	0.79	0.39	0.23	0.60	0.12	0.78
656 TEXTL ETC PRODS NES	***7.02***	***1.49***	0.21	***1.53***	0.19	***1.39***
657 FLOOR COVR TAPESTRY ETC	***2.60***	0.23	0.13	0.51	0.10	0.35
661 CEMENT ETC BLDG PROD	***2.81***	0.34	0.27	0.26	0.18	***1.35***
662 CLAY REFRAC BLDG PRD	0.45	0.03	0.15	0.15	0.44	0.41
663 OTH NONMET MINERAL MFS	0.51	0.29	0.17	0.28	***1.19***	0.52
664 GLASS	0.88	0.45	0.62	0.60	0.50	0.85
665 GLASSWARE	0.79	0.30	0.60	***1.16***	0.37	0.42
666 POTTERY	***6.39***	***3.42***	0.11	***1.39***	0.84	***2.84***
667 PEARL PREC SEMI-P STONE	0.42	0.15	0.15	0.03	0.17	***2.61***
671 PIG IRON ETC	***5.66***	0.71	0.05	0.82	0.84	0.02
672 IRON STL PRIMARY FORMS	***1.83***	0.00	0.06	0.55	0.02	0.18
673 IRON STEEL SHAPES	0.44	0.01	0.33	0.16	0.16	0.25
674 IRN STL UNIV PLATE SHEET	0.45	0.05	0.23	0.14	0.12	0.09
675 IRON STEEL HOOP STRIP	.	.	.	.	.	.
676 RAILWY RAILS ETC IRN STL	0.77	0.04	0.22	0.00	0.05	0.01
677 IRN STL WIRE EXCL W ROD	0.88	0.02	0.17	0.13	0.68	0.38
678 IRON STL TUBES PIPES ETC	0.60	0.14	0.44	0.12	0.37	0.94
679 IRN STL CASTINGS UNWORKD	***2.58***	0.09	0.41	0.06	0.34	0.19
681 SILVER PLATINUM ETC	0.07	0.08	***1.26***	0.16	0.14	0.01
682 COPPER	0.38	***3.79***	0.97	0.25	0.67	0.11
683 NICKEL	0.13	0.00	0.30	0.00	0.01	0.00
684 ALUMINIUM	0.32	0.01	0.29	0.84	0.22	0.05
685 LEAD	***3.28***	0.14	0.55	0.48	0.57	0.03
686 ZINC	***1.64***	0.01	***2.64***	0.03	0.07	0.12
687 TIN	***5.35***	0.05	***5.88***	***17.52***	***10.44***	0.96
688 URANIUM THORIUM ALLOYS	0.61		0.00	0.00	0.01	0.05
689 NONFER BASE METALS NES	***3.27***	0.02	0.19	0.08	0.01	0.53
691 STRUCT PARTS NES	0.90	0.14	0.37	0.62	0.60	0.80
692 METAL TANKS BOXES ETC	0.42	0.05	0.36	0.86	0.55	0.87
693 WIRE PRODS NONELEC	***1.36***	0.01	0.33	0.11	0.66	0.38
694 STEEL COPP NAILS ETC	***1.31***	0.23	0.54	0.22	0.75	0.41
695 TOOLS	***1.53***	0.14	0.66	0.04	0.12	0.16

696 CUTLERY	*3.61*	0.26	0.55	*1.39*	0.13	*1.28*
697 BASE MTL HHOLD EQPT	*2.99*	0.96	0.19	*1.93*	0.30	*1.68*
698 METAL MANUFACT NES	*1.26*	0.33	0.58	0.18	0.57	0.53
711 POWER MACH NONELEC	0.13	0.16	0.27	0.03	0.12	0.10
712 AGRIC MACH	0.17	0.00	0.05	0.01	0.02	0.03
714 OFFICE MACH	0.63	*2.13*	*5.29*	0.24	*2.11*	*2.12*
715 METAL WORK MACH	0.38	0.04	0.52	0.01	0.13	0.28
717 TEXTL LEATHER MACH	0.53	0.06	0.34	0.03	0.09	0.14
718 MACH FOR SPCL INDUST	0.17	0.09	0.67	0.25	0.19	0.09
719 MACH NES NONELEC	0.27	0.08	0.73	0.07	0.48	0.60
722 ELEC PWR MACH SWITCH	*1.25*	0.73	*1.72*	0.23	*1.32*	*1.53*
723 ELEC DISTRIB MACH	0.65	*5.40*	0.76	0.28	0.85	*1.64*
724 TELECOM EQPT	*1.48*	*2.01*	*2.56*	0.66	*3.88*	*1.20*
725 DOMEST ELEC EQPT	*2.41*	0.26	0.77	0.11	0.54	*1.90*
726 ELEC MEDCL XRAY EQPT	0.11	0.01	0.20	0.00	0.03	0.02
729 ELEC MACH NES	0.45	*4.19*	*3.14*	0.21	*3.33*	*1.15*
731 RAILWAY VEH	*4.14*	0.01	0.02	0.56	0.41	0.78
732 ROAD MOTOR VEH	0.05	0.09	0.08	0.03	0.04	0.08
733 ROAD VEH NONMTR	*1.94*	0.29	*1.03*	*1.30*	0.62	*1.37*
734 AIRCRAFT	0.07	0.02	0.23	0.03	*1.25*	0.71
735 SHIPS BOATS	0.81	0.38	0.76	0.27	0.63	0.18
812 PLUMB HEAT LGHT EQPT	*2.25*	0.84	0.33	0.23	0.26	0.79
821 FURNITURE	*1.28*	*1.86*	0.20	*2.07*	*1.35*	*1.45*
831 TRAVEL GOODS HBAGS	*8.58*	*3.79*	0.23	0.89	0.26	*3.57*
841 CLOTH NOT FUR	*5.05*	*3.96*	0.39	*2.40*	0.97	*2.71*
842 FUR ETC CLOTHES PROD	*6.49*	0.05	0.02	0.01	0.22	0.34
851 FOOT WEAR	*6.08*	*1.76*	0.15	*6.35*	0.21	*5.35*
861 INSTR APPARAT	0.75	*1.02*	0.87	0.18	0.58	0.63
862 PHOTO CINEMA SUPPLIES	0.15	0.01	*1.29*	0.02	0.06	0.03
863 DEVEL CINEMA FILM	0.42	*5.07*	0.03	0.00	0.02	0.11
864 WATCHES CLOCKS	*3.47*	*3.96*	*1.87*	0.34	0.89	*2.14*
891 SOUND RECORDERS	*1.45*	0.57	*3.35*	*1.54*	*4.56*	*1.80*
892 PRINTED MATTER	0.23	0.09	*1.00*	0.03	0.21	0.63
893 PLASTIC NES	*1.85*	0.62	0.56	0.42	0.62	*3.14*
894 TOYS SPORTING GOODS ETC	*6.27*	*1.97*	0.62	*1.21*	0.94	*2.10*
895 OFFICE SUPPLIES NES	*1.57*	0.13	*1.02*	0.57	0.83	0.81
896 WORKS ART ETC	0.23	0.05	0.07	0.02	0.01	0.39
897 GOLD SILVER JEWELRY	*2.48*	0.43	*1.47*	*1.94*	*1.70*	*4.34*
899 OTHER MANUFACT GOODS	*5.08*	*3.20*	0.39	0.80	0.25	*1.52*
911 MAIL NOT CLSS BY KIND	.		.	.	.	
931 SPECL TRANSACTS	0.11	0.27	0.78	0.00	0.43	0.30
941 ZOO ANIMALS PETS	*2.57*	*2.34*	0.30	*1.19*	0.25	0.79
951 WAR FIREARMS AMMUN	0.06	0.06	0.00	0.01	0.05	0.08
961 COIN NONGOLD NONCUR	0.02	0.00	0.26	0.00	0.01	0.00