INDIA AND CHINA IN WTO

Building Complementarities and Competitiveness in the External Trade Sector

Report of a Study

Sponsored by

Planning Commission
Government of India

Study Team

Prof. T P Bhat, *Team Leader*
Mr Atulan Guha
Dr Mahua Paul

ISID
Institute for Studies in Industrial Development
4, Institutional Area, Vasant Kunj,
New-Delhi-110070

April, 2006

CONTENTS

List of Tables

List of Graphs

List of Appendices

ACKNOWLEDGEMENTS

This study on "India-China in WTO: Building Complementarities and competitiveness in External Trade Sector" is undertaken with financial support from the Planning Commission, Government of India, New Delhi. The Institute for Studies in Industrial Development (ISID) gratefully appreciates their kind support for this venture. We thank Dr. O. P. Sharma, the then Advisor, International Trade Division, and Mr. P. K. Aggarwal, Deputy Advisor, Socio-Economic Research Unit of Planning Commission, Government of India, for their encouragement in formulating the proposal.

Prof. T. S. Papola, Director, ISID, gave most useful suggestions and comments for improving the structure and contents of the draft. We are indebted to him. Prof. S. K. Goyal, Vice-Chairman, ISID, provided critical comments in various phases of the draft. We are, indeed thankful to him. Dr. M. R. Murthy, Deputy Director, helped in organizing various activities in preparing the manuscript. We gratefully acknowledge his services. We would also like to take this opportunity to thank our colleagues at the ISID, particularly, Prof. K. S. Chalapati Rao, Dr. Jesim Pais, Dr. Partha P. Sahu, Dr. Vinoj Abraham, and Dr. Ch. Purnachandra Rao who helped us in computer programming and also with suggestions at various stages of the draft. We would also like to thank Miss Puja Mehta for editorial assistance in finalizing the report. We express our thanks Mr. Sudhir Agarwal, Mr. Dhanunjai Kumar and Mr. Sunil Agarwal for the computer support and Mr. Amitava Dey for library and documentation services.

Prof. T.P.Bhat
Mr. Atulan Guha
Dr. Mahua paul

April, 2006

Executive Summary

Liberalization of foreign trade is a watershed in development policy of both India and China. To start with, both the countries adopted inward-looking import substitution policies with an emphasis on self-sufficiency. Later in 1978, China adopted the policy of 'opening up to the outside world' and in 1991, India initiated an import liberalization policy. Comparative advantage replaced self-sufficiency as the basic tenant of trade policy and both the countries are now pursuing market-oriented and outward-looking policies. India has been a member of the WTO since its inception and China joined the WTO in the year 2001. Both the countries are adhering to the WTO rules in conducting their international trade.

China was able to preserve positive trade balance for a long period with the exception of early 1950s and in mid-1980s. Remittances from overseas Chinese have made an important contribution to the balance of payments. Besides, they also brought skill, and knowledge of foreign markets to enhance production and exports. Investments from Hong Kong and Taiwan made a major contribution to China's rapid growth of foreign trade after the open door policy. However, this was not the case with India, the NRI contribution is insignificant and FDI was not export-oriented. More importantly, the volume of FDI was also small as compared to China.

In spite of some similarities and dissimilarities, there is a scope for economic cooperation between India and China. Both the countries are growing fast. They are home to the world's largest pools of skilled work force and are expected to be the engines of global economic growth in the present century. Both the countries are developing closer economic relations with each other and with the rest of the Asian countries through bilateral and regional agreements.

In recent years, bilateral trade and investment between India and China are growing, indicating the existence of a vast potential for economic cooperation. The complementarities exist between the countries, particularly in imports from China in electrical and electronics, chemicals and silk products. There are limited complementarities of Indian exports to China. This is confined more or less to primary, resource based products, and low technology manufactured products.

China's entry into the WTO has provided new opportunities and challenges for both the countries to establish cooperation in the areas of negotiations. India and China could take a common stand in issues such as agriculture subsidies, trade related aspects of intellectual property rights, trade facilitation, trade in services and trade dispute settlement, to name but a few.

China joined the WTO by undertaking many important commitments. These pertain to liberalization of trade and investment. Further, it agreed to provide non-discriminatory treatment to all WTO members, elimination of duel pricing practices, elimination of price controls, elimination of export subsidies on agricultural products and access to its service markets. As per the market access commitment, China has significantly reduced tariff duties on both manufacturing and farm products and removed non-tariff barriers to trade. It has bound all tariffs.

The advanced countries are major beneficiaries of China's accession to the WTO, followed by East Asian and South East Asian countries. The developing countries, particularly South Asian countries, are the minor gainers. China itself is a prime gainer because of increased access to the global market and an improvement in productive efficiency through improvement in technology and management.

China's joining of WTO coincided with the rapid rise in the Indo-China bilateral trade. During the recent years (2000–2004), it grew by 25.5 per cent on an annual basis. Indian exports to China increased by 26.3 per cent and

imports from China enhanced by 24 per cent on an average per annum. However, India's share in China's global imports remained just one per cent. China's share in India's global imports reached 5 per cent. In recent years, China is gaining importance as destination for India's exports.

India's export basket to China is dominated by primary and resource based products. However, the product diversification is occurring gradually in most recent years. Imports from China are diversified and include resourced manufactured products and low and medium technology based products. The product composition of India's exports to China has changed, but the level of product concentration has not changed much over the years.

The number of products that India exports to China is much lower than the number of products that are imported from China. However, this situation changed to some extent in the year 2002. The Chinese exports to India are more diversified and Indian exports to China are less diversified. The degree of product concentration is high for India than for Chinese exports to India.

There is a change in composition of China's exports to India. The shift is from resource based manufactured products to advance technology based manufacturing products. The major change in product composition occurred in case of Chinese exports to India in 2003 when the manufacturing products with more advanced technology products, namely electrical and electronic products, dominated the Chinese export products to India. This change also has raised the Chinese potential for sustaining its export performance as compared to India.

There are three reasons for increase in India's exports to China: First and foremost is the increase in Chinese demand for Indian products. Second is the increase in competitiveness of Indian products and third is the increase in product diversification by India. However, the influence of competitiveness has declined in recent years. In case of Chinese exports into India, product diversification played a major role, second factor is the increase in India's

demand for the Chinese products, and the third factor is increase in competitiveness of Chinese products.

When all the products exported from India are considered and compared with 0.25 per cent export product list, a different picture emerges. The competitive factor becomes important and it accounts for over 50 per cent changes in Indian exports. The demand factor responsible for increase in Indian exports will account for slightly more than one-third and increase due to product diversification shows about one-sixth of increase in exports. If we compare both the analysis, the trends are the same with the exception of demand factor.

The increase in Chinese exports to India on all product basis shows the increase in competitiveness as the major factor, second is increase in India's demand for Chinese products, and third is the product diversification. There are discrepancies in the results of two list of products analyzed due to product composition. Nevertheless, the fact emerges that all the three factors are responsible for expansion of both India's exports to China and China's exports to India. The increase in Chinese demand is responsible for more than one-third of increase of India's export to China whereas competitiveness constitutes half of the increase in India's exports. The product diversification does not play an important role. As far as Chinese exports to India are concerned, competitiveness is the most important factor followed by demand factors.

The trade complementarities can develop in two ways, that is, intra-industry trade and inter-industry trade between the two economies. Three types of indices, namely complementarity index, trade overlap index and Grubel-Lloyd index, could measure the scope for trade cooperation. All the three indices show that in Indo-China bilateral trade, intra-industry trade seems to play a minor role. There is a huge gap between Chinese import need at individual product level and India's export to that country. The revealed comparative advantage (RCA) index value shows that India has an

advantage over its competitors in primary products, natural resource based or low technology manufacturing products. Further, it is found that India has an advantage over its competitors in product groups such as textiles (5 product lines), leather products (5), engineering (1), and granite (1). India could gain higher market share due to complementarities in product groups of: leather (7 products), chemicals (5), textiles (5), engineering (2), and granite (2), and food products (1).

Advanced and medium technology products dominate the Chinese import basket and it accounts for 61 per cent of the imports. To enhance trade complementarities with China, the country needs to diversify export products towards these technology-oriented products. Given the current state of Indian industrial structure, it appears that in the immediate future, the scope for building complementarities appears slim, as the potential for intra-industry trade is limited; the option is to enhance inter-industry trade.

In the year 2003, in 45 products, India's share was more than 0.25 per cent of exports to China. In 22 products, India has a market share of more than 10 per cent. In fact, 10 Indian products enjoyed the highest market share in China, but none of these products enjoyed substantial share in India's total exports. The most important product in India's exports to China is iron ore, iron, and steel. They constitute around 47 per cent of Indian exports. This indicates high concentration of few export products. India enjoys a large market in China in 10 products. The RCA value is higher for these products indicating greater comparative advantage. In other 35 products, India does not have a large market share. Among these, in eight products India's RCA is greater than the countries whose market share is higher than India. Nevertheless, India is unable to capture a large share in the Chinese market. In 18 other products, India has price advantage over the competitors but its market share is low. The reasons may lie in the quality of the products. Prima facie, it appears that except a few primaries and resource based low technology manufacturing products, India's competitiveness is limited.

Among 45 listed products, in 44 products India has export potential. Overall, 31 products have shown various degrees of export dynamism

Our survey of Indian exporting companies to China indicates that about 36 per cent of them export branded products, 59 per cent non-branded products and 5 per cent both branded and non-branded products. Large-sized companies export their own branded products. The medium- and small-sized companies export non-branded products to China. In fact, the large companies export larger proportion of their export to China than the small-and medium-sized companies.

The product analysis provides the views of the exporters on competitiveness of the commodities they export to China. The trade margin is sizeable in the case of fish and fish products. The Chinese market is highly competitive in fish and fish products with intensive competition from Pakistan, Bangladesh, Sri Lanka, Malaysia, Indonesia, Vietnam and Japan. Indian export prices are higher as compared to the products from Bangladesh, Pakistan and Sri Lanka but lower than Malaysia, Indonesia and Japan. The lower product prices would sustain Indian exports. The secondary data analysis supports this view. For spices and agricultural products, trade margin is narrow. In this product group, competition is mainly from developing countries. Indian products are superior and prices are slightly higher. Exporters opine that China can be developed into a reliable partner in this product group. Trade margin on marbles and granites are 8–15 per cent. Italian and Brazilian marbles are considered better but Indian prices are lower. Since the demand for marbles and granites are on the rise, export appears sustainable.

The trade margin for iron ore is in the region of 10–15 per cent whereas for zinc ore, concentrates, and chromium ore it is lower by about 5 per cent. The demand for these products is huge in China, particularly for iron ore. India is competitive in these product lines, except zinc ore. The pressure on the margin is high in case of chromium ore. Indian product

quality is at par with that of its competitors. The demand factor would make trade sustainable. In chemical group of products, the main products exported are aluminum oxide, menthol, monoboxylic acid, terephthalic acid, six hexanelactam, antibiotics and polyethylene. Trade margin varies in the range of 10–22 per cent. Trade is sustainable in these product lines particularly in aluminum oxide, menthol, monocarboxylic acid, six hexanelactam and antibiotics. Only in case of terephthalic acid and polyethylene, trade may not appear sustainable.

Export of natural rubber from India to China is small in quantity as compared to exports of Thailand and Indonesia. The trade margin is in the range of 10–15 per cent. Indian export prices are lower compared to products from other countries except Bangladesh. There is not much difference in the quality of competitors' products and Indian products. The price disadvantage may drive away the Indian exporters. In leather products, India's competitors are Pakistan, Bangladesh, Thailand, Vietnam, South Korea and Italy. The qualities of the competitors' products are better but Indian prices are lower. The trade margin varies in the range of 10–30 per cent. The growth of Chinese market in this product group makes trade sustainable.

The small-sized Indian companies export paperboards, fine papers, decorative printing papers and laminated papers. The trade margin is 7.5–10 per cent. Indian product prices are higher compared to the main competitors. The Indian companies feel that trade is not sustainable. Trade margin in textile group of products is small and it is around 5 per cent. Indian product prices are lower, with the exception of Bangladesh. The garment production is on a large scale and demand is on the rise. The Indian exporters view that trade is sustainable. The trade margin in human hair for wig making, diamond, jewellery and silver are 10–30 per cent. Indian exporters are successfully competing in these products. Their products are cheaper and at par with the product quality of the competitors.

Indian steel products are competitive in the Chinese market. This view is supported by the views of the exporting companies as well as the secondary data. The trade margin varies from 5–20 per cent. For many companies the margin is thin. It is indeed difficult to make price and quality comparisons due to various grades of the product and subtle differentiation in product quality. Quality of Indian product is well accepted and product prices are lower than that of Japan and South Korea. Trade would grow in this segment of products. In copper and aluminum products, in terms of price, India is competitive and the quality is at par with the competitors. There are non-tariff barriers in the form of fumigation and chemical treatment for example in the case of wood containers. Similar is the case with transmission shafts and cranks.

Except very few products like terephthalic acid, polyethylene and paper and paper products, the export appears on the rising curve. There is hardly any non-tariff barrier hindrance from the Chinese side. More importantly, Indian products in these selected segments are both price and quality competitive. A few companies in steel and chemical products are actively considering establishing joint ventures in China. The exporters are of the view that their trade is sustainable. The Chinese market is becoming more and more competitive and Indian exporters are adjusting themselves to the changing needs. This fact is evident from the growth of Indian exports to China in 2004 and 2005.

The study indicates that there are substantial complementarities with Indian imports and Chinese exports through inter-industry trade. The complementarities index of Chinese exports with Indian imports shows a declining trend but in absolute terms, the value of index is substantially high for the years 1996 to 2003. It has ranged from 69 to 93. Chinese export basket to India consists of 67 products in 2003 (the share of at least 0.25 per cent in total Chinese exports to world); there are 48 products in which they have enjoyed a share of more than 5 per cent in India's imports of these products

from the world. This indicates that Chinese exports have substantial complementarities with Indian imports. Out of these 48 products, China enjoys the largest market share in India for 27 products and in 12 products, the second largest market share. It means that most of the Chinese products are highly competitive in the Indian market. Further evidence shows that China's export basket for India (with 0.25 per cent criteria) consists of 52 products in 2003, and all of them have a minimum of 5 per cent share in the Indian market. In 31 product groups, China enjoys the largest share in the Indian market and second largest market share in 9 product groups. It confirms that Chinese products are competitive in the Indian market.

Our survey of Indian manufacturing companies and trading houses revealed that over the years, particularly after 2001, China has diversified its exports to India. An increasing number of Indian companies are sourcing their supplies from China. This is mainly due to relatively cheaper prices of products, acceptable quality and prompt delivery. Most of the Indian manufacturing companies buy inputs from China to use in the manufacturing processes to make their products cost competitive. Some quantities of these inputs are sold in the domestic market with the margin of profit in the range of 5–15 per cent. 42 per cent of companies surveyed, expressed that there is no qualitative difference between the domestic and the Chinese products. 25 per cent observed that Chinese products are superior and 22 per cent noted they are inferior to the domestic products. All of them viewed that Chinese products are cheaper. At the product level, 72 per cent of the products imported from China are either of the same quality or are superior to the domestic products. Top consideration for imports from China is low prices and efficient delivery.

In electronic and electrical product group category, a large number of products are cheaper in the range of 20–30 per cent and above. Similar is the case with organic chemicals and compounds, silk and fabrics, casings and PVC. Trade margin is lesser in the range of 5–15 per cent for minerals and

concentrates, paper and paper products. An overwhelming number of Indian companies expressed that they would like to outsource electronic, electric, organic, and chemical compounds from China. None of the manufacturing companies faced any problems from the Chinese end. Most of them are happy with their Chinese suppliers.

The survey reveals that nearly 69 per cent of trading companies are involved only in imports and 39 per cent both in import and export activities. Many trading companies consider importing as a more profitable business. Over 50 per cent of the companies surveyed import non-branded, 42 per cent branded and 8 per cent both branded and non-branded products from China. Now, trade is gradually shifting towards branded products. The trading companies import mostly branded products (89 per cent). Non-branded products include silk (100 per cent), minerals and metals (77 per cent), and chemical and allied products (57 per cent). In electrical and electronics, a large number of products have a trade margin ranging from 15 to 40 per cent. Importantly, China provides customized products with the right kind of warranty; this is particularly true for branded products. In this group of products, 61 per cent of the companies opined that the Chinese products are similar to or superior to than the domestic products. Others said that the products they have imported are not available in the domestic market. The trade margin for silk products is relatively less than 15 per cent. Majority expressed that Chinese silk is inferior to the domestic products. Low prices are the main consideration in imports. Similar is the case with minerals and metals. For majority of the chemical products trade margins are high and there are hardly any quality differences. In all product groups, the main consideration is the low price.

Both manufacturing and trading companies view that electrical and electronic products are cheaper and trade margin is high. The preference is clearly for branded products. In chemicals and allied products, the case is similar with trade margin but there is clear preference for non-branded

products. In minerals and metals, both trading and manufacturing companies show relatively lower trade margins as well as preference for non-branded products. Similar is the case with silk and silk products. Overriding consideration in both cases is low prices.

With its entry into the WTO, China has emerged as a leading trading power in the global market. Its share in the world exports has increased over 6 per cent in 2004. To fulfill its membership requirements at the WTO, it is adopting broad and deep trade liberalization measures. It has reduced tariff duties and dismantled many non-tariff measures. The process is still on. Many studies show that China will gain most from its WTO accession. Main gainers are developed countries, newly industrializing Asian economies such as South Korea, and Singapore and least developed countries. Because of the similar resources endowments, South Asian and South East Asian countries like Thailand, Malaysia, Indonesia and the Philippines may face keener competition in labor-intensive and low priced products. Low wages are the main source of China's comparative advantage. China has developed a strong comparative advantage in the assembly stage of technology/capital-intensive products and processing trade for a number of products. Further, it has improved its capacity in the production of components. The supply of skilled labor is high in China, which increases its potential to produce skill-intensive products. The developing countries that export labor-intensive products and assembly operations will be subjected to more of "competition effects" of China than "complementarities effects". On this basis, South Asia, Africa and Latin America may suffer from competition effects of China.

China is intensifying competition in domestic markets of developing countries. However, currently the "safeguard measures" and restrictions that are included in the protocol of accession of WTO may limit its ability. The developed countries will be the main beneficiaries of the complementarities effect because they are the main sources of China's imports. It appears that the U.S., the E.U. and Japan would benefit greatly. For all developing

countries, including India, competition with China has intensified in the third-world countries markets as the result of the accession. India competes with China in the third-world countries markets for labor-intensive goods such as textiles, clothing, light manufacturing products, chemicals, and granite and leather products. The competition has intensified due to the abolition of textile quota by the U.S., Canada, and the E.U. in 2005 and China's lowering of import duties on manufacturing inputs. The WTO accession has also increased FDI into China, which has improved productivity in the manufacturing sector.

The U.S., the E.U., Japan and ASEAN countries are major destinations for exports of both the countries. In these countries, China is a main competitor for Indian exports. In selected 50 product lines (6-digit level), India has an edge over China in 24 products and China has an advantage in 23 product lines in the U.S. market. In these items, China has an advantage over India by a large margin especially in the case of garments, iron and steel products, footwear and light engineering products. Competition is severe in labor-intensive products. In 35 selected such products India showed an advantage in 16 products and China in 19 products in the Japanese market. However, China enjoys distinct advantage in the Japanese market in a large number of products. The percentage of Indian imports in total Japanese imports is 0.57 per cent as compared to China's 19.68 per cent.

In ASEAN market, China is very much ahead in a number of products and Indian competition is relatively feeble. India's share in ASEAN imports is 1.05 per cent as compared to China's 7.39 per cent. However, India is showing an increase in exports of some traditional products. India's competitiveness is relatively better in the EU market. India's market share in 2003 is 1.48 per cent to the EU's global imports as compared to China's 9.34 per cent. Product wise competition is intense in leather and textile products. In ready-made garments, China has a higher market share than India. It is

clear that China has established its high competitive power in the US, Japan, ASEAN and the EU.

China is the second largest recipient of FDI. Further, it is successful in attracting huge export-oriented FDI in recent years. The foreign invested enterprises (FIE's) played a significant role in export expansion of China. The share of MNCs in exports is over 50 per cent in case of China as compared to mere 3 per cent for India. More importantly, China is able to attract FDI to provide capital and expertise to achieve export competitiveness in a wide range of sectors. The FDI brought in the product design, specialized machine tools, intermediate inputs and knowledge of world marketing channels. The Chinese government assured certain key conditions for profitability such as low taxes, reliable infrastructure, adequate power, decent logistics for imports and exports. As a result, the manufactured exports reached over 90 per cent of the total exports in 2003. A substantial proportion of these exports constitute mechanical, electronics and electrical products. The contribution of MNCs is high in these segments.

FDI inflow into India is relatively low and its focus is mainly on sectors such as infrastructure, power, capital goods and food processing. Among these sectors, many of them do not fall under export activities. A substantial proportion of FDI in case of India has gone to services, infrastructure and low technology intensive consumer goods manufacturing industries. As much as 40 per cent of FDI in the late 1990s has taken the route of acquisitions rather than green field ventures. In contrast, the FDI is concentrated in export-oriented and high technology manufacturing industry in China. The FDI accounts for 45 per cent of China's manufactured products and 80 per cent of high technology exports. To some extent, the export-oriented production model is replicated in India in the services sector, particularly in software development and business processes. The FDI in India have not entered the export-oriented industries and have little impact on India's exports. Further, FDI in Indian manufacturing sector has been

domestic market-oriented and not efficiency seeking in nature. The contribution of Special Economic Zones in India's export is around 10 per cent whereas in China the same is over 70 per cent.

India and China, the two big Asian powerhouses, would become the part of Asian Free Trade Area (AFTA) within a decade. They will be joined by Japan and South Korea. The move is clearly towards creating a "common Asian market". This trade block will match the economic might of the European Union and North American Free Trade Area. The size of the market will be huge, around $3 trillion. Both India and China have already signed the Framework of Economic Agreement with the ASEAN countries with the 'early harvest program', which covers the areas of economic cooperation and common list of items for exchange of tariff concessions as a confidence building measure. India and China both have made progress in the implementation of the agreement.

Besides this agreement, India has also concluded sub-regional agreement with Bangladesh, Sri Lanka, Thailand, Myanmar, Nepal and Bhutan. This block is known as BIMST-EC. This is seen as a bridging link between two regional groupings that are SAARC and ASEAN. India has also concluded bilateral free trade agreement with Sri Lanka and Thailand. The Framework Agreement on ASEAN-China Comprehensive Economic agreement sets out modalities of cooperation in trade, investment and facilitation. The motivation of the agreement is both political and economic. Politically, China wishes to remain on friendly terms with its neighbors on its southern front. The agreement is to alley ASEAN concerns about conceived Chinese threat with its economic rise. China is eyeing the ASEAN natural resources, particularly oil and its large market. Closer economic relations with ASEAN will enable China to build its geo-political influence in Southeast Asia and counter balance the influences of Japan and the U.S.

China's accession to the WTO has changed its outlook about her as well as towards the outside world. Both its exports and imports have grown

faster than the world trade in recent years. As China's trade with the rest of the world has deepened, its composition and geographical pattern have also shifted. Its overall share of exports to advanced countries has not only increased, but has also diversified. At the same time, China has become increasingly important within the Asian regional economy. Vertical specialization of production within Asia has led to an increasing share of China's imports coming from within the region, and China is now among the most important export destinations for other Asian countries.

Trade reforms and commitments made as a part of China's accession to the WTO have been crucial in promoting its integration with the global trading system. These reforms included substantial tariff reductions and dismantling of most non-tariff barriers; improved market access following WTO accession has been important. Continued implementation of WTO commitments in the coming years will further facilitate China's ongoing integration with the global economy and generate benefits for most partner countries. However, it may also pose some challenges and the extensive safeguard provisions under the WTO agreement represent a downside risk that could constrain China's export growth in the future.

Executive Summary

Liberalization of foreign trade is a watershed in development policy of both India and China. To start with, both the countries adopted inward-looking import substitution policies with an emphasis on self-sufficiency. Later in 1978, China adopted the policy of 'opening up to the outside world' and in 1991, India initiated an import liberalization policy. Comparative advantage replaced self-sufficiency as the basic tenant of trade policy and both the countries are now pursuing market-oriented and outward-looking policies. India has been a member of the WTO since its inception and China joined the WTO in the year 2001. Both the countries are adhering to the WTO rules in conducting their international trade.

China was able to preserve positive trade balance for a long period with the exception of early 1950s and in mid-1980s. Remittances from overseas Chinese have made an important contribution to the balance of payments. Besides, they also brought skill, and knowledge of foreign markets to enhance production and exports. Investments from Hong Kong and Taiwan made a major contribution to China's rapid growth of foreign trade after the open door policy. However, this was not the case with India, the NRI contribution is insignificant and FDI was not export-oriented. More importantly, the volume of FDI was also small as compared to China.

In spite of some similarities and dissimilarities, there is a scope for economic cooperation between India and China. Both the countries are growing fast. They are home to the world's largest pools of skilled work force and are expected to be the engines of global economic growth in the present century. Both the countries are developing closer economic relations with each other and with the rest of the Asian countries through bilateral and regional agreements.

In recent years, bilateral trade and investment between India and China are growing, indicating the existence of a vast potential for economic cooperation. The complementarities exist between the countries, particularly in imports from China in electrical and electronics, chemicals and silk products. There are limited complementarities of Indian exports to China. This is confined more or less to primary, resource based products, and low technology manufactured products.

China's entry into the WTO has provided new opportunities and challenges for both the countries to establish cooperation in the areas of negotiations. India and China could take a common stand in issues such as agriculture subsidies, trade related aspects of intellectual property rights, trade facilitation, trade in services and trade dispute settlement, to name but a few.

China joined the WTO by undertaking many important commitments. These pertain to liberalization of trade and investment. Further, it agreed to provide non-discriminatory treatment to all WTO members, elimination of duel pricing practices, elimination of price controls, elimination of export subsidies on agricultural products and access to its service markets. As per the market access commitment, China has significantly reduced tariff duties on both manufacturing and farm products and removed non-tariff barriers to trade. It has bound all tariffs.

The advanced countries are major beneficiaries of China's accession to the WTO, followed by East Asian and South East Asian countries. The developing countries, particularly South Asian countries, are the minor gainers. China itself is a prime gainer because of increased access to the global market and an improvement in productive efficiency through improvement in technology and management.

China's joining of WTO coincided with the rapid rise in the Indo-China bilateral trade. During the recent years (2000–2004), it grew by 25.5 per cent on an annual basis. Indian exports to China increased by 26.3 per cent and

imports from China enhanced by 24 per cent on an average per annum. However, India's share in China's global imports remained just one per cent. China's share in India's global imports reached 5 per cent. In recent years, China is gaining importance as destination for India's exports.

India's export basket to China is dominated by primary and resource based products. However, the product diversification is occurring gradually in most recent years. Imports from China are diversified and include resourced manufactured products and low and medium technology based products. The product composition of India's exports to China has changed, but the level of product concentration has not changed much over the years.

The number of products that India exports to China is much lower than the number of products that are imported from China. However, this situation changed to some extent in the year 2002. The Chinese exports to India are more diversified and Indian exports to China are less diversified. The degree of product concentration is high for India than for Chinese exports to India.

There is a change in composition of China's exports to India. The shift is from resource based manufactured products to advance technology based manufacturing products. The major change in product composition occurred in case of Chinese exports to India in 2003 when the manufacturing products with more advanced technology products, namely electrical and electronic products, dominated the Chinese export products to India. This change also has raised the Chinese potential for sustaining its export performance as compared to India.

There are three reasons for increase in India's exports to China: First and foremost is the increase in Chinese demand for Indian products. Second is the increase in competitiveness of Indian products and third is the increase in product diversification by India. However, the influence of competitiveness has declined in recent years. In case of Chinese exports into India, product diversification played a major role, second factor is the increase in India's

demand for the Chinese products, and the third factor is increase in competitiveness of Chinese products.

When all the products exported from India are considered and compared with 0.25 per cent export product list, a different picture emerges. The competitive factor becomes important and it accounts for over 50 per cent changes in Indian exports. The demand factor responsible for increase in Indian exports will account for slightly more than one-third and increase due to product diversification shows about one-sixth of increase in exports. If we compare both the analysis, the trends are the same with the exception of demand factor.

The increase in Chinese exports to India on all product basis shows the increase in competitiveness as the major factor, second is increase in India's demand for Chinese products, and third is the product diversification. There are discrepancies in the results of two list of products analyzed due to product composition. Nevertheless, the fact emerges that all the three factors are responsible for expansion of both India's exports to China and China's exports to India. The increase in Chinese demand is responsible for more than one-third of increase of India's export to China whereas competitiveness constitutes half of the increase in India's exports. The product diversification does not play an important role. As far as Chinese exports to India are concerned, competitiveness is the most important factor followed by demand factors.

The trade complementarities can develop in two ways, that is, intra-industry trade and inter-industry trade between the two economies. Three types of indices, namely complementarity index, trade overlap index and Grubel-Lloyd index, could measure the scope for trade cooperation. All the three indices show that in Indo-China bilateral trade, intra-industry trade seems to play a minor role. There is a huge gap between Chinese import need at individual product level and India's export to that country. The revealed comparative advantage (RCA) index value shows that India has an

advantage over its competitors in primary products, natural resource based or low technology manufacturing products. Further, it is found that India has an advantage over its competitors in product groups such as textiles (5 product lines), leather products (5), engineering (1), and granite (1). India could gain higher market share due to complementarities in product groups of: leather (7 products), chemicals (5), textiles (5), engineering (2), and granite (2), and food products (1).

Advanced and medium technology products dominate the Chinese import basket and it accounts for 61 per cent of the imports. To enhance trade complementarities with China, the country needs to diversify export products towards these technology-oriented products. Given the current state of Indian industrial structure, it appears that in the immediate future, the scope for building complementarities appears slim, as the potential for intra-industry trade is limited; the option is to enhance inter-industry trade.

In the year 2003, in 45 products, India's share was more than 0.25 per cent of exports to China. In 22 products, India has a market share of more than 10 per cent. In fact, 10 Indian products enjoyed the highest market share in China, but none of these products enjoyed substantial share in India's total exports. The most important product in India's exports to China is iron ore, iron, and steel. They constitute around 47 per cent of Indian exports. This indicates high concentration of few export products. India enjoys a large market in China in 10 products. The RCA value is higher for these products indicating greater comparative advantage. In other 35 products, India does not have a large market share. Among these, in eight products India's RCA is greater than the countries whose market share is higher than India. Nevertheless, India is unable to capture a large share in the Chinese market. In 18 other products, India has price advantage over the competitors but its market share is low. The reasons may lie in the quality of the products. Prima facie, it appears that except a few primaries and resource based low technology manufacturing products, India's competitiveness is limited.

Among 45 listed products, in 44 products India has export potential. Overall, 31 products have shown various degrees of export dynamism

Our survey of Indian exporting companies to China indicates that about 36 per cent of them export branded products, 59 per cent non-branded products and 5 per cent both branded and non-branded products. Large-sized companies export their own branded products. The medium- and small-sized companies export non-branded products to China. In fact, the large companies export larger proportion of their export to China than the small-and medium-sized companies.

The product analysis provides the views of the exporters on competitiveness of the commodities they export to China. The trade margin is sizeable in the case of fish and fish products. The Chinese market is highly competitive in fish and fish products with intensive competition from Pakistan, Bangladesh, Sri Lanka, Malaysia, Indonesia, Vietnam and Japan. Indian export prices are higher as compared to the products from Bangladesh, Pakistan and Sri Lanka but lower than Malaysia, Indonesia and Japan. The lower product prices would sustain Indian exports. The secondary data analysis supports this view. For spices and agricultural products, trade margin is narrow. In this product group, competition is mainly from developing countries. Indian products are superior and prices are slightly higher. Exporters opine that China can be developed into a reliable partner in this product group. Trade margin on marbles and granites are 8–15 per cent. Italian and Brazilian marbles are considered better but Indian prices are lower. Since the demand for marbles and granites are on the rise, export appears sustainable.

The trade margin for iron ore is in the region of 10–15 per cent whereas for zinc ore, concentrates, and chromium ore it is lower by about 5 per cent. The demand for these products is huge in China, particularly for iron ore. India is competitive in these product lines, except zinc ore. The pressure on the margin is high in case of chromium ore. Indian product

quality is at par with that of its competitors. The demand factor would make trade sustainable. In chemical group of products, the main products exported are aluminum oxide, menthol, monoboxylic acid, terephthalic acid, six hexanelactam, antibiotics and polyethylene. Trade margin varies in the range of 10–22 per cent. Trade is sustainable in these product lines particularly in aluminum oxide, menthol, monocarboxylic acid, six hexanelactam and antibiotics. Only in case of terephthalic acid and polyethylene, trade may not appear sustainable.

Export of natural rubber from India to China is small in quantity as compared to exports of Thailand and Indonesia. The trade margin is in the range of 10–15 per cent. Indian export prices are lower compared to products from other countries except Bangladesh. There is not much difference in the quality of competitors' products and Indian products. The price disadvantage may drive away the Indian exporters. In leather products, India's competitors are Pakistan, Bangladesh, Thailand, Vietnam, South Korea and Italy. The qualities of the competitors' products are better but Indian prices are lower. The trade margin varies in the range of 10–30 per cent. The growth of Chinese market in this product group makes trade sustainable.

The small-sized Indian companies export paperboards, fine papers, decorative printing papers and laminated papers. The trade margin is 7.5–10 per cent. Indian product prices are higher compared to the main competitors. The Indian companies feel that trade is not sustainable. Trade margin in textile group of products is small and it is around 5 per cent. Indian product prices are lower, with the exception of Bangladesh. The garment production is on a large scale and demand is on the rise. The Indian exporters view that trade is sustainable. The trade margin in human hair for wig making, diamond, jewellery and silver are 10–30 per cent. Indian exporters are successfully competing in these products. Their products are cheaper and at par with the product quality of the competitors.

Indian steel products are competitive in the Chinese market. This view is supported by the views of the exporting companies as well as the secondary data. The trade margin varies from 5–20 per cent. For many companies the margin is thin. It is indeed difficult to make price and quality comparisons due to various grades of the product and subtle differentiation in product quality. Quality of Indian product is well accepted and product prices are lower than that of Japan and South Korea. Trade would grow in this segment of products. In copper and aluminum products, in terms of price, India is competitive and the quality is at par with the competitors. There are non-tariff barriers in the form of fumigation and chemical treatment for example in the case of wood containers. Similar is the case with transmission shafts and cranks.

Except very few products like terephthalic acid, polyethylene and paper and paper products, the export appears on the rising curve. There is hardly any non-tariff barrier hindrance from the Chinese side. More importantly, Indian products in these selected segments are both price and quality competitive. A few companies in steel and chemical products are actively considering establishing joint ventures in China. The exporters are of the view that their trade is sustainable. The Chinese market is becoming more and more competitive and Indian exporters are adjusting themselves to the changing needs. This fact is evident from the growth of Indian exports to China in 2004 and 2005.

The study indicates that there are substantial complementarities with Indian imports and Chinese exports through inter-industry trade. The complementarities index of Chinese exports with Indian imports shows a declining trend but in absolute terms, the value of index is substantially high for the years 1996 to 2003. It has ranged from 69 to 93. Chinese export basket to India consists of 67 products in 2003 (the share of at least 0.25 per cent in total Chinese exports to world); there are 48 products in which they have enjoyed a share of more than 5 per cent in India's imports of these products

from the world. This indicates that Chinese exports have substantial complementarities with Indian imports. Out of these 48 products, China enjoys the largest market share in India for 27 products and in 12 products, the second largest market share. It means that most of the Chinese products are highly competitive in the Indian market. Further evidence shows that China's export basket for India (with 0.25 per cent criteria) consists of 52 products in 2003, and all of them have a minimum of 5 per cent share in the Indian market. In 31 product groups, China enjoys the largest share in the Indian market and second largest market share in 9 product groups. It confirms that Chinese products are competitive in the Indian market.

Our survey of Indian manufacturing companies and trading houses revealed that over the years, particularly after 2001, China has diversified its exports to India. An increasing number of Indian companies are sourcing their supplies from China. This is mainly due to relatively cheaper prices of products, acceptable quality and prompt delivery. Most of the Indian manufacturing companies buy inputs from China to use in the manufacturing processes to make their products cost competitive. Some quantities of these inputs are sold in the domestic market with the margin of profit in the range of 5–15 per cent. 42 per cent of companies surveyed, expressed that there is no qualitative difference between the domestic and the Chinese products. 25 per cent observed that Chinese products are superior and 22 per cent noted they are inferior to the domestic products. All of them viewed that Chinese products are cheaper. At the product level, 72 per cent of the products imported from China are either of the same quality or are superior to the domestic products. Top consideration for imports from China is low prices and efficient delivery.

In electronic and electrical product group category, a large number of products are cheaper in the range of 20–30 per cent and above. Similar is the case with organic chemicals and compounds, silk and fabrics, casings and PVC. Trade margin is lesser in the range of 5–15 per cent for minerals and

concentrates, paper and paper products. An overwhelming number of Indian companies expressed that they would like to outsource electronic, electric, organic, and chemical compounds from China. None of the manufacturing companies faced any problems from the Chinese end. Most of them are happy with their Chinese suppliers.

The survey reveals that nearly 69 per cent of trading companies are involved only in imports and 39 per cent both in import and export activities. Many trading companies consider importing as a more profitable business. Over 50 per cent of the companies surveyed import non-branded, 42 per cent branded and 8 per cent both branded and non-branded products from China. Now, trade is gradually shifting towards branded products. The trading companies import mostly branded products (89 per cent). Non-branded products include silk (100 per cent), minerals and metals (77 per cent), and chemical and allied products (57 per cent). In electrical and electronics, a large number of products have a trade margin ranging from 15 to 40 per cent. Importantly, China provides customized products with the right kind of warranty; this is particularly true for branded products. In this group of products, 61 per cent of the companies opined that the Chinese products are similar to or superior to than the domestic products. Others said that the products they have imported are not available in the domestic market. The trade margin for silk products is relatively less than 15 per cent. Majority expressed that Chinese silk is inferior to the domestic products. Low prices are the main consideration in imports. Similar is the case with minerals and metals. For majority of the chemical products trade margins are high and there are hardly any quality differences. In all product groups, the main consideration is the low price.

Both manufacturing and trading companies view that electrical and electronic products are cheaper and trade margin is high. The preference is clearly for branded products. In chemicals and allied products, the case is similar with trade margin but there is clear preference for non-branded

products. In minerals and metals, both trading and manufacturing companies show relatively lower trade margins as well as preference for non-branded products. Similar is the case with silk and silk products. Overriding consideration in both cases is low prices.

With its entry into the WTO, China has emerged as a leading trading power in the global market. Its share in the world exports has increased over 6 per cent in 2004. To fulfill its membership requirements at the WTO, it is adopting broad and deep trade liberalization measures. It has reduced tariff duties and dismantled many non-tariff measures. The process is still on. Many studies show that China will gain most from its WTO accession. Main gainers are developed countries, newly industrializing Asian economies such as South Korea, and Singapore and least developed countries. Because of the similar resources endowments, South Asian and South East Asian countries like Thailand, Malaysia, Indonesia and the Philippines may face keener competition in labor-intensive and low priced products. Low wages are the main source of China's comparative advantage. China has developed a strong comparative advantage in the assembly stage of technology/capital-intensive products and processing trade for a number of products. Further, it has improved its capacity in the production of components. The supply of skilled labor is high in China, which increases its potential to produce skill-intensive products. The developing countries that export labor-intensive products and assembly operations will be subjected to more of "competition effects" of China than "complementarities effects". On this basis, South Asia, Africa and Latin America may suffer from competition effects of China.

China is intensifying competition in domestic markets of developing countries. However, currently the "safeguard measures" and restrictions that are included in the protocol of accession of WTO may limit its ability. The developed countries will be the main beneficiaries of the complementarities effect because they are the main sources of China's imports. It appears that the U.S., the E.U. and Japan would benefit greatly. For all developing

countries, including India, competition with China has intensified in the third-world countries markets as the result of the accession. India competes with China in the third-world countries markets for labor-intensive goods such as textiles, clothing, light manufacturing products, chemicals, and granite and leather products. The competition has intensified due to the abolition of textile quota by the U.S., Canada, and the E.U. in 2005 and China's lowering of import duties on manufacturing inputs. The WTO accession has also increased FDI into China, which has improved productivity in the manufacturing sector.

The U.S., the E.U., Japan and ASEAN countries are major destinations for exports of both the countries. In these countries, China is a main competitor for Indian exports. In selected 50 product lines (6-digit level), India has an edge over China in 24 products and China has an advantage in 23 product lines in the U.S. market. In these items, China has an advantage over India by a large margin especially in the case of garments, iron and steel products, footwear and light engineering products. Competition is severe in labor-intensive products. In 35 selected such products India showed an advantage in 16 products and China in 19 products in the Japanese market. However, China enjoys distinct advantage in the Japanese market in a large number of products. The percentage of Indian imports in total Japanese imports is 0.57 per cent as compared to China's 19.68 per cent.

In ASEAN market, China is very much ahead in a number of products and Indian competition is relatively feeble. India's share in ASEAN imports is 1.05 per cent as compared to China's 7.39 per cent. However, India is showing an increase in exports of some traditional products. India's competitiveness is relatively better in the EU market. India's market share in 2003 is 1.48 per cent to the EU's global imports as compared to China's 9.34 per cent. Product wise competition is intense in leather and textile products. In ready-made garments, China has a higher market share than India. It is

clear that China has established its high competitive power in the US, Japan, ASEAN and the EU.

China is the second largest recipient of FDI. Further, it is successful in attracting huge export-oriented FDI in recent years. The foreign invested enterprises (FIE's) played a significant role in export expansion of China. The share of MNCs in exports is over 50 per cent in case of China as compared to mere 3 per cent for India. More importantly, China is able to attract FDI to provide capital and expertise to achieve export competitiveness in a wide range of sectors. The FDI brought in the product design, specialized machine tools, intermediate inputs and knowledge of world marketing channels. The Chinese government assured certain key conditions for profitability such as low taxes, reliable infrastructure, adequate power, decent logistics for imports and exports. As a result, the manufactured exports reached over 90 per cent of the total exports in 2003. A substantial proportion of these exports constitute mechanical, electronics and electrical products. The contribution of MNCs is high in these segments.

FDI inflow into India is relatively low and its focus is mainly on sectors such as infrastructure, power, capital goods and food processing. Among these sectors, many of them do not fall under export activities. A substantial proportion of FDI in case of India has gone to services, infrastructure and low technology intensive consumer goods manufacturing industries. As much as 40 per cent of FDI in the late 1990s has taken the route of acquisitions rather than green field ventures. In contrast, the FDI is concentrated in export-oriented and high technology manufacturing industry in China. The FDI accounts for 45 per cent of China's manufactured products and 80 per cent of high technology exports. To some extent, the export-oriented production model is replicated in India in the services sector, particularly in software development and business processes. The FDI in India have not entered the export-oriented industries and have little impact on India's exports. Further, FDI in Indian manufacturing sector has been

domestic market-oriented and not efficiency seeking in nature. The contribution of Special Economic Zones in India's export is around 10 per cent whereas in China the same is over 70 per cent.

India and China, the two big Asian powerhouses, would become the part of Asian Free Trade Area (AFTA) within a decade. They will be joined by Japan and South Korea. The move is clearly towards creating a "common Asian market". This trade block will match the economic might of the European Union and North American Free Trade Area. The size of the market will be huge, around $3 trillion. Both India and China have already signed the Framework of Economic Agreement with the ASEAN countries with the 'early harvest program', which covers the areas of economic cooperation and common list of items for exchange of tariff concessions as a confidence building measure. India and China both have made progress in the implementation of the agreement.

Besides this agreement, India has also concluded sub-regional agreement with Bangladesh, Sri Lanka, Thailand, Myanmar, Nepal and Bhutan. This block is known as BIMST-EC. This is seen as a bridging link between two regional groupings that are SAARC and ASEAN. India has also concluded bilateral free trade agreement with Sri Lanka and Thailand. The Framework Agreement on ASEAN-China Comprehensive Economic agreement sets out modalities of cooperation in trade, investment and facilitation. The motivation of the agreement is both political and economic. Politically, China wishes to remain on friendly terms with its neighbors on its southern front. The agreement is to alley ASEAN concerns about conceived Chinese threat with its economic rise. China is eyeing the ASEAN natural resources, particularly oil and its large market. Closer economic relations with ASEAN will enable China to build its geo-political influence in Southeast Asia and counter balance the influences of Japan and the U.S.

China's accession to the WTO has changed its outlook about her as well as towards the outside world. Both its exports and imports have grown

faster than the world trade in recent years. As China's trade with the rest of the world has deepened, its composition and geographical pattern have also shifted. Its overall share of exports to advanced countries has not only increased, but has also diversified. At the same time, China has become increasingly important within the Asian regional economy. Vertical specialization of production within Asia has led to an increasing share of China's imports coming from within the region, and China is now among the most important export destinations for other Asian countries.

Trade reforms and commitments made as a part of China's accession to the WTO have been crucial in promoting its integration with the global trading system. These reforms included substantial tariff reductions and dismantling of most non-tariff barriers; improved market access following WTO accession has been important. Continued implementation of WTO commitments in the coming years will further facilitate China's ongoing integration with the global economy and generate benefits for most partner countries. However, it may also pose some challenges and the extensive safeguard provisions under the WTO agreement represent a downside risk that could constrain China's export growth in the future.

Chapter I

Introduction

Both India and China are large economies. Their domestic markets provide vast scope for diversified industrialization and trade. Both economies are classified by international agencies as emerging markets with potential for rapid economic growth. Both economies possess the capacity to become the 'power houses' of global economy. There are many similarities between the two economies such as vast pool of employable labour and abundance of natural resource endowments. Also both countries suffer from paucity of capital and a large a large part of population is still dependent on farm activities. Poverty and relatively poor standard of living continue to affect a large number of people in both the countries. Eradication of poverty and improvement in living standard, therefore, are seen as the basic objectives of development and acceleration in the rate of economic growth as the means to achieve them.

China began to open up its economy through gradual process of economic liberalization in 1978. India started the process in 1991. Over the years, several economic reform measures were adopted to enhance industrial competitiveness. Host of measures were adopted to attract foreign direct investment (FDI) to modernize a whole range of production techniques, systems and management. With these steps, efforts are being made to integrate the domestic market with the global market. Both India and China are growing at relatively faster rate than most other countries in recent years; this situation offers opportunities for expanding inter-se trade on the basis of production complementarities. Growing exports do create intensive competition in world market in product lines where both are competitive. It is in this backdrop, the present study has been undertaken.

China's entry into the WTO was an important event in terms of the integration of one of the world's fastest growing economy. It would enable global trading to expand rapidly. It has opened up new opportunities and challenges to Indian enterprises in domestic, Chinese and global markets. Chinese products will compete in India's domestic market on the basis of the WTO market access agreements. Similarly, Indian enterprises will get access to China's domestic market. Both countries will compete on the same footing in the world market. Besides, both countries are making efforts to attract FDI to expand production, upgrade technology and management practices. In the recent period, the Chinese trade regime has undergone many changes to bring in conformity with the rules and regulations stipulated as a condition to Chinese entry into WTO. Import tariffs have to be brought down and industrial tariffs have come down to an average of 8 per cent and tariffs on farm products to 14.5 per cent. Many of the trade distorting non-tariff barriers have already been removed and steps are taken to reduce subsidies and other government support programs. Similar policy measures are being undertaken by India in a calibrated manner over a period of time.

India and China have pledged to achieve two-way trade target of $20 billion in 2008 and $30 billion in 2010 from the level of $13.6 billion in 2004. India's exports to China crossed $7.7 billion and imports from China reached $5.9 billion in 2004. This rise is largely due to commodity diversification along the inter-industry lines. Now, China is emerging as the second important trade partner for India, next only to the US.

The present study examines the issues pertaining to**:** a**)** impact of China's entry into WTO on India in terms of exports, imports, and inflow of FDI; b**)** prospect for enhancing trade in existing product lines and creating fresh avenues in new product groups by analyzing export and import structures of both the economies and scope for creation of trade complementarities in the intra-industry and inter-industry framework; c)

assessment of the competitive power of both the countries in the major markets such as the US, the EU, Japan, and ASEAN particularly, in the labour intensive manufacturing products such as textiles, garments, leather products, chemicals and host of light engineering products; d) impact of FDI inflow on exports of both the countries; and e) the likely impact of China and India joining Asian Free Trade Area (AFTA) in 2010 and 2011 respectively.

Assessment of trade policy developments indicates that both the countries have benefited from import liberalization to a large extent. This is evidenced by growth in exports and imports. China cut trade restrictions on imports and exports in a gradual manner. By the time China entered the WTO in 2001, the import regime had been entirely transformed. The share of imports subject to licensing requirements had fallen to less than 4 per cent of all commodities. Besides, sweeping changes in trading rights and reduction in the scope of state controlled trading organizations had been undertaken. India too abolished quantitative restrictions on most of the commodities. Import tariffs were drastically reduced and non-tariff barriers dismantled in both the countries. However, tariff duties remained relatively higher in India than in China. The Chinese commitment to the WTO compelled China to cut tariffs but it was not the case with India. The import liberalization policy of India was more calibrated. At the outset, it appears that China is more open as compared to India on the trade policy front. These facts enable us to analyze the reasons for the rising trade between the two countries.

The study presents an overview of Indo–China bilateral trade ever since China began its economic liberalization program in 1978. Analysis includes growth trends in exports, imports, commodity composition, patterns exports, and imports of both the countries. Based on this analysis, potential products for future expansion of trade have been identified. In assessing trends in Indo-China bilateral trade, taking account especially of the size of the Chinese market and its presence in international trade.

In considering the impact of China's entry into WTO on India's exports, it should be noted that both India and China have comparative advantage in the export of labor-intensive manufactured goods due to low costs of labor. India competes with China in export of many products such as textiles, garments, leather, and leather products, chemicals, and wide range of light engineering items. Thus, India will have stiff competition from China since most of its export items are also principal commodities in the Chinese export basket. The trade composition of both the countries is similar, and so is their trade direction, the US, the EU, and Japan being their main trade partners. Further integration of Chinese economy with the rest of the world is likely to have a negative impact on India's exports. This hypothesis has been examined in the light of growth trends and revealed comparative advantage of specific products in the important markets for both the countries.

On the other hand, an increase in China's imports would have a positive impact on India's exports. Main commodities imported by China like machinery, mineral and mineral products, iron and steel, organic chemicals, agricultural products are principal commodities in the Indian export basket. Given that China will have to lower tariffs on many of its imports and phase out many subsidies, there would be some increase in India's exports to China. The extent of this influence has been evaluated. Next, we have considered the impact on India's imports. Unlike exports, impact on India's imports is likely to be small. The bilateral trade between India and China is quite limited, with India's exports to China constituting about 1 per cent of latter's total imports and India's imports from China is over 5 per cent of our total imports. Thus, given the limited volume of bilateral trade with China, there will be little impact of China's entry into WTO on India's imports, at least in the short run.

So far as FDI inflows are concerned, China has been attracting much larger inflows than India. These FDI inflows into China were oriented towards production of goods and services for its domestic markets and such

of the exports that will increase as a result of opening up of many new sectors with its accession to WTO. FDI inflow into India though not as large as in the case of China, is expected to be determined by similar factors. India will have similar reforms and opening of additional sectors in the near future, and domestically-oriented FDI is country specific, and would be primarily determined by the pace of macroeconomic reforms in India. The impacts of China's entry into WTO on export-oriented FDI inflows are positive. Since, there is only limited amount of export-oriented FDI, and many countries compete for it, the impact on inflow of export-oriented FDI into India is likely to be marginally negative but the exact effect may be hard to determine. India is not considered to be competitive in attracting FDI, particularly of the export-oriented type as compared with China. Chinese success in attracting FDI inflows has been primarily due to its large Special Economic Zones which have efficient physical infrastructure, streamlined administration, cheap skilled labour, flexible labour laws, and favourable regulatory and tax treatment of foreign firms. If India creates such an environment, it may be able to attract increased flow of FDI. India has taken initiative by setting up Special Economic Zones, which may help to attract more FDI inflows.

Recently, India and China have decided to join the ASEAN led Asian Free Trade Area (AFTA). China will join in 2010 and India in 2011. Before that both the countries would bring down tariff duties, near to the level of the ASEAN, so that further harmonization becomes easy and trade integration would be achieved by 2020. As a precursor, India has signed free trade agreement with Thailand and similar agreement with Singapore is on the cards. China is moving in this direction with the ASEAN countries. Impact of these agreements will have some spillover effect on Indo-China bilateral trade. Further, China has proposed free trade agreement with India. The matter has been referred to a Joint Study Group.

DATA SOURCES

The main data sources used in the study are:

- The UN Commodity Trade Statistics
- WITS, a trade database of UNCTAD
- DGCI & S Trade data
- Asian Development Bank database
- India trade database of Centre for Monitoring Indian Economy
- WTO database on tariff schedule
- PRC General Administration of Customs, China's Custom Statistics
- Primary Survey conducted by ISID in major cities of India
- Reserve Bank of India data base

METHODOLOGY

The export and import products that are included in the analysis constitute at least 0.25 per cent each of India's exports and imports to China. The analysis is based on 6- digit level H.S. code 1996.

For an overview of Indo-China bilateral trade ever since China began economic liberalization in 1978 and from 1996 we have done a detailed analysis of Indo-China bilateral trade by using UN Commodity Trade Data. This overview includes macro level trends in export, import, trade diversification, trade intensity, factors behind the increase in trade and complementarities in bilateral trade between the two countries.

We have measured competitiveness of Indian and Chinese products in respective markets as well as in third country markets such as the US, the EU, Japan and the ASEAN. Indexes such as market share, relative unit prices and revealed comparative advantages (RCA) are used for this purpose. We have measured the potential of Indian export to China and Indian imports from China through indexes such as growth rate of market share and indexes of potential trade.

A primary survey was conducted with a view to assessing the role of manufacturing companies, trading houses and exporting companies in enhancing inter-se trade between the two countries. The basic objective was to evaluate the competitive strength of Indian products in Chinese market and Chinese products in Indian market. For this purpose, the views of large-, medium-, as well as small-sized companies were sought. The preference for branded and non-branded products (exports and imports) offered the scope for assessing the standardized products from both the sides. The trading margins on each of the commodities helped to understand the competitiveness of the products exported and imported. It also underlined the importance of inter-industry and intra-industry trade in the overall Indo-China bilateral trade. The assessment of price and quality was among the major aspect of analysis made possible by the primary survey. It also helped draw some inferences about the sustainability of India's exports to China and imports from China.

Plan of the Study

After this introductory chapter which provides brief introduction to the theme of the study, data sources and the methodologies employed in the study, chapter 2 illustrates the trade development policies adopted in China and India and differences in substance and contents. Further, it lists out the commitments made by China in joining the WTO. Chapter 3 is devoted to provide the picture of Indo-China bilateral trade during the period 1997 to 2003. It indicates India's export intensity to China and China's export intensity to India. Also, it identifies commodity concentration of exports and imports in bilateral trade. The reasons for rise in India's exports to China and India's imports from China are also found. Chapter 4 deals with the structure and potential of Indo-China bilateral trade and measures the degree of complementarities in trade between the two countries. It throws light on competitiveness of Indian products in the Chinese market and potential of Indian exports to China. Similarly, it describes the competitiveness and

potential of Chinese products in Indian market. Chapter 5 deals with the competitiveness of exports of India and China in third country markets, specifically, in the US, the EU, Japan and ASEAN markets; the exports consist of those commodities which have high competitiveness in each of the markets. Chapter 6 illustrates the role of FDI in export enhancement of China and India along with the assessment of special economic zones in both the countries. It also underlines the evolution of outward flow of FDI from China and India in recent years. Chapter 7 describes the position of India and China in the ASEAN led Asian Free trade Area in the foreseeable future. Chapter 8 lists out main findings and concludes the study.

Chapter 2

India and China Trade policy Developments

Section I
Trade Policy Developments of China

To begin with, China was an autarkic economy in which foreign trade was a residual of the economic plan. Except for Soviet assistance in the 1950s, foreign operations for the most part were nationalized or closed. In the 1960s and 1970s, China imported the production equipment that was deemed vital to its basic industrial development. Exports were planned to finance these imports, keeping an overall trade balance. Prior to the late 1970s, China's commodity trade was determined almost entirely by economic planning. The State Planning Commission's import plan covered more than 90 per cent of all imports. The export plan was also comprehensive and specified the physical quantities of more than 3000 individual commodities. A handful of state owned foreign trade corporations were responsible for carrying out the trade plan prior to 1978. Since the planning process was carried out in physical terms, the exchange rate and relative prices played little role in determining the magnitude and commodity composition of China's foreign trade. A significant share of China's exports consisted of goods for which China did not enjoy a comparative advantage in production. The producers of export goods had no economic incentive to expand their international sales. Therefore, the volume of China's trade grew relatively slowly. China's share of world trade dropped markedly from 1.5 per cent in 1953 to 0.6 per cent in 1977[1]. The system depressed the volume of trade and distorted commodity composition of foreign trade. Rather than concentrating on labor-intensive goods, China exported significant quantities of capital-intensive goods.[2] This system of physical planning of foreign trade was gradually dismantled in

---

1 Lardy Nicholos. R, China in the World Economy, p1

2 Lardy Nicholos. R, Chinese Foreign Trade, The China Quarterly, No. 131, September 1992, pp. 695-700.

1980s and by the end of 1990s was largely abandoned. The government through its foreign trade companies continued to maintain direct control on a few important commodities. Otherwise, most of the trade was decentralized and increasingly market determined. A number of firms were authorized to engage in foreign trade. The reforms of pricing of traded goods were increasingly transmitted to the domestic market. Further, an exchange rate policy was adopted that did not discriminate against exports. Direct trade controls were phased out and the system began to rely more on indirect instruments such as tariffs and non-tariff barriers to regulate the flow of imports and exports.

On the import side, in the early years of the reform era, China maintained a complex and highly restrictive system of controls such as tariffs, quotas, and licensing requirements and an array of other tools. These included limiting the number of companies authorized to carry out trade transactions and restricting the range of goods that each of these companies was allowed to trade, import substitution lists, a system of registration for selected imports, and commodity inspection requirements. By the time China entered the WTO in 2001 the import regime had been entirely transformed. The average statutory tariff, which stood at the relatively high level of 56 per cent in 1982, was reduced to 15 per cent by 2001.The share of all imports subject to licensing requirements fell from a peak of 46 per cent in the late 1980s to fewer than 4 per cent of all commodities by the time China entered the WTO. The government abolished import substitution lists and authorized large number of companies to engage in foreign trade transactions. The transformation was similarly far reaching on the export side. At their peak in 1991, for example, two-thirds of all exports were subject to export licensing and quotas. But by 1999 only 8 per cent of all exports were so encumbered.

Three other policies were critical to the expansion of China's foreign trade over the past two and a half decades. First is the reform of the pricing

and allocation of foreign exchange. In the pre-reform era, the state fixed the exchange rate at an overvalued level to implicitly subsidize the import of high priority capital goods that could not be produced domestically. Overvaluation of the domestic currency led to excess demand for foreign exchange relative to supply, necessitating a rigid system of exchange control. The key elements of this control system required that the exporters surrender 100 per cent of their foreign exchange earnings to the government; rigid limitations on the rights of individuals to hold foreign currency; and strict controls on the outflow of capital. Beginning in the early 1980s, the state gradually modified these features of the foreign exchange system. Exporters were allowed to retain a share of their foreign exchange earnings. That gave them the ability to finance imports without the need to seek permission to purchase foreign exchange, which was a substantial incentive to sell into the international market. At the later stage, the government devalued the currency from nominal exchange rate of RMB 1.5 to RMB 8.7 per dollar in 1994 when fixing the official exchange rate at the rate then prevailing in the parallel foreign exchange market. This ended the prevailing dual exchange rate system.[3] In real terms, China's currency lost just over 70 per cent of its value between 1980 and 1995. In two years time, the Chinese authorities announced that the currency was convertible on current account transactions, meaning that importers could purchase foreign exchange without restrictions.

Second policy support for rapid growth of China's foreign trade was the decision of the State Council in 1984 to rebate the indirect taxes that reduced profitability of exporting. This reform, which is allowed under the rules of the WTO, permits China, which relies on indirect taxes such as the value-added tax, to compete with firms in countries that rely primarily on direct taxes such as the corporate and individual income tax. A third policy that helped the rapid expansion of China's exports over the past decade is the

[3] Just prior to the unification of the two rates at the market rate of 80 per cent of all foreign trading was on the parallel, unrestricted market.

duty drawback system that supports China's export processing program. This system, which was formalized in the second half of the 1980s, rebates import duties on raw materials, parts and components used in export processing, allowing export processing to take place at world prices, free from tariff or domestic pricing distortions. The rapidly increasing share of total exports contributed by processing suggests the importance of this initiative. By 2002, processed exports reached $180 billion and accounted for 55 per cent of China's total exports. As reforms took foothold, export growth became increasingly concentrated in labor-intensive products in which China has a relatively strong comparative advantage. In the early years of reform, China exported primarily agricultural products, petroleum, and petroleum products. Later China shifted increasingly into manufactured goods, particularly light manufactures. The share of primary products exports fell by almost four-fifth, from an average of 45 per cent of total exports in the first of the 1980s to 10 per cent by 1999.[4]

China's fastest growing exports have been labor-intensive manufacturers - textiles, apparel, footwear, and toys. Between 1980 and 1998 exports of these items rose more than ten-fold, from $4.3 billion to $53.5 billion. The share of China's total exports accounted for by these four product categories soared from 6.9 per cent to 29.1 per cent during this period. In textiles, China's share almost doubled from 4.6 per cent in 1980 to 8.5 per cent in 1998. The increase was even faster for apparel where China's share of global exports more than quadrupled from 4 per cent to 16.7 per cent over the same period. Similarly the expansion in the world market share for toys-from 2.3 per cent to 18.9 per cent in this period. China's share of the world market for footwear rose the fastest of all, soaring from1.9 per cent in 1980 to 20.7 per cent.[5] Recently, China has become an important location for the assembly of consumer electronics, computers and other information technology products.

4 National Bureau of Statistics, China statistical Yearbook 2002 (Beijing: Statistics Press, 2002), p 613.

5 Lardy Nicholos R, Integrating China into the Global Economy, p.56.

While some of these goods have a high- tech appearance, the high value parts and components are still mostly sourced off shore and assembly of final goods in China is relatively more labor-intensive. The growing importance of these goods is reflected in the US market where imports from China rose sharply, from 426 million in 2000 to $3.5 billion in 2002. During this period China displaced the European Union, Mexico and Japan to become the largest supplier of high tech goods to the US.[6]

The cumulative inward foreign direct investment (FDI) was about $480 billion in China by the end of 2003. This is the largest of any emerging market economy. Over half of FDI has gone into the manufacturing sector, where there are very few restrictions on foreign ownership. The economic importance of foreign affiliates in China is reflected in their contribution to manufacture goods output, which in 2002 stood at 30 per cent. Contrary to the impression that foreign affiliates have invested in China mostly as manufacturing platform for sales into the global market, about 60 per cent of the output of joint ventures and wholly foreign-owned firms is sold on the domestic market.[7]To sum up, China is perhaps the best example of the positive connection between openness and economic growth. Economic reforms in China transformed it from a highly protected market to relatively more open emerging market economy by the time it came into the WTO at the end of 2001.

Foreign Trade Regime of India

In comparison, India was relatively a more open economy, even though the emphasis was on inward looking import substitution policy. However, the foreign exchange crisis in 1956 - 57 put an end to the phase of liberalization and comprehensive import controls were introduced and

6 American Electronic Association, Tech Trade Update 2003, Washington D.C., 2003, p 5.

7 For the years 1994 through 2002 the share of output of foreign manufacturing affiliates sold on the domestic market has ranged between 55.0 and 63.5 per cent.

maintained until 1966[8]. In June 1966, under the pressure from the World Bank, India devalued the rupee from 4.7 to 7.5 rupees per dollar. This 57.5 per cent devaluation was accompanied by some liberalization of import licensing and cuts in import tariffs. But by 1968, intense domestic reaction to devaluation led India to turn inward with vengeance.[9]Almost all liberalizing initiatives were reversed and import controls tightened. This regime was consolidated and strengthened in the subsequent years and remained more or less intact until the beginning of a period of phased liberalization in the late 1970s.

The severity of the import controls was reflected in a decline in the proportion of non-oil and non-cereals imports in the GDP from the low level of 7 per cent in 1957-58 to an even lower level of 3 per cent in 1975-76. Since consumer goods imports were banned, the incidence of this decline was mainly borne by machinery, raw materials and components. The impact on the pattern of industrialization and efficiency was visible. During this period, import-substitution policies were followed with little regard to costs. It resulted in extremely diverse industrial structure and many industries had high production costs. There was a general problem of poor quality and technological backwardness, which beset even low cost sectors with comparative advantage such as textiles, garment, leather goods, and primary industries such as cotton[10]. The fact is that import substitution reduced import of substitute products but it resulted in increased demand for imported capital equipment, technology and raw materials. By 1976, however, the resulting obsolescence of the capital stock and technologies of many industries becoming apparent, and a steady liberalization of imports of capital

---

8 Bhagwati, Jagdish N. and Desai Padma, (1970), India-Planning for Industrialization, Oxford University Press.

9 Bhagwati, Jagdish and Srinivasan, T N., Foreign Trade Regimes and Economic Development: India, New York, National Bureau of Economic Research.

10 Prusell, Garry (1992), Trade Policy in India, in Dominick Salvatore (ed.) National Trade Policies, New York: Greenwood Press, pp. 423-458.

equipment and technology began thereafter. Against this backdrop, reforms were undertaken in late 1970s and 1980s.

The prevailing regime rested on a complex system of licensing but involved no explicit quantitative restrictions. Import was done through a liberal grant of licenses, without any policy announcements. The pace of import liberalization picked up significantly in 1985. In response, the external sector registered a dramatic improvement in performance. Exports, which had grown at a paltry 1.2 per cent rate during 1980-85, registered a rapid annual growth rate of 14.4 per cent during 1985-90. However, exports grew much slowly than the imports. Broadly, five import-liberalizing steps can be identified. First, the OGL list was steadily expanded. The list was reintroduced in 1976 with 79 items on it. By April 1990 when the import policy covering years 1990-93 was issued, the list came to have 1,339 items on it. In 1987-88, 30 per cent of all imports entered under OGL. The inclusion of an item in OGL list was usually accompanied by an "exemption" which amounted to a tariff reduction. In most of the cases, the items on the list were machinery or raw materials for which no substitutes were produced at home. The second source of liberalization was the decline in the share of canalized imports. Between 1980-81 and 1986-87, the share of these imports in total imports declined from 67 per cent to 27 per cent. Over the same period, canalized non-POL (petroleum, oil and lubricants) imports declined from 44 per cent to 11 per cent of total non-POL imports. This change significantly expanded the room for imports of machinery and raw materials[11]. Third, several export incentives were introduced after 1985, which helped expand imports directly when imports were tied to exports and indirectly by relaxing the foreign exchange constraint. Replenishment (REP) licenses could be freely traded on the market and it helped to relax foreign exchange constraints on some imports. The main feature of the REP licenses was that it allowed the

[11] The decline in the share of canalized imports was due to increased domestic production of food grains, cotton and crude oil, and reduced world prices of canalized imports such as fertilizers, edible oils, non-ferrous metals and iron and steel.

holder to import items on restricted list. Even though their limits to the import competition were provided through these licenses, as exports expanded, the volume of these imports increased as well.

Fourth source of liberalization was significant relaxation of industrial controls and related reforms beginning in 1985. By 1990, 31 industries were completely de-licensed, the investment limit below which no industrial license would be required was raised to Rs. 500 million in backward areas, and Rs. 150 million elsewhere, provided the investments were located in both cases at stipulated minimum distances from urban areas of stipulated sizes. Products subject to Small Scale Industries (SSI) reservation were off limits though the asset ceiling of firms designated as SSI units was raised from Rs. 2 million to Rs. 3.5 million. Broad banding, which allowed firms to switch production between similar production lines such as trucks and cars was introduced in 1986 in 28 industry groups. This provision was expanded in the subsequent years and led to increased flexibility in many industries. In the same year, the firm that has reached 80 per cent capacity utilization in any of five years preceding 1985 was assured authorization to expand capacity up to 133 per cent of maximum capacity utilization reached in those years. To relax the hold of the licensing and capacity constraints on larger firms (subject to MRTP Act), the asset limit was raised from Rs. 200 million to Rs. 1000 million and the requirement of MRTP clearances was waived for 27 industries, subject to certain conditions. This measure significantly enhanced the freedom of large firms to enter new products. Price and distribution controls on cement and aluminum were entirely abolished. The final and important source of external liberalization was a realistic exchange rate and rupee was allowed to depreciate in response to market signals. During this period, the export sector grew rapidly.

Trade liberalization program initiated in July 1991 was comprehensive but gradual. The reform virtually abolished import licensing on intermediate

inputs and capital goods. However, consumer goods accounting for nearly 30 per cent of tariff lines remained under licensing. It was only after a challenge by India's trading partners in the Dispute Settlement Body (DSB) of the WTO that these goods were freed of licensing a decade later in April 2001. Now, except a handful of goods disallowed on environmental, health and safety grounds and a few others that are canalized such as fertilizers, cereals, edible oils and petroleum products, all goods can be imported without license or any other restrictions. The tariff rates had been raised during 1980s to turn quota rents into revenue. According to the Government of India[12] (1993), tariff revenue as a proportion of imports went up from 20 per cent in 1980-81 to 44 per cent in 1989-90. Similarly, in 1990-91, the highest tariff rate stood at 355 per cent, simple average of all tariff rates at 113 per cent and the import weighted average of tariff rates at 87 per cent.[13] With the removal of licensing, these tariff rates became effective restrictions on imports. Therefore, the main task of the reforms in the 1990s and beyond has been to lower tariffs. This has been done in a gradual manner by compressing the top tariff rate while rationalizing the tariff structure through a reduction in the number of tariff bands. As a result, tariff rates fell over the years.

The 1990s trade liberalization was also accompanied by the liberalization of foreign exchange regime, which with various controls had served as an extra layer of restrictions on imports. In 1991, the government devalued the rupee by 22 per cent against the dollar. In February 1992, a dual exchange rate system was introduced, which allowed exporters to sell 60 per cent of their foreign exchange in the free market and 40 per cent to the government at the lower official price. Importers were authorized to purchase foreign exchange in the open market at a higher price, effectively ending the exchange control. Within a year of establishing this market exchange rate, the official exchange rate was unified with it. Starting in February 1994, many

12 Government of India (1993), Tax Reform Committee: Final Report, part II, Ministry of Finance, New Delhi.

13 WTO (1998), Trade Policy Review: India, Geneva: WTO Secretariat.

current account transactions including all current business transactions, education, medical expenses, and foreign travel were also permitted at the market exchange rate. These steps culminated in India accepting the IMF Article VIII obligations, which made the rupee officially convertible on the current account. The impact of liberalization was positive. The ratio of total exports of goods and services to GDP doubled from 7.3 per cent in 1990 to 14 per cent in 2000. This rise was less dramatic on import side due to the fact that increased external borrowing was still financing a large proportion of imports in 1990, which was not true in 2000. But the rise was still significant from 9.9 per cent in 1990 to 16.6 per cent in 2000. Within ten years, the ratio of total goods and services trade to GDP rose from 17.2 per cent to 30.6 per cent. Nevertheless, this is substantially lower than the corresponding ratio of 49.3 per cent achieved by China in 2000.

The opening of the economy to international trade has raised the share of trade in the GDP. Goods and services trade has increased from an average of 15.1 per cent of the GDP in 1980-81 to an average of 24.8 per cent of the GDP in 2000-01. Similarly, merchandise trade, which has averaged 12.6 per cent of the GDP in the decade of the 1980s increased to an average of 20.1 per cent of the GDP in the 1990s. The change on import side has been less than on the export side. In the 1980s, imports were 7.2 per cent of the GDP and it increased to 9.8 per cent in 1990s. As result, the proportion of imports financed by exports has increased from 59 per cent in 1980s to 74 percent in the 1990s. Manufactured exports responded well to the trade reform and increased from an average of 60.7 per cent to 76.1 per cent of total exports form 1980s to 1990s. The importance of manufactured exports to domestic enterprises has increased, which has more than doubled from 6.4 per cent in 1980s to 13.2 percent in the 1990s. Thus, even with many domestic controls and policy distortions still hampering manufacturing in India, this sector has demonstrated its comparative advantage vis-à-vis other trade sectors. Despite these changes in the trade account, the trade deficit has not changed

significantly in the 1990s. India's share in the world exports continues to increase from 0.52 per cent in 1990 to 0.67 percent in 2000. This increase was higher than in the 1980s because of the gradual lifting of the quantitative restrictions and reductions in import duties. Overall, it may be said that the liberalization of the external sector during 1990s was successful in meeting the BOP crisis of the decade and putting the BOP on a sustainable path. These reforms improved the openness of the Indian economy.

Trade Policy comparison

It may be useful to make India's trade policy comparison with China because both the countries are of comparable sizes and both have a history of inward-looking trade policies. Further, China's selective liberalization amounted to a release from a command economy, while India's reform occurs in the context of a controlled economy. Moreover, China's trade is characterized by a high fraction of re-exports, in particular via Hong Kong, so that trade volume measures may not capture China's true level of openness. Despite these drawbacks, India's trade policy regime with China's yields useful policy lessons. The reduction in average tariffs is a general phenomenon in both India and China. In India, the biggest reduction occurred in the immediate aftermath of the 1991 BOP crises and trend towards reduction in average tariffs was reversed in 1998. Indian tariffs increased slightly since then, as the result of conversion of non-tariff barriers to tariff barriers, in line with the Article XI of GATT. India's average tariff in 1999, 32.5 per cent (against China's 16.3 per cent in 2000) and 28.3 percent in 2004 (as against China's 9.8 per cent in 2004), remained higher than China's tariff (for details see Table - 2.1).

Table - 2.1
Mean Weighted and Unweighted Tariffs–India and China

	Year	Mean tariff %	Std. Deviation of Tariff rates %	Weighted mean tariff %
All Products				
China	1992	40.4	32.1	32.1
	1997	17.8	13.2	20.9
	2000	16.3	10.7	14.7
	2004	9.8		6.0
India	1990	79.8	39.4	56.1
	1997	30.0	14.0	27.7
	1999	32.5	12.3	28.5
	2004	28.3		28.0
Primary Products				
China	1992	36.1	26.2	22.3
	1997	17.8	18.2	19.9
	2000	16.5	-	18.8
	2004	10.0		5.6
India	1990	69.8	38.4	34.1
	1997	25.7	22.6	22.6
	1999	30.9	-	23.2
	2004	30.0		36.9
Manufacturing Products				
China	1992	40.6	33.4	35.6
	1997	17.8	11.2	21.2
	2000	16.2	-	13.7
	2004	9.7		6.0
India	1990	79.9	39.4	70.8
	1997	31.3	9.8	29.5
	1999	32.8	-	32.7
	2004	26.9		25.3
Source: World Development Indicators (various years)				

A simple unweighted tariff, suggests that India is much more restrictive to trade as compared to China. Of course, simple consideration of unweighted average tariffs is not enough to characterize India's trade policy. Table - 2.1 displays average weighted and unweighted tariff rates for India and China for various years since 1990. Once weighted by the share of imports, differences in tariff rates as of 2004 were sharper than to those for unweighted rates–6.0 percent for China and 28.0 per cent for India. The smallest difference was in manufacturing (6.0 per cent versus 25.3 per cent

respectively for China and India), with larger differences in primary products (5.6 per cent versus 36.9 per cent respectively for China and India). Perhaps more importantly than average levels, the standard deviation of tariff captures the degree of distortion of the trade regime. The fact is that the rate of effective protection, which results from the fact that both a producer's output and inputs are covered by tariffs, is equal to the statutory tariff rate if the latter is uniform across inputs and outputs. Moving towards uniform tariff rates, therefore, goes some way towards reducing the peak rates of effective protection. Part of India's trade liberalization has consisted of a reduction in the dispersion of tariff rates.

Another way to assess the magnitude of tariffs, weighted by the volume of imports, is to examine the ratio of import tax revenue to total imports. This may provide a less accurate picture of the state of current policy, since the figures do not refer to statutory rates. But they may provide another notion of the degree of openness of trade regime, perhaps closer to the actually enforced average tariff rate. For both the countries, the ratio has fallen over time, India's import duties to total imports is much greater than that of China's (21.67 per cent for India versus 2.76 per cent for China in 1998). The tariff rates in India since 1999 reveal a tendency for average tariffs to rise (may be seen from Table - 1). This is particularly pronounced for primary products, but holds also for manufactured products. This is largely the result of the conversion of quantitative restrictions to tariff barriers, required because of GATT's Article XI. Higher tariffs substituting for phased-out QR's were possible in the context of high negotiated tariff bound rates under the Uruguay Round agreement.[14] Many trade defensive measures were put in

[14] According to the WTO's Trade Policy Review of India in April 1998, under the Uruguay Round, "India has bound 67 percent of all its tariff lines, whereas prior to that only 6 percent of tariff lines were bound. The bindings range from 0 to 300 percent for agricultural products and from 0 to 40 percent for other products". Negotiated reductions in these bound rates have been slow to come since they were agreed to in 1990, providing the Indian government with considerable leeway to raise tariffs.

place to provide adequate protection and a level playing field to domestic players vis-à-vis imports as a result of phasing out QR's.

Prior to 1991 liberalization, the QR protected share was as high as 93 per cent in total tradable GDP, and it had come down to 66 per cent by 1995. Data from the World Bank suggests that, in the period 1991-93, the coverage rate of non-tariff measures for India was 62.6 per cent, and for China 11.3 per cent, as percentage of tariff lines.[15]This coverage rate has fallen below 4 per cent of the import tariff lines in China in 2000. The decline in falling rate of coverage of QR's has been spectacular and it declined to 12.96 per cent in 2000 and 5.30 per cent in 2001. Out of 10,149 tariff lines, 9,611 were free of QR's, 479 were restricted and only 59 were outright prohibitions. Since 1995, India has increasingly made use of the anti-dumping measures. India has slowly moved to the top of the list. According to the WTO, India is first in terms of measures actually enacted, with 94 measures in place versus 65 for the US in 2000-01. India is the most active user of antidumping measures in the world. In contrast, China has initiated a few antidumping measures since 1995[16]. It has, however, been the target of these measures[17]. In fact, roughly, 20 per cent of India's antidumping measures were directed towards China; by far China has become India's main target. Perhaps because of the increase in India's use of anti-dumping measures, she has herself become the target of such measures[18]. Antidumping, thus, appears to be a prime policy substitute used by India to

---

15 These measures comprise all quantitative restrictions (prohibitions, quotas, non-automatic licensing, VERs and MFA), price control measures (minimum, reference or basic import price systems, price surveillance and voluntary export price restraints), additional customs formalities and other entry control measures, local content requirements, but excludes Para-tariff measures, automatic licensing and import surveillance, advance payment of duties and import deposits and anti-dumping and countervailing actions.

16 China has initiated 20 antidumping cases against foreign imports by 2002. 14 of these cases came after China joined the WTO.

17 Antidumping investigations initiated against China alone totaled to 356 cases and measures were initiated in 254 cases between 1995 and 2003.

18 There were 98 cases of antidumping investigations against India of which in 50 cases measures were in place during the period 1995 and 2003.

replace reduced tariffs and phased out quantitative restrictions. However, this is not the case with China.

Although China remained more close to foreign trade than India over much of the period since 1950, the situation became reverse from mid-1980s. Since then China's trade ratio has tripled, while India's has less than doubled. By 1998, China appears almost twice as open as India. A comparison of the growth of imports and exports of merchandises shows that the volumes of both imports and exports actually decreased in average annual rates in India in the 1980-1990 decade, while they rose at rates of 13.9 per cent for exports and 15.8 per cent for imports in China. The effects of liberalization on the trend in export and import volumes is apparent since both picked up in India in the ensuing decade, although at a rate much slower than China. It is interesting to look at the structure of export and import trade of both the countries. For India, the four main merchandise export categories consists of non-metallic mineral manufactures (gems, jewelry and related products), clothing, textile yarn, fabrics, coffee, tea and spices which jointly account for 50 per cent of goods exports. China's four main exports are clothing and garments, yarn and textiles, electrical machinery and equipment, and petroleum and related products, but these categories accounted for only 31 per cent of total exports. In other words, Chinese exports are much more diversified than Indian exports. The structure of Chinese exports by products has also changed much more rapidly than India's, illustrating China's move "up the value-added ladder". In contrast, there is great stability of India's goods export structure since 1980. Industrial base did not affect the exports largely. Further, China exports more manufactured goods, as share of total exports (88 per cent of merchandise exports versus 72 per cent in India), and India's service exports represent a greater share of total exports than in China (27.60 per cent versus 10.23 per cent of total exports in 1999).

On import front, four main categories are mineral fuels, basic manufactures, machine and transport equipment, and chemicals - accounting for over 90 per cent of India's goods imports. As opposed to this the share of China's main imports - industrial machinery, textiles, electrical machinery, petroleum and petroleum products-characterized by a decline of the first two and a relative increase of the last two over the last decade. China's imports are more diversified, as the top four-import categories account for less than 35 per cent of imports. The structure of imports by geographic source suggests a decline in the shares of OPEC, the EU and the US over the last decade. The increase in the share of non-Asian developing countries as sources of imports (from 28.2 per cent in 1990 to 54.7 per cent in 2000), as well as a growing share of East and South East Asian countries as a source of Indian imports. The structure of exports by destination zone has also changed, with marked increases in the shares of the US (from 11.1 per cent of exports in 1980 to 20.9 per cent in 2000) and of Asia (from 13.4 per cent of exports in 1980 to 21.4 per cent in 2000). A very similar pattern was experienced by China, although the share of the EU and US in China's trade rose faster than in the case of India.

Section II
China in WTO

China became a member of WTO on 11 December 2001. The undertakings of China to accession of the WTO were massive and most ambitious ever made in the history of the WTO or the GATT. The Working Party of the WTO concluded the agreement after almost 15 years of negotiations with China. The 142-member governments of the WTO accepted some 900 pages of legal text. Particularly, the US and the EU secured a large number of commitments and concessions from China. As a result of negotiations, China has agreed to undertake a series of important commitments to open and liberalize its economic regime in order to better

integrate into the world economy and offer a more predictable environment for trade and foreign investment in accordance with WTO rules. Some of the commitments undertaken by China are as follows:

- China will provide non-discriminatory treatment to all WTO members. All foreign individuals and enterprises, including those not invested or registered in China, will be accorded treatment no less favorable than accorded to enterprises in China with respect to the right to trade.
- China will eliminate dual pricing practices as well as treatment accorded to goods produced for sale in China in comparison to those produced for export.
- Price controls will not be used for purposes of affording protection to domestic industries or services providers.
- The WTO agreement will be implemented by China in an effective and uniform manner by revising its existing domestic laws and enacting new legislation fully in compliance with the WTO agreement.
- Within three years of accession, all enterprises will have the right to import and export all goods and trade them throughout the customs territory with limited exceptions.
- China will not maintain or introduce any export subsidies on agricultural products.

Many of these conditions are not currently applicable to other WTO members, namely dual pricing practices, price controls and export subsidies on agricultural products. Further, implementations of China's commitments are time bound. However, this not the case with other member countries of the WTO. While China will reserve the right of exclusive state trading for products such as cereals, tobacco, fuels and minerals and maintain some restrictions on transportation and distribution of goods inside the country, many of the restrictions that foreign companies have at present in China will be eliminated or considerably eased after a 3-year phase-out period. In other areas, like the protection of intellectual property rights, China will implement

the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement in full from the date of accession. During a 12-year period starting from the date of accession there will be a special Transitional Safeguard Mechanism in cases where imports of products of Chinese origin cause or threaten to cause market disruption to the domestic producers of other WTO members. Also prohibitions, quantitative restrictions or other measures maintained against imports from China in a manner inconsistent with the WTO Agreement would be phased out or dealt with in accordance with mutually agreed terms and timetable specified in an annex to the Protocol of Accession.

Goods: As per the market access commitment, China will gradually eliminate trade barriers and expand market access to goods from foreign countries. China has bound all tariffs for imported goods. After implementing all the commitments, China's average bound tariff level will decrease to 15 per cent for agricultural products. The range is from zero to 65 per cent, with the higher rates applied to cereals. For industrial goods, the average bound tariff level will go down to 8.9 per cent with a range from zero to 47 per cent, with the highest rates applied to photographic film and automobile and related products. Some tariff will be eliminated immediately and others reduced mostly by 2004 but in no case later than 2010.

Textiles: Upon accession, China will become a party to the Agreement on Textiles and Clothing and will be subject to its rights and obligations. As for all WTO members, quotas on textiles will end on 31st December 2004, but there will be a safeguard mechanism in place until the end of 2008 permitting WTO member governments to take action to curb imports in case of market disruption caused by Chinese export of textile products.

Agriculture: China agreed to limit its subsidies for agricultural production to 8.5 per cent of the value of the farm output (as per Article 6.4 of the Agriculture Agreement). China also agreed to apply the same limit to subsidies covered by Article 6.2 of the Agriculture Agreement.

Services:

Telecom: Upon China's accession, Foreign Service suppliers will be permitted to establish joint venture enterprises, without quantitative restrictions, and provide services in several cities. Foreign investment in the joint venture shall be no more than 25 per cent. Within one year of accession, the areas will be expanded to include services in other cities and foreign investment shall be no more than 35 per cent. Within three years of accession, foreign investment shall be no more than 49 per cent. Within five years of accession, there will be no geographic restrictions.

Banking: Upon accession, foreign financial institutions will be permitted to provide services in China without client restrictions for foreign currency business. For local currency business, within two years of accession, foreign financial institutions will be permitted to provide services to Chinese enterprises. Within five years of accession, foreign financial institutions will be permitted to provide services to all Chinese clients.

Insurance: Foreign non-life insurers will be permitted to establish as a branch or as a joint venture with 51 per cent foreign ownership. Within two years of accession, foreign non-life insurers will be permitted to establish as a wholly owned subsidiary. Upon accession, foreign life insurers will be permitted 50 per cent foreign ownership in a joint venture with a partner of their choice. For large-scale commercial risks, reinsurance and international marine, aviation and transport insurance and reinsurance, upon accession, joint ventures with foreign equity of no more than 50 per cent will be permitted; within three years of accession, foreign equity share will be increased to 51 per cent; within five years of accession, wholly owned subsidiaries will be permitted.

Summary of key concessions is given below:

- Reduction of the average import tariff from 24.6 per cent to 9.4 per cent.

i. From 22 to 17.5 per cent tariff for agricultural products; elimination of agricultural subsidies on exports. From 25 to 8.9 per cent tariff for industrial products[19].
ii. From 100 to 25 per cent tariff for vehicles and 10 per cent tariff for vehicle parts by 2006
iii. From 12.5 to 3.4 per cent tariff (2002) and zero (2005) for information technology products

- Farm subsidies to be capped at 8.5 per cent of production value.
- Elimination of import tariff on computers, semi-conductors and other high-tech products by 2005.
- Elimination of import quotas by 2006.
- Substantial opening of service sectors, including banking, insurance, telecommunications and professional services.
  i. Up to 49 per cent foreign ownership in telecommunications and insurance after three years of accession.
  ii. Importers to have own distribution networks.
  iii. Full market access for foreign banks within five years (currency business with local enterprises after two years) of accession.
- Broad reforms relating to transparency, notice, receptively to feed back from interested parties, uniform application of laws, judicial reviews and enforcement
- Enforcement of stipulations of numerous WTO agreements such as:
  i. Trade related investment measures: immediate lifting of norms on local content (as of accession)
  ii. Trade Related Industrial Property Rights
  iii. Technical Barriers to Trade
  iv. Information Technology Agreements

[19] By early 2001 China's average tariff for merchandise have been cut to 15.3 per cent, about half the level prevailing in India and roughly equivalent to tariffs in Brazil and Mexico. Similarly, import quotas and licensing requirements have been steadily reduced and by 2000 covered only 4 per cent of all import commodities. China's average collection rate (customs revenue divided by total value of imports) is reported to be around 3 per cent compared with 29 per cent for India.

- The WTO member countries can continue considering China as 'non-market Economy' for purpose of antidumping for 15 years.
- Item relating to product-specific safeguard mechanisms for 12 years.
- A special textile safeguard allows the US impose unilateral restrictions during 2005–08
- Firms from WTO member countries to enjoy same rights to trade as Chinese enterprises.
- All enterprises will have the right to import and export goods and conduct trade within three years of accession.
- Practice of two-tier pricing as well as different treatment for domestically sold and export goods to be abolished.
- Remaining price controls will not aim to provide protection to domestic manufacturers and service providers.
- China will be subject to a very thorough yearly oversight to monitor implementation during first eight years, involving 21 different WTO subsidiary bodies.

Accession to the WTO represents a new stage of China's economic reform and opening to the outside world, i.e. from a kind of selective liberalization to comprehensive liberalization, from unilateral liberalization to WTO rules–based liberalization. Accession will make Chinese economy fully integrated with the international trading system. Liberalization will enhance China's economic efficiency and promote industrial progress. Competition will force Chinese enterprises to improve technology and management. WTO accession will provide benefits to China in terms of security of its access to world markets. By virtue of the WTO's MFN provision, Chinese products will enjoy equal rights to enter other markets. At the same time, market access and trade disputes will be governed by the WTO rules, meaning that Chinese companies will not face discrimination in other markets. Thus, WTO membership will have significant implications for promoting Chinese economic growth. The industries such as garments, footwear, metal,

electronics and other light manufactures have shown rapid growth in exports. Imports are also increasing; however, its growth is relatively slower as compared to export growth. However, import increase has caused some problems of adjustment to small and medium enterprises. As expected, imports of textiles, food grains, feed grains, metals and petrochemicals have increased. The challenge to Chinese agricultural sector has come from cheaper imported goods and reduction of government subsidies. It has caused decline in rural incomes and the rise of surplus labor. The challenge to China's service sector is significant. It is being gradually opened up and pace of liberalization is slow compared to other sectors.

China's compliance of the WTO commitments is going according to the set timetable. Four years into the WTO, China has reached its goal in cutting manufactured goods tariffs; with the general tariff level lowered from 15.6 per cent in 2001 to 10.6 percent at the end of 2004. It has further lowered to 10.1 per cent in 2005. The tariff cuts in products have even gone ahead of the WTO set timetable. The tariff for automobiles in particular was 80 per cent to 100 per cent before China's accession to the WTO. They were 43.8 percent in 2002, which dropped to 30 per cent in 2004 and which went down to 25 per cent in 2005. The overall import duty for agricultural products has fallen from 22 per cent to 15.8 per cent. For some of the US priority products, it has dropped from an average of 31 per cent to 14 per cent in 2004, with an even sharper decrease for beef (12 per cent), poultry (10 per cent), pork (12 per cent), cheese (12 per cent), and grapes (13 per cent). China has been continuously eliminating non-tariff trade barriers since its accession to the WTO. Now, the number of quota-administered commodities has reduced to 52 in export and 8 in import. Quota license and special bidding administration were cancelled for goods under 16 tax item numbers including motorcycles and their key parts, car and key parts, camera and watch. However, tariff quotas for imports of palm oil, soybean oil, colza oil and sugar continue. The proportion

of lower tariff quota for palm oil, soybean oil and colza oil increased to 9 per cent and for wheat, it is 15 per cent.

In sensitive service trade segment, many positive steps have been taken. In the banking system, region and client limitations on foreign funded banks conducting RMB business were removed, with such business sites extending from Shanghai, Shenzhen to 13 other cities. Around 100 foreign-funded banking institutions were allowed to conduct RMB business, and establishment of independent automobile mortgage agencies were permitted. In the insurance sector, international life insurance companies were allowed to operate in more cities; nearly 40 of them have opened 70 business units in China. In retailing, the number of foreign funded companies neared 270 with more than 4500 outlets. Transnational retailing giants like Wal-Mart, Carrefour, and Metro all expanded investment in China. Forty odd laws and regulations conformed to WTO rules have been published, which improved the law of transparency. China granted full foreign trade rights ahead of schedule, allowing all enterprises at home and abroad as well as individuals to engage in foreign trade on Chinese land. As for IPR protection, a string of laws and related rules, including trademark law, patent law, copyright law and regulations on protection of computer software have been published, and a large batch of right infringement cases investigated and prosecuted.

At the outset, it appears that 4-years into the WTO, China has complied with its commitments. It adopted "stable transition" policies by avoiding strong adverse impact on domestic industries. This is due to effective measures introduced and implemented by the central and local agencies. First, protective policies on related industries played an active role. Due to the screening effect of the transition period, domestic sectors have not been hit hard by outside competitions. The automobile sector is a case in point. While fulfilling commitments, the Chinese Ministry of Commerce used WTO rules flexibly and insisted on orderly administration and proper control over

automobile import quota and through a series of adjustments effectively cushioned the blow of imported vehicles. During this period, both domestic auto manufacturing and sales increased but at the same time, imported automobiles remained approximately 4 per cent of the domestic sales. Secondly, some sectors were opened ahead of schedule, such as retailing business. The rivalry between foreign and domestic firms started long before, and home enterprises grew stronger under the competition pressure. Thirdly, in recent years, economic globalization and a fresh round of manufacturing transfer left some sectors pressed less urgently by international competition. Changes in the global market also served as a cushion. The relative stability of China's telecom sector, for example, is due to sluggish global market that left many telecom operators cautious towards investing in China. Overall, China is fulfilling its commitments to the WTO without much adverse effect on its domestic economy.

Chapter 3

Indo-China Bilateral Trade: A Survey

Two-Way Trade

India and China established diplomatic relations on April 1, 1950. India was the second country to establish diplomatic relations with China among the non-socialist countries. In 1954, Chinese Premier, Zhou Enlai, and Indian Premier, Pandit Nehru, exchanged visits and jointly initiated the famous five principles of peaceful coexistence. Due to hostile political relations, the trade between the two countries was disrupted and it resumed in 1978. Both the countries signed a Trade Agreement (Most Favored Nation Agreement) in 1984. In 1988, Indian Prime minister, Rajiv Gandhi, visited China. His visit brought the relations of the two countries into a new stage of development as the two sides agreed to maintain peace and tranquility along the lines of actual control and make efforts to improve and develop bilateral relations prior to finding a solution to boundary questions. In 2003, Indian Prime Minister, Atal Bihari Vajpayee, visited China. At that, time India and China signed agreements on visa simplification procedures and education programs besides enhancing the bilateral trade to $10 billion by 2005. Over the years, an elaborate framework for promoting trade and economic relationship has been evolved. The main areas of trade and economic relationship includes: bilateral trade, science and technology, coal, steel, civil aviation, shipping, banking, tourism, investment protection and promotion, trade facilitation, avoidance of double taxation and cooperation on WTO issues. Besides both the countries are parties to the Bangkok Agreement.

Indo-China bilateral trade developed slowly and steadily in the formative years of 1950s. The trade volume increased from Rs.41.3 million in 1950 to Rs.126.7 million at the end of the decade; on average, it grew in the vicinity of 20 per cent. However, thereafter trade volume-declined year after

year, it was Rs.11.3 million in 1962[1]. Two countries resumed their diplomatic ties in 1976 and trade began to grow rapidly. It was $25.5 million in 1978 and touched a figure of $110.1 million in 1981 (as per the Customs Administration of China total trade amounted to $165.8 million). During this period, two nations signed trade protocols that largely facilitated the two-way trade to grow. However, growth has been more or less steady. In 1981, India's export was $83.3 million that touched a figure of $97.3 million in 1990, at the annual growth rate of 1.7 per cent and imports from China grew approximately 10 per cent to reach the volume of $166.8 million in the same period. In most of the years, the trade balance remained in favor of China.

During 1990s, Indo-China bilateral trade began to expand rapidly, particularly after mid-1990s. During the decade, total two-way trade increased by 30.6 per cent per annum on an average to touch a figure of $2920 million by year 2000. (Source: China's Customs Statistics). By 2003, it has increased further to $7595.09 million. Exports from India touched a figure of $1350 million with the average annual growth rate of 34.3 per cent. In 2003, it had become $3343.59 million. Compared to the year 2000 in 2003 Indian exports to China had increased by 2.47 times, experiencing an annual average growth rate of more than 36.89 per cent. On the other hand, imports from China witnessed a figure of $1569 million by year 2000 with annual growth rate of 31.1 per cent. In 2003, it had reached $4251.50 million. Compared to the year 2000, in 2003 India's imports from China had gone up by 2.70 times with an average growth rate of 31.04 per cent. According to the data source of China's Customs Statistics, except for the year 1993, the current account of balance of trade was in favor of China till 2003 (Table - 3.1).

According to UN Commodity Trade Statistics, the trends are similar with some differences from the China's Customs Statistics. There are minor

[1] Wen Fude (1996), To Explore Potentials and Expand Sino-Indian Economic and Trade Cooperation, South Asia Studies 3,

mismatches in the exact value of the India's exports to China and imports from China until 2002. However, the major difference is lying in the figures of the year 2003. According to UN Commodity Trade Statistics, India enjoyed trade surplus with China in the year 2003.

Table - 3.1
India- China Bilateral Trade —1997 to 2003
(in million $)

Years	*Imports from India*	*Exports to India*	*Trade Balance*
1997	897.26	933.06	35.80
1998	905.70	1016.59	110.89
1999	825.72	1161.89	336.17
2000	1350.41	1569.47	219.06
2001	1699.97	1896.27	196.30
2002	2274.18	2671.72	397.54
2003	3343.59	4251.50	907.91
Source: China's Customs Statistics.			

Bilateral trade growth has been much faster in the recent years. In 1996, the total Indo-China trade was little more than $1.4 billion. By 2003, it has crossed $ 8.2 billion (See the Table - 3.2). In 2004, India became the 11th largest trade partner of China and bilateral trade between the two countries reached a total of $13.6 billion (China Daily, Feb. 25, 2005), representing an increase of 64.74 per cent over the corresponding period of last year.

Table - 3.2
India-China Bilateral Trade - 1997 to 2004
(in million $)

Years	*China's Import from India*	*India's Import from China*	*Trade Balance*	*Total Trade*
1996	719.15	756.52	-37.37	1475.67
1997	897.22	1110.55	-213.33	2007.77
1998	905.70	1097.69	-191.99	2003.39
1999	825.74	1287.18	-461.44	2112.92
2000	1353.44	1527.51	-174.07	2880.95
2001	1699.06	2057.85	-358.79	3756.91
2002	2273.82	2779.14	-505.32	5052.96
2003	4251.32	4004.50	246.82	8255.82
2004	7677.98	5944.59	-1733.39	13,622.57

Source: UN commodity trade statistics

Despite rapid growth, the share of India in China's imports is just one per cent and that of China in India's imports is around 5 per cent in 2003. As an export partner, India is of very little importance to China. India's share in China's world exports is around one per cent. However, the same cannot be said for India. Of late China has become a very important destination for India's exports. In 1996, share of India's exports to China to total Indian exports was 2.60 per cent. In 2003, it has become 7.03 per cent [See Table - 3.3]. In terms of important export partners for India, today, China stands second after the US.

Table - 3.3
Importance of India and China as Trade Partners of each other

Years	*India's Share in Chinese Import*	*China's Share in Indian Import*	*Share of China's export to India in total Chinese Export*	*Share of India's export to China into total Indian Export*
1996	0.52	1.93	0.33	2.60
1997	0.63	2.68	0.41	2.70
1998	0.64	2.58	0.40	2.77
1999	0.50	2.59	0.41	2.16
2000	0.60	2.97	0.39	3.08
2001	0.69	3.96	0.52	3.84
2002	0.77	4.54	0.61	4.84
2003	1.03	5.19	0.69	7.03
Source: UN commodity trade statistics				

Trade Intensity

The relative importance of two countries in their respective exports and imports is also demonstrated by the trade intensity index[2]. Trade intensity index measures whether the value of trade between two countries is greater, or smaller than should be expected, based on their relative importance in world trade. The value of index less than unity has been interpreted as indicating a bilateral export flow that is smaller than expected, given the partner country's importance in world export. For last three years,

[2] The trade intensity index can be defined as;

$$T_{ij} = [x_{ij} / X_{it}] \div [x_{wj} / X_{wt}]$$

Where, x_{ij} and X_{wj} are the values of country i's exports and world exports to country j, x_{it} is i's total export, and X_{wt} is total world export.

2001—2003 China's export intensity to India is lying within 0.5 to 0.65. It implies that China's export to India is much lower than expected given the Indian market's importance in world export. India's export intensity index to China, with the exception of 1999, has never been below 0.85. In the last two years, the value is greater than one (See Table - 3.4). It implies that in the years 2002 and 2003, India's exports to China are higher than expected, given the Chinese market's importance in world export. The reason behind it may be the very steep increase in India's export of iron and steel and iron ore to China, during the last couple of years. There may be other reasons too, like increasing complementarities between Indian export and Chinese import, etc., which we shall discuss later.

Table - 3.4
Trade Intensity Index for China and India

Year	*India's Export intensity to China*	*China's Export intensity to India*
1996	0.83	0.37
1997	0.96	0.50
1998	1.00	0.48
1999	0.70	0.45
2000	0.85	0.47
2001	0.95	0.60
2002	1.00	0.61
2003	1.23	0.54
Calculated by the author from UN Commodity trade Statistics		

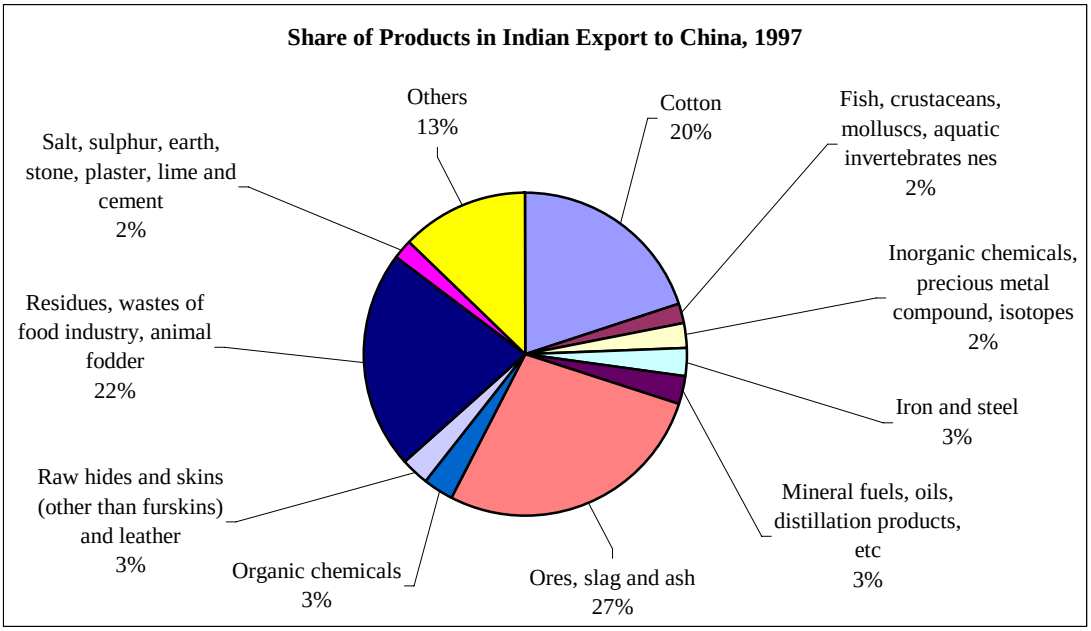
Major Exports from India to China

India's export basket was traditionally dominated by primary and resource based products in the past. It is now showing signs of diversification. Exports of iron and steel, plastics, auto components, pharmaceuticals and machinery items have been rising over the last few years. The product group such as machinery and instrument has in fact, registered a growth of over 100 per cent between 2002–03 and 2003–04. Chinese exports to India, on the other

hand, are relatively diversified and include resource based, manufactured items, as also low and medium technology products.

At the 2-digit HS96 codes, in the year 1997, the major products that India imported from China were ores, slag and ash, residuals, wastes of food industry, animal fodder and cotton. These products together constituted 69 per cent of India's imports from China in that year (Graph - 1).

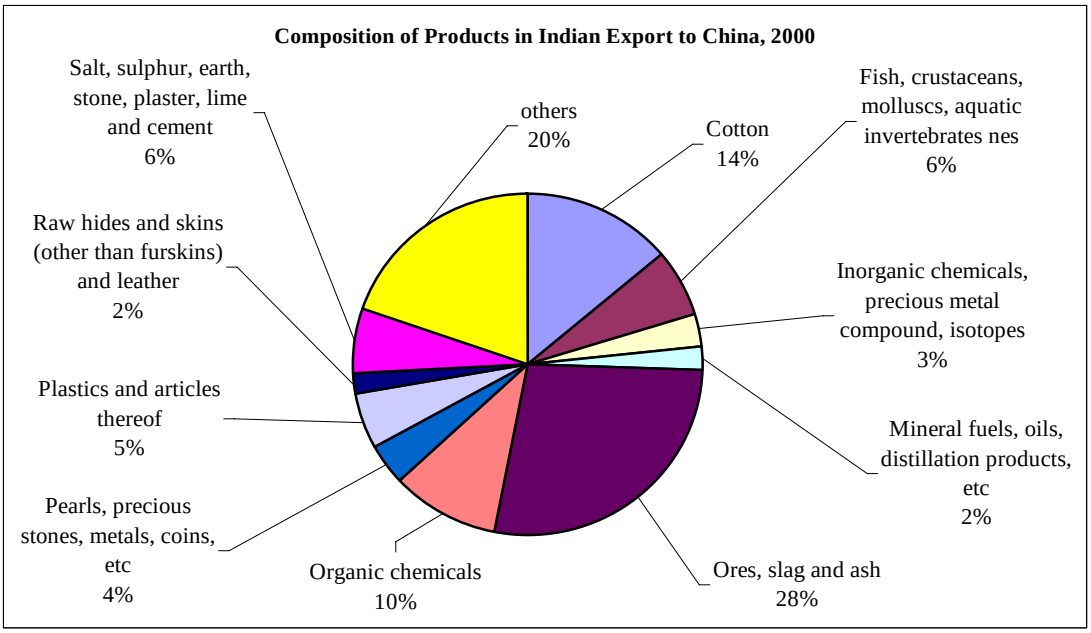
Graph - 1



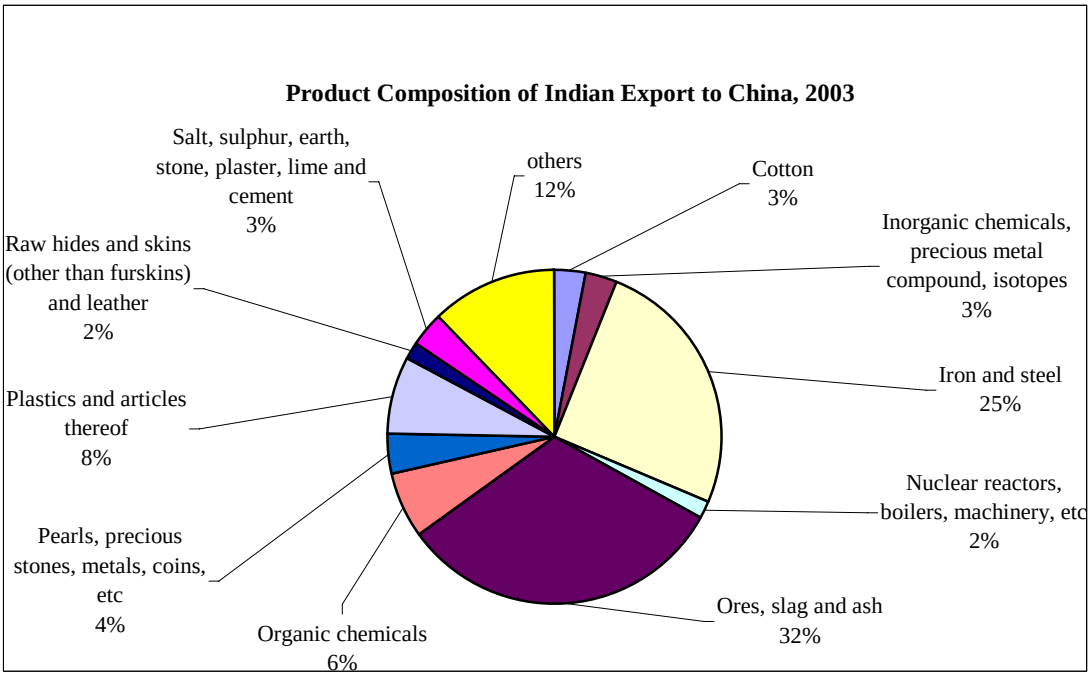
The major products in Indian exports to China in 2000 were ores, slag and ash, cotton, organic chemicals, plaster, lime and cement, Fish, crustaceans, molluscs, acquatic invertebrates nes, etc. Together they constituted 64 per cent of Indian exports to China (Graph - 2).

In the year 2003, the major products that India exported to China were ores, slag and ash, iron and steel, plastics and articles thereof and organic chemicals. These four categories of products together constituted around 71 per cent of total export to China in the year 2003 (Graph - 3).

Graph – 2



Graph – 3



Ores, slag and ash remain the major components of Indian exports to China for the last seven years. Cotton and residuals, wastes of food industries, animal fodder have lost their importance in exports. Iron and steel, plastics and articles, organic chemicals have emerged as major products in Indian

exports to China. Organic chemicals though remain a major product for export to China; its export growth rate is less than the overall growth rate of Indian exports to China. Both iron and steel and plastics and articles have increasing share in Indian exports to China. Share of plastics and articles in 2003 is 8 per cent. The Iron and Steel sector emerged as the major product group in export to China. In 2000, it was not in the top ten major exporting sectors. However, in 2003, it constituted almost one-fourth of our exports to China. Also in ores, slag and ash, iron ore has acquired a major share. Iron ore, iron, and steel accounted for about 47 per cent of total exports. These compositional changes in Indian export basket to China clearly indicate a shift from primary and natural resource based manufacturing products to low and medium technology manufacturing products.

Now, we shall look into the product composition scenario at HS 6–digit level. In the year 1997, all products are either primary products or resource based manufacturing products. The largest exporting item was iron ore. The second is soyabean oil cake, closely followed by Cotton (Table - 3.5).

Table - 3.5
Top Ten Indian Exports to China, 1997

HS1996 Code	*Top 10 Products*	*Share*
230400	Soya-bean oil-cake and other solid residues	17.77
260111	Iron ore, concentrate, not iron pyrites, unagglomerated	16.07
520522	Cotton yarn >85per cent single combed 714-232 dtex, not retail	5.78
261000	Chromium ores and concentrates	5.69
260112	Iron ore, concentrate, not iron pyrites, agglomerated	4.68
520100	Cotton, not carded or combed	4.41
520512	Cotton yarn >85per cent single uncombed 714-232 dtex, not ret.	3.47
271016	Petroleum naphtha	2.27
281820	Aluminium oxide, except artificial corundum	2.13
151530	Castor oil or fractions not chemically modified	1.95
Total		64.22

At the 6–digit level for the year 2000, the presence of resource based products, like, iron ore, cotton yarn, granite, chromium ores, etc. continued to dominate the list of top 10 products (Table - 3.6). In comparison to 1997, there

is a marginal decrease in the share of primary products. Iron ore continued to be most important exporting product distantly followed by cotton yarn. Some organic and inorganic chemicals also figure into the top 10 products list.

Table - 3.6
Top Ten Indian Exports to China, 2000

HS1996 Code	*Top 10 Products*	*Share*
260111	Iron ore, concentrate, not iron pyrites,unagglomerated	17.49
520522	Cotton yarn >85per cent single combed 714-232 dtex, not retail	7.91
251611	Granite, crude or roughly trimmed	5.31
261000	Chromium ores and concentrates	4.51
260112	Iron ore, concentrate, not iron pyrites, agglomerated	4.49
30379	Fish nes, frozen, whole	4.39
710239	Diamonds (jewellery) worked but not mounted or set	3.88
281820	Aluminium oxide, except artificial corundum	3.08
151530	Castor oil or fractions not chemically modified	1.99
390210	Polypropylene in primary forms	1.80
Total		54.86

In the year 2003, among the top 10 products, five are of iron ore, iron, and steel product category. Iron ore, concentrate, not iron pyrites, agglomerated and unagglomerated account for more than 28.50 per cent of Indian exports to China in 2003. It has the highest share in India's exports to China. The agro-based products are completely absent from top 10 products list. It only consists of mining resource based products. These products can be classified as resource based manufacturing and low technology manufacturing products. Among these products, the major export product group is iron and steel. Also some of the products of plastics, organic and inorganic chemicals have been exported to China in 2003 (see table - 3.7).

Table - 3.7
Top Ten Indian Exports to China, 2003

HS1996 Code	*Top 10 Products*	*Share*
260111	Iron ore, concentrate, not iron pyrites, unagglomerated	23.96
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	9.06
260112	Iron ore, concentrate, not iron pyrites, agglomerated	4.69
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	4.21
710239	Diamonds (jewellery) worked but not mounted or set	3.79
390210	Polypropylene in primary forms	3.44
390120	Polyethylene - specific gravity >0.94 in primary forms	3.26
281820	Aluminium oxide, except artificial corundum	2.94
251611	Granite, crude or roughly trimmed	2.78
720839	Flat rld prod/coils>3mm	2.33
Total		60.46

Though the product composition[3] of Indian exports to China has changed, the level of product concentration has not changed much over the period of 1996 to 2003. The share of top 10 products in total Indian exports to China, with the exception of 2001, has varied roughly within 54 to 64 per cent. Also, the share of top 3 products in total Indian exports to China, with the

[3] To analyze the magnitude of trade concentration, we have used three empirical indexes. These include,

a) A count of the number of products exported. It faces two related problems-first, how to distinguish between established and marginal exports and second, at what level of aggregation should products be defined. We have adopted an approach, which differentiates goods at the 6-digit level of the HS 1996 code. To be included in the count, we have followed two methods. First, any product that is being exported or imported is included in the count. Second, a product has to account for at least 0.25 per cent of total export.
b) A second index is the share of a country's total exports accounted for by the largest products. It is be based upon three and ten largest products. The higher the shares of these products, the higher the level of export concentration.
c) The Hirschman index[3] is being used to measure the trade concentration. This index ranges between 0 and 1, with lower values indicating less concentrated trade structure.

The Hirschman index is

$$H_j = \sqrt{\sum (x_i / X)^2}$$

Where, x_i is the value of exports of commodity i (normally defined at the 6-digit HS 1996 level) and X is the total value of country j's exports.

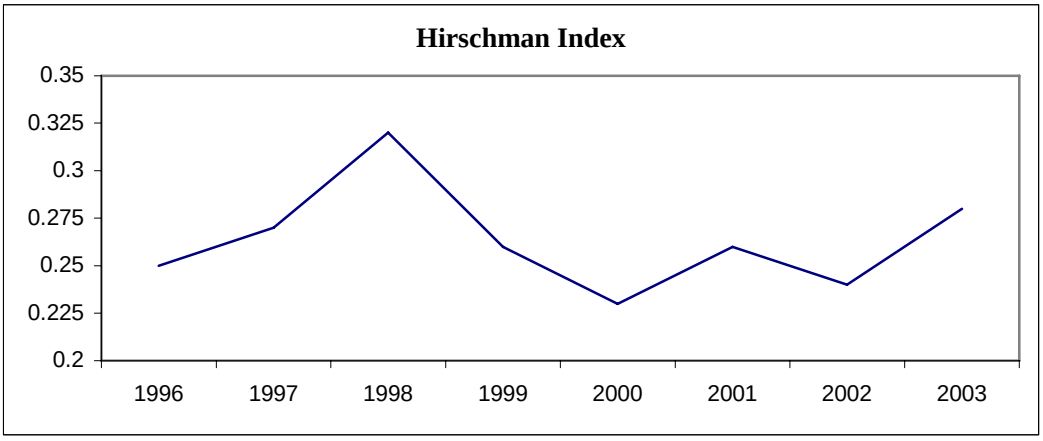
exception of 2001, has varied roughly within 30 to 40 per cent. Hirschman Index has also shown low variability of degree of product concentration. This has varied roughly with 0.24 to 0.32 (Table - 3.8).

Table - 3.8
India's Exports to China, Product Concentration

Year	*Share of top 10 Products*	*Share of top 3 Product*	*Hirschman Index*	*No. of products with share of atleast 0.25per cent share at India's Export to China*	*No. of total product China has Imported from India*	*Ratio (in %) of Col. 5 & col.6*
1	*2*	*3*	*4*	*5*	*6*	*7*
1996	60.46	37.70	0.25	44	685	6.42
1997	55.32	29.41	0.27	47	796	5.90
1998	57.55	33.48	0.32	44	809	5.44
1999	54.86	30.71	0.26	43	920	4.67
2000	62.44	36.13	0.23	56	1102	5.08
2001	70.60	49.46	0.26	62	1165	5.32
2002	64.22	39.63	0.24	52	1352	3.58
2003	61.69	37.16	0.28	45	1555	2.89

Despite low variability, the Hirschman Index of last four years (2000 to 2003), shows a marginal upward trend in product concentration. (Graph – 4). The evidences from the share of top 10 and top 3 products also support this finding. Both the shares show an upward trend in this period. However, it is not supported by the declining trend in the proportion of number of products that have at least 0.25 per cent share in the total number of products exported to China by India.

Graph – 4
India's Exports to China, Hirschman Index



There is further conflict in the evidences between Hirshman Index and other indexes. Hirschman Index shows on average, at trade concentration has gone down in the period of 2000–03 in comparison to the period of 1996–1999. It is supported by the fact that ratio of number of products that have at least 0.25 per cent share in total number of products exported to China by India has on average gone down in the latter period in comparison to the previous period. Whereas share of top 10 and 3 products on average, has gone up in the period of 2000–03 in comparison of the period of 1996–1999. This shows an increase in trade concentration.

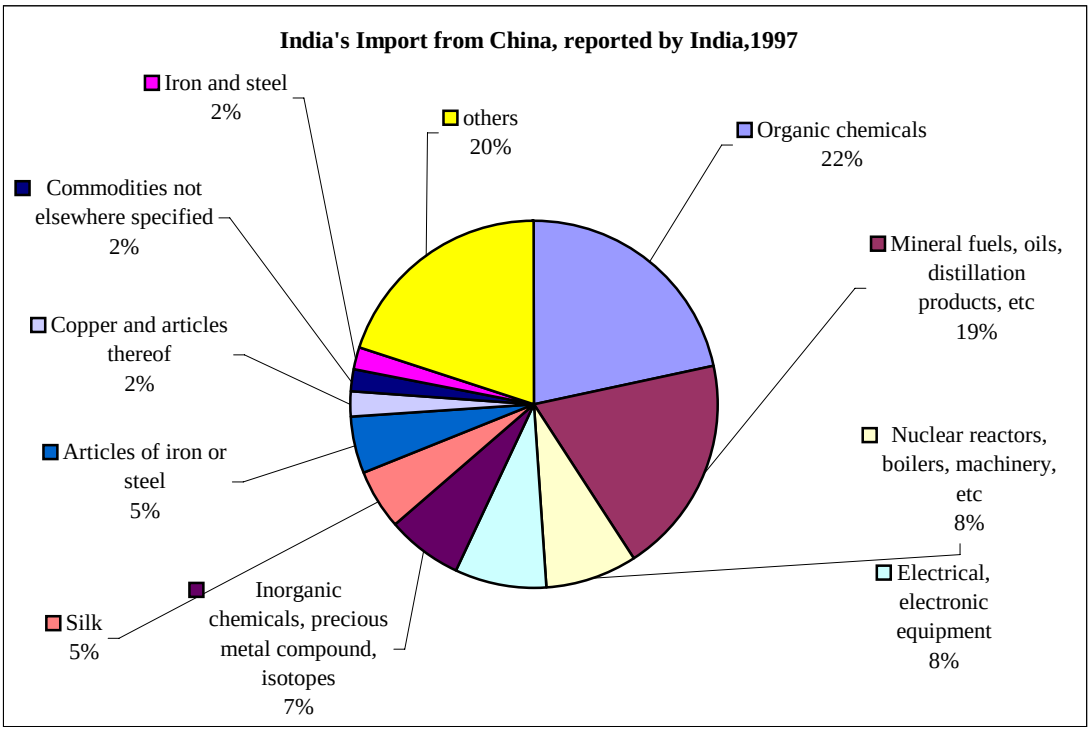
How does one explain these conflicting evidences regarding trade concentration? The explanation lies in the structure of incremental in the total Indian export to China which has gone up very steeply in recent years. First, export of certain Indian products (like, iron and steel, iron ore, etc.) to China has gone up steeply and having a very large share in Indian export basket to China. It is reflected by the increasing trade concentration for some indexes, especially in the share of top 3 and top 10 products. Second, there is a continuous increase in the total number of Indian products exported to China. In addition, this product diversification has led to a decline in the ratio of number of products that have at least 0.25 per cent share in the total number of products. The Hirschman index also shows this marginal reduction in trade concentration in 2000–03, compared to 1996–99, presumably because of an increase in the number of products which is at least 0.25 per cent share. In the period 2000–03, Hirschman index is showing increasing concentration. This is because of declining trend in the number products selected by 0.25 per cent share criteria.

Major Exports of China to India

At the 2-digit HS, 96 code, the major products that China exported to India in the year 1997 were organic chemicals, mineral fuels, oils, distillation

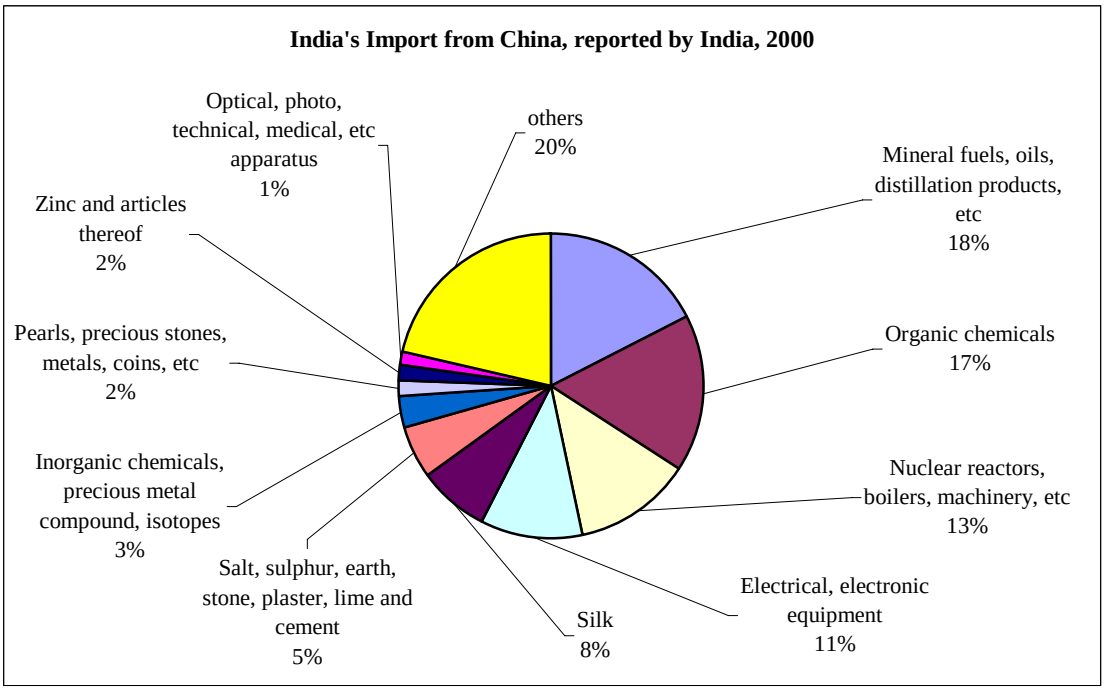
products, etc. electrical, electronic equipments, nuclear reactors, boilers, machinery, etc. and inorganic chemicals, precious metal compound and isotope. These five categories of products together constituted around 64 per cent of total exports to India (Graph - 5).

Graph - 5



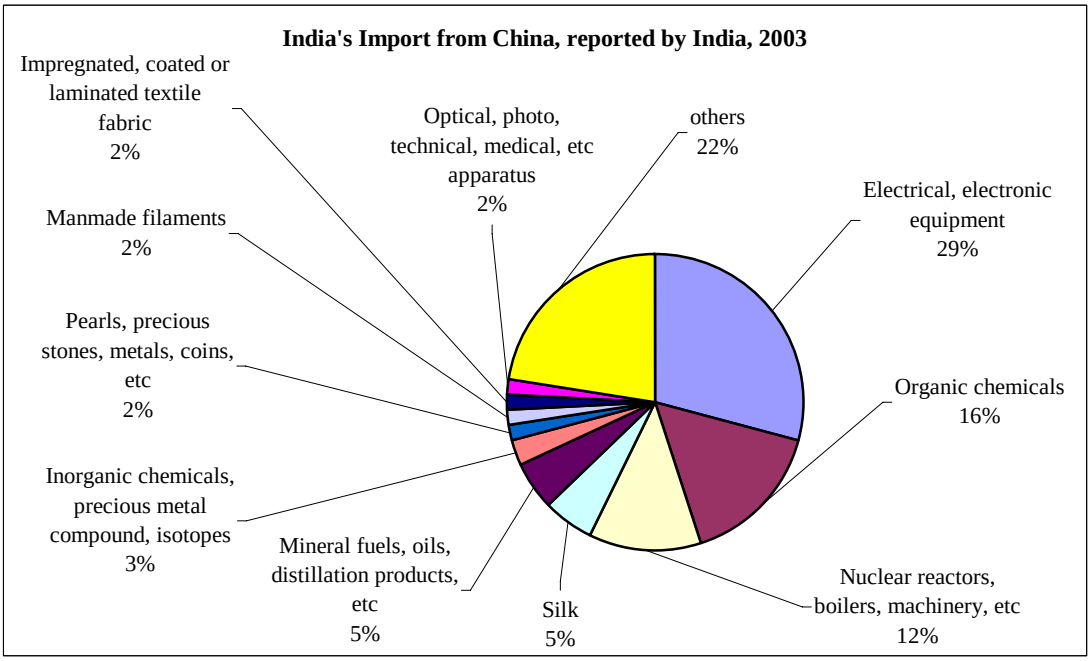
In the year 2000, the major Chinese products exported to India were mineral fuels, oils, distillation products, etc. organic chemicals, nuclear reactors, boilers machinery, etc. electrical, electronic equipments and silk. These five products together constituted 67 per cent of the total exports to India (Graph - 6).

Graph - 6



In 2003, the major products that India imported from China were electrical, electronic equipments, organic chemicals, nuclear reactors, boilers machinery, etc. silk, mineral fuels, oils, distillation products, etc. Together they constituted around 67 per cent of the total Chinese exports to India (Graph - 7).

Graph - 7



The interesting observation is the proportion of major five products that have remained stable over these comparing years. For the years 2000 and 2003, this proportion as well as the major five product categories is the same. The year 1997 was little different. The proportion of top five product categories was 64 per cent and inorganic chemicals, precious metal compound and isotope replaced silk.

Though top five product category remained the same, there was a change in the share in total Chinese exports to India. In 1997, the share of organic chemicals was highest at 22 per cent. However, gradually, it came down to 17 per cent in 2000 and 16 per cent in 2003. In both 1997 and 2000 the share of mineral fuels, oils, distillation products etc. was high, though declining. In 1997, it was 19 per cent and became 18 per cent in 2000. But by 2003, it declined drastically to 5 per cent. The proportion of nuclear reactors, boilers machinery, etc. increased from 8 per cent in 1997 to 13 per cent in 2000, then declined marginally to 12 per cent in 2003. But the sector that experienced a boom in export to China is electrical, electronic equipments. In 1997, its share was only 8 per cent. In 2000, it went up to 11 per cent and in 2003, it had gone up further to 29 per cent.

Therefore, there is a compositional change in Chinese exporting products to India. In addition, this change has taken place from more resource based manufacturing products to advanced technology based manufacturing products. These findings will have further evidences, once we shift our discussion at the level of 6-digit HS96 classification.

At the level of 6-digit HS96 code, in top 10 products, for 1997 (table - 3.9), the share of resource based manufacturing product [like, Coke, semi-coke of coal, lignite, peat & retort carbon, raw silk (not thrown), coal except anthracite or bituminous, not agglomerated, petroleum oils and oils obta, etc.] is a dominant one. But some manufacturing products with more

Table - 3.9
India's Import from China, 1997

HS 1996 Code	*Top 10 Products*	*Share*
270400	Coke, semi-coke of coal, lignite, peat & retort carbon	15.09
500200	Raw silk (not thrown)	4.10
271000	Petroleum oils&oils obta	2.45
294200	Organic compounds, nes	2.17
294110	Penicillin's, derivatives, in bulk, salts	2.07
847330	Parts and accessories of data processing equipment nes	1.99
740311	Copper cathodes and sections of cathodes unwrought	1.86
730511	Pipe-line submerged arc welded steel diameter >406mm	1.65
270119	Coal except anthracite or bituminous, not agglomerated	1.58
852990	Parts for radio/TV transmit/receive equipment, nes	1.56
Total		34.53

advanced technology (e.g., Parts and accessories of data processing equipment nes, Parts for radio/TV transmit/receive equipment, nes, Pipe-line submerged arc welded steel diameter >406mm) also figure in this list. Some specific categories of coal (Coke, semi-coke of coal, lignite, peat & retort carbon, Coal except anthracite or bituminous, not agglomerated) have the largest share in Indian imports from China.

The year 2000 also shows a similar kind of product composition. The resource based manufacturing products continued to dominate the top 10 products list, but some manufacturing products with more advanced technologies also figure in this list. Moreover, there is a marginal increase in the share of these kinds of products (Table - 3.10).

There is a major change in the product composition of 2003. The Manufacturing products with more advanced technology, especially in the category of electrical and electronics goods is dominating the list. Out of the top 10 products, 5 belong to this category and together they account for 23.11 per cent of Chinese exports to India (table - 3.11).

Table - 3.10
India's Import from China, 2000

HS 1996 Code	*Top 10 Products*	*Share*
270400	Coke, semi-coke of coal, lignite, peat & retort carbon	12.54
500200	Raw silk (not thrown)	6.39
270119	Coal except anthracite or bituminous, not agglomerated	4.88
251010	Natural calcium phosphates, unground	3.94
847330	Parts and accessories of data processing equipment nes	3.89
294200	Organic compounds, nes	2.58
294110	Penicillins, derivatives, in bulk, salts	2.08
847170	Storage units	1.80
790111	Zinc, not alloyed, unwrought, >99per cent pure	1.34
847190	Automatic data processin	1.33
Total		40.76

Table - 3.11
India's Imports from China, 2003

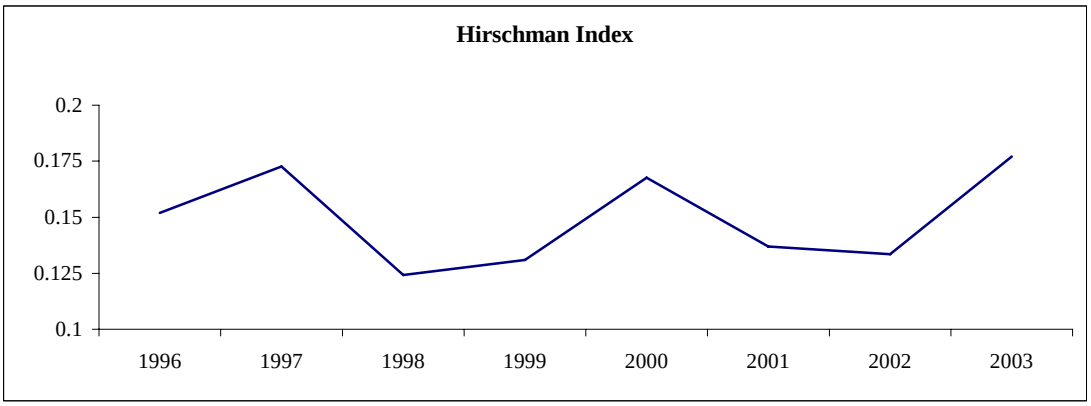
HS 1996 Code	*Top 10 Products*	*Share*
852520	Transmit-receive apparatus for radio, TV, etc	15.75
270400	Coke, semi-coke of coal, lignite, peat & retort carbon	3.68
294200	Organic compounds,	3.05
847330	Parts and accessories of data processing equipment	2.92
500200	Raw silk (not thrown)	2.79
294110	Penicillin's, derivatives, in bulk, salts	2.35
270119	Coal except anthracite or bituminous, not agglomerated	1.75
847160	I/O units w/n storage u	1.74
847170	Storage units	1.73
852290	Parts and accessories of recorders except cartridges	0.97
Total		36.73

The concentration of products in China's exports to India has remained stable over the period of 1996 to 2003. Share of top 10 products has varied approximately within the range between 31 to 41 per cent. The share of top 3 products has varied approximately within the range between 16 to 24 per cent. The values of Hirschman index has varied within 0.12 to 0.18 (Table - 3.12 and Graph - 8).

Table - 3.12
India's Import from China

Year	*Share of top 10 Products*	*Share of top 3 Products*	*Hirschman Index*	*No. of products with share of at least 0.25per cent share in India's Import from China*	*No. of total product India has Imported from China*	*Ratio of Col. 5 &col.6*
1	*2*	*3*	*4*	*5*	*6*	*7*
1996	35.65	21.66	0.15	66	1620	4.07
1997	35.06	21.64	0.17	66	1981	3.33
1998	33.23	16.41	0.12	65	2139	3.04
1999	31.98	18.11	0.13	64	2367	2.70
2000	40.76	23.80	0.17	48	2582	1.86
2001	38.29	18.85	0.14	54	2820	1.91
2002	35.29	16.40	0.13	59	3069	1.92
2003	36.73	22.47	0.18	52	3234	1.61

Graph - 8
China's Export to India, Hirschman Index



The trade concentration on average is lower within 1996 to 1999 compared to the period of 2000 to 2003. It is quite evident from the values of share of top10 products, share of top 3 products and the Hirschman Index. But it is contradicted by the fact that the ratio of number of products that is have at east 0.25 per cent share in the total number of products imported from China by India has on average gone down in the latter period in comparison to the previous period.

Again these contradicting evidences may be because of the similar phenomena of Indian exports to China, that is on the one hand, certain products, like electrical and electronic accessories, imported from China by India have gone up very steeply and it is reflecting in the increasing trade concentration for some indexes, specially the share of top 3 and top 10 products. On the other hand, there is a continuous increase in the total number of Chinese products imported by India. Moreover, this product diversification has led to decline of ratio of number of products that have at least 0.25 per cent share in the total number of products.

Comparison between Major Exports of India and China

Though of late India is enjoying trade surplus against China, the number of products (at HS 96 6-digits level) that India sells to China is much lower (at most 50 per cent) than the number of Chinese products coming into India. However, since 2002 the situation is changing. The number of Indian products added to the list of exported into the Chinese market has surpassed the number being added to the list of Chinese products coming into India. Overall, the Chinese exports to India are still more diversified than the Indian exports to China, but from 2002 onwards, Indian exports are getting diversified at a faster pace than the Chinese exports (Table - 3.13).

The degree of product concentration is also substantially higher for Indian exports than the Chinese exports. All the four indexes are indicating the same. This, also, indicates towards the potential for greater sustainability of Chinese exports to India than the Indian exports to China (Table - 3.14).

Table - 3.13
Product Analysis of Indian Exports to China

Year	*No. of total products India has exported to China*	*Growth rate of no. of Indian products exported to China*	*Change in no. of Indian products exported to China*	*No. of total products China has Exported to India*	*Growth rate of no. of Chinese products exported to India*	*Change in no. of Chinese products exported to India*
1	*2*	*3*	*4*	*5*	*6*	*7*
1996	685			1620		
1997	796	16.20	111	1981	22.28	361
1998	809	1.63	13	2139	7.98	158
1999	920	13.72	111	2367	10.66	228
2000	1102	19.78	182	2582	9.08	215
2001	1165	5.72	63	2820	9.22	238
2002	1352	16.05	187	3069	8.83	249
2003	1555	15.01	203	3234	5.38	165

Table - 3.14
Select Product Analysis of India and China

	Chinese Exports to India				*Indian Export to China*			
Year	*Share of top 10 prodts*	*Share of top 3 prodts*	*No. of prodts. having at least 0.25per cent share in total no. of prodts./ total no. of prodts*	*Hirschman Index*	*Share of top 10 prodts*	*Share of top 3 prodts*	*No. of prodts. having at least 0.25per cent share in total no. of prodts./ total no. of prodts*	*Hirschman Index*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1996	35.65	21.66	4.07	0.15	60.46	37.70	6.42	0.25
1997	35.06	21.64	3.33	0.17	55.32	29.41	5.90	0.27
1998	33.23	16.41	3.04	0.12	57.55	33.48	5.44	0.32
1999	31.98	18.11	2.70	0.13	54.86	30.71	4.67	0.26
2000	40.76	23.80	1.86	0.17	62.44	36.13	5.08	0.23
2001	38.29	18.85	1.91	0.14	70.60	49.46	5.32	0.26
2002	35.29	16.40	1.92	0.13	64.22	39.63	3.58	0.24
2003	36.73	22.47	1.61	0.18	61.69	37.16	2.89	0.28

In world trade, the technology-intensive products are growing more rapidly in trade than in other activities. Resource based, low technology and medium technology manufactures are steadily losing their shares in world trade in the last 20 years (1981 to 2000). It, however, needs to be noted that despite a decreasing trend in their share in the last 10 years (1990–2000), the

share of medium technology manufactures in world export is highest among these technological groups, accounting for a little more than one-third of world trade in manufactures (Table - 3.15). High technology product export growth is more dependent on innovation and high-income elasticity of demand. And with continuing technical progress and rising incomes one would expect faster growth and trade in high –technology products. For the same reason, medium technology's export growth should be higher than low and resource based technology products. Therefore, a country whose export basket consists of products that are more advanced technology based is likely to have higher potential for sustaining its export performance.

Table - 3.15
Share of Technology based Manufactures in World Export of Manufactured Products

Technology Category	*1980*	*1985*	*1990*	*1995*	*2000*
Resorce Based	26.6	24.7	21.1	20	18.5
Low Technology	18.8	18.8	19.6	19.1	17.4
Medium Technology	40.9	40.2	40.8	38.5	36.1
High Technology	13.7	16.3	18.5	22.4	28
Total	100	100	100	100	100

On this criterion Chinese exports to India potentially have high sustainability than those of India to China. Chinese export bundle to India consists of more technologically advanced manufacturing products than the Indian export bundle to China. This conclusion is also supported by the UNIDO in their analysis of export performance of the few countries (World Industrial Development Report). In China's total exports to the world, the manufacturing sector contributed around 92 per cent in the year 2000. Within the manufacturing sector, the share of medium and high technology manufactured goods is 45.6 in the same year. In India's total exports to the world, the manufacturing sector contributed around 86 per cent in 2000 and the share of medium and high technology manufactured goods is 19.7 per cent in the same year (Table - 3.16).

Table - 3.16
Share of Manufacture, Medium and High tech Product of China and India in Global Exports

	Share of manufactured goods in total exports (per cent)			*Share of medium and high-tech goods in manufactured exports (per cent)*		
	1980	1990	2000	1980	1990	2000
China	3.1	76.0	92.0	18.5	34.4	45.6
India	59.2	79.6	85.8	22.7	17.9	19.7
Source: World Industrial Development Report, 2004						

The same UNIDO report also finds that in the top 25 exporting countries list, China figures in the entire product categories list. Whereas India figures in only resource-based and low technology based list. In these two lists, India appears at much lower rank than China (table - 3.17).

Table - 3.17
Ranking of China and India in World Export of Manufactured Products

Technology Category	*China*	*India*
Resource Based	11	22
Low Technology	1	15
Medium Technology	11	Does not figure into top 25 countries
High Technology	9	Does not figure into top 25 countries

Reasons behind Increase in Indo-China Bilateral Trade

For increase in Indian exports to China, the identified three factors are:

- Increase in Chinese demand;
- Improvement in the competitiveness of the Indian exports; and
- Increase in the number of products, which India has started exporting to China.

An empirical procedure[4] is followed to isolate the effects of demand, diversification and competitiveness changes on India's export to China.

[4] The empirical procedure that will be followed to isolate the effects of demand, diversification and competitiveness changes on India's export to China and China's export to India: —
The influence of demand for a specific product in a country can be measured by the change in the total (global) value of imports of that product. Suppose, Do,j and Dt,j

We have limited our study in the products that have at least 0.25 per cent share in the total Indian exports to China (Table - 3.18). The number of such products in 1997 was 47. In the year 2000, it became 56 and there are 27 products (with 0.25 per cent share) that India exported to China in the years 1997 as well as 2000. Therefore, product diversification has taken place. Twenty products, which appeared in 1997 list, have disappeared in the year 2000 list and 29 products, which did not appear in year 1997 list, were added in year 2000 list. Indian exports to China have gone up in 2000 as compared to 1997 by $380.44 million. In this export increase, $110.38 million are due to increase in the Chinese demand of these products (numbered 27). This constitutes 29.01 per cent of total export increase. Due to increase in competitiveness, the increase in export is $174.13 million. This constitutes 45.77 per cent of total export increase. Moreover, due to product diversification the increase in export is $95.93 million. This accounts for the remaining 25.22 per cent of export increase.

---

represent China's total import of product j at period 'o' and 't' respectively, the change in export of that product 'j' by India to China attributed solely to demand $\Delta E_{d,j}$ is:

$$\Delta E_{d,i} = S_{0,j} \times (D_{t,j} - D_{0,j})$$

where $S_{0,j}$ is the share of country i ,say India, in total Chinese imports of product 'j' from all countries in the base period 0.

So, for all the product exported by India to China, the change in export due to change in demand can be measured if we take the sum total of all the products exported by India to China.

$$\Delta E_d = \sum_j S_{0,j} \times (D_{t,j} - D_{0,j})$$

Second, the change in the competitive position of country i, say India, in exporting product j into China can be measured by the difference between exports of that have occurred due to change in market share of that Indian product into China.

This competitive factor $\Delta E_{c,j}$ is:

$$\Delta E_{c,i} = D_{t,j} \times (S_{t,j} - S_{0,j})$$

where $S_{0,j}$ and $S_{t,j}$ are the share of the country i, say India, in total Chinese imports of the product 'j' in period 0 and t respectively and Dt,j represent China's total import of product j at period 't'.

To get the increase of India's exports of all products to China due to increase in competitiveness can be measured by taking summation over the entire exported product to China in $\Delta E_{c,j}$.

Now a country's total export to another country can be increased because of another factor that is increase in product diversification. Any differences between changes in a country's total exports and the sum of these two "demand" and "competitive" factors are due to product diversification.

Table - 3.18
Different Factors behind Increase in Indian Export to China
(With 0.25 per cent list)

(In million $)

Period	*Initial Year 1997 to Present Year 2000*	*Initial Year 2000 to Present Year 2003*
No. of Products in the Initial Year	47	56
No. of Products in the Present Year	56	45
No. of Product Present in the Lists of Both Year	27	15
Total Exports of Listed Products in Initial Year	789.41	1169.86
Total Exports of Listed Products in Present Year	1169.86	3649.89
Change in Export Value Between Initial and Present Year	380.44	2480.03
Change in Indian Exports due to Change in Demand Between Initial and Present Year	110.38 (29.01 per cent)	835.37 (36.68 per cent)
Change in Indian Export due to Change in the Competitive Position Between Initial and Present Year	174.13 (45.77 per cent)	309.57 (12.48 per cent)
Change in Indian Export due to Change in Product Diversification Between Initial and Present Year	95.93 (25.22 per cent)	1335.08 (53.38 per cent)

The number of products in 2003 has declined to 45 from 56 in the year 2000. In addition, the number of common products that India exported to China in the years 2000 and 2003 became 15. It shows a good degree of change in product composition. The share of 41 exporting products of the year 2000 list has gone down below 0.25 per cent share in 2003 whereas 30 new products got into the product list of year 2003. Therefore, product diversification has taken place. Indian exports to China have gone up in 2003 as compared to 2000 by $2480.03 million. In this export increase, $835.37 million are due to increase in Chinese demand of these products (numbered 15). This constitutes 36.68 per cent of the total export increase. Due to increase in competitiveness, the increase in export is $309.57 million. This constitutes 12.48 per cent of total export increase. In addition, due to product diversification the increase in exports is $1335.08 million. This accounts for the remaining 53.38 per cent of export increase.

Hence, all the three factors have a positive influence on increase in Indian exports to China. However, the influence of competitiveness has gone

down in recent years compared to the previous period. The most important factor behind the increase in export growth in the period of 2000–03 is massive product diversification. And increase in Chinese import demand also has substantial impact. Increase in competitiveness has the least impact on export increase in these years. Increase in Chinese import demand is the most important factor behind the increase of Indian export from the year 2002 and 2003. Increase in product diversification is the second important factor.

The number of products (in 0.25 per cent share list) that China has exported to India has gone down from 66 in the year 1997 to 48 in 2000. Number of products common in the list of both the years is 26. So 40 products of the year 1997 list are being dropped from the year 2000 list and 22 new products have been entered into the year 2000 list. So there is a substantial degree of compositional change as well as negative product diversification that has taken place in the Chinese export basket to India between years 1997 and 2000. Chinese exports to India have gone up in 2000 as compared to 1997 by $202.43 million. In this export increase, $87.62 million are due to increase in the Indian demand for these products (numbered 26). This constitutes 43.28 per cent of the total export increase. Due to increase in competitiveness, the increase in export is $146.02. This constitutes 72.13 per cent of the total export increase. Moreover, due to negative product diversification (i.e. product concentration), the decline in export is $31.21. This accounts for the 15.42 per cent of export decline.

The number of products, China has exported to India, has gone up from 48 in the year 2000 to 52 in 2003. Number of products common in the list of both the years is 24 products. So 24 products of year 2000 list is being dropped from the list of the year 2003 and 28 new products have entered the year 2003 list. Therefore, a substantial degree of compositional change as well as product diversification has taken place in the Chinese export basket to India between years 2000 and 2003. The Chinese exports to India have gone

up in 2003 in compared to 2000 by $1335.11 million. In this export increase, $329.69 million are due to increase in the Indian demand of these products (numbered 24). This constitutes 24.69 per cent of the total export increase. Due to increase in competitiveness, the increase in export is $132.86 million. This constitutes 9.95 per cent of the total export increase. And due to product diversification the increase in export is $872.55 million. This accounts for the remaining 65.35 per cent of export increase (Table - 3.19).

Table - 3.19
Different Factors behind Increase in Chinese Exports to India
(With 0.25per cent list)

(in million $)

	Initial Year 1997 to Present Year 2000	*Initial Year 2000 to Present Year 2003*
No. of Products in the Initial Year	66	48
No. of Products in the Present Year	48	52
No. of Products Present in the Lists of Both Years	26	24
Total Exports of Listed Products in Initial Year	710.79	913.23
Total Exports of Listed Products in Present Year	913.23	2248.34
Change in Export Value Between Initial and Present Year	202.43	1335.11
Change in Indian Exports due to Change in Demand Between Initial and Present Year	87.62 (43.28 per cent)	329.69 (24.69 per cent)
Change in Indian Export due to Change in the Competitive Position Between Initial and Present Year	146.02 (72.13 per cent)	132.86 (9.95 per cent)
Change in Indian Export due to Change in Product Diversification Between Initial and Present Year	-31.21 (- 15.42 per cent)	872.55 (65.35 per cent)

In our above analysis, we have used the export basket on which each product's share is at least 0.25 per cent of the total exports of India to China and vice versa. Due to the peculiarity of Indo-China trade, there is trade concentration in this basket between the years 1997 and 2000 and between the years 2002 and 2003. The composition of products has changed substantially. For example, many products in the year 2000 do not exist in the 0.25per cent export basket in the year 2003. This provides an indirect hint at product diversification. However, the total number of products that have been traded

in these years has shown a steep upward trend. Therefore, to get a clearer picture we are extending our analysis to all the products that have been traded in these years.

In our analysis of different components responsible for increase in Indian exports to China, based on all the products, it is found that the major factor behind the increase is change in competitive position. It has accounted approximately 60 per cent of the change in Indian exports to China between the years 1997 and 2000. Between the years 2000 to 2003, this factor's share has come down to approximately 50 per cent. The demand factor responsible for increase in Indian exports account for little more than one-third of it. Comparing two periods, between the years 1997 and 2000 and between 2000 and 2003, it shows decline in share. In the previous period, the share was approximately 38 per cent and in the latter year, it came down to 35.5 per cent. The increase in Indian export due to product diversification is showing an increase. It has increased from 2.78 per cent in previous period to 14.60 per cent in latter period (Table - 3.20)

Table - 3.20
Different Factors behind Increase in Indian Export to China (for all products)

(in million$)

Period	*Initial Year 1997 to Present Year 2000*	*Initial Year 2000 to Present Year 2003*
No. of Products in the Initial Year	796	1102
No. of Products in the Present Year	1102	1555
No. of Products Present in the Lists of Both Years	497	785
Total Exports of Listed Products in Initial Year	897.23	1353.45
Total Exports of Listed Products in Present Year	1353.45	4251.33
Change in Export Value Between Initial and Present Year	456.22	2897.88
Change in Indian Exports due to Change in Demand Between Initial and Present Year	174.18 (38.17per cent)	1028.38 (35.48 per cent)
Change in Indian Export due to Change in the Competitive Position Between Initial and Present Year	269.33 (59.03 per cent)	1446.30 (49.40 per cent)
Change in Indian Export due to Change in Product Diversification Between Initial and Present Year	12.71 (2.78 per cent)	423.2 (14.60 per cent)

If we compare our analysis based upon all products with the 0.25 per cent listed products, the trends for share of different factors show similar trend with the exception of demand factor. In smaller lists, it shows a marginal increase between the two periods. Whereas, in total list of products, it shows a marginal decline. However, in both the periods and in both the analysis, it constitutes roughly one-third of the total increase in Indian exports to China. The share of competitiveness factor is estimated to be lower in the shorter list, because certain products in iron and steel sector did not appear in the shorter list in year 2000 as their share was less than 0.25 per cent. However, in 2003, not only they are in this shorter list, their share in total export basket is also high. In the analysis, based upon the shorter list, the increase in total export due to increase in exports of these products is due to increased product diversification. However, in the list of all products, it is due to increase in competitiveness and demand from China.

In our analysis for different components responsible for increase in Chinese exports to India, on the basis of all the products, the major factor behind the increase shows a marked difference between the two periods, years 1997 to 2000 and 2000 to 2003. For the initial period the product diversification is the most important factor (share is around 60 per cent) behind the increase in Chinese exports. In addition, demand factor has very little influence (1.26 per cent) in this increase. In the latter period increase in competitiveness (share is around 56 per cent) is the major reason behind China's exports to India. The second important factor is increase in India's demand. It constitutes 36.31 per cent of increase in Chinese exports, whereas product diversification has constituted 7.61 per cent of export increase (Table - 3.21).

Table - 3.21
Different Factors behind Increase in Chinese Export to India (for all products)

(in million$)

Period	*Initial Year 1997 to Present Year 2000*	*Initial Year 2000 to Present Year 2003*
No. of Products in the Initial Year	1981	2582
No. of Products in the Present Year	2582	3234
No. of Products Present in the Lists of Both Years	943	2265
Total Exports of Listed Products in Initial Year	1110.55	1527.51
Total Exports of Listed Products in Present Year	1527.51	4004.50
Change in Export Value Between Initial and Present Year	416.96	2476.99
Change in Chinese Exports due to Change in Demand Between Initial and Present Year	5.29 (1.26 per cent)	899.56 (36.31 per cent)
Change in Chinese Export due to Change in the Competitive Position Between Initial and Present Year	165.97 (39.80 per cent)	1388.71 (56.06 per cent)
Change in Chinese Export due to Change in Product Diversification Between Initial and Present Year	245.7 (58.92 per cent)	188.72 (7.61 per cent)

Comparing our analysis based upon all products with the 0.25 per cent listed products, the trends for shares of different factors show a completely different trend. For the initial period, the shorter list shows that there is negative product diversification whereas for all product lists, it is the most important factor behind the increase in Chinese exports. The opposite has happened in the latter period. Based upon small list, analysis in latter period competitiveness has very little, i.e. less than 10 per cent contribution. Whereas the analysis based upon all the products, shows that competitiveness was the most important factor behind increase in Chinese exports. Now the question is why there is this kind of large discrepancy between the two findings. The answer lies in the changes of product composition. Comparing the years 1997 and 2000, the number of products that had a share of at least 0.25 per cent of total Chinese exports has gone down substantially and share of products that appeared in the list of both the years, has gone up. Where as in the next period, the number of products that had a share of at least 0.25 per cent of total Chinese exports has gone up. Also, due to compositional change, certain products (e.g. transmit-receive apparatus for radio, TV, etc) that were not in

shorter list in 2000 have been added to the top few commodities. This kind of compositional shift has also resulted in higher estimation of share of product diversification as a component behind increase in Chinese exports and lower estimation of other two components. In addition, there was massive product diversification in the year 2000 as compared with 1997. As a result, the number of products that appeared in shorter list of the year 2000 was less than the shorter list of the year 1997.

Now comparing India and China, all the three factors are responsible for expansion of both Indian exports to China and China's exports to India. However, the increase in Chinese demand is responsible for more than one-third of increase of India's export to China whereas the competitiveness constitutes 50 to 60 per cent (approximately) of increase in Indian exports. Product diversification does not have much important role to play. In contrast, for Chinese export, the initial period's increase was primarily because of wide scale product diversification and then for competitiveness. Whereas in the latter period, competitiveness became the most important component, followed by demand factor for increase in Chinese exports to India.

Chapter 4

Structure and Potential of Indo-China Bilateral Trade

The potential for rise in Indo-China bilateral trade can be assessed from analyzing the structure of trade between the two countries. The analysis of complementarities and competitiveness of trade flows is required in this context. As far as complementarities are concerned, it shows the scope that exists to build up trade co-operation between the two countries. This trade co-operation can be build up based on scope in trading two different product baskets. In other words, the countries having comparative advantages in commodities that are different from each other. Therefore, they can trade with each other. In other words, the countries have inter-industry trade. In addition, the trade co-operation can be build up through the simultaneous exports and imports within the same industry or production groups. In other words, through intra-industry trade the trade co-operation can be built. We shall use three different indices to measure the scope of trade co-operation. These are Complementarity's Index, Trade Overlap Index, and Grubel-Lloyd Index. Complementarity's index measures complementarity's through inter-industry trade. Grubel-Lloyd index measures the extent of intra–industry trade. And trade overlaps measure the relative importance of inter–and intra–industry trade in total bilateral trade.

Another aspect that needs to be considered for assessing the trade potential of India with China is the competitiveness of their products in their respective markets. Standard trade theory of Heckscher-Ohlin-samuelson-Stolper type (which is based upon neo-classical schools' assumptions and methodology and tools), says that a country will gain from international trade if they export those products, in which they have natural comparative advantages and import those products in which they don't have the comparative advantages. This above-mentioned standard theory is based

upon several well-known but unrealistic assumptions, namely uniform technology, undifferentiated products, factor-price equalization and absence of economies of scale. Regardless of these shortcomings in standard trade theories, we shall try to trace out the export competitiveness of products produced by China and India, through various methods that are not incompatible with these theories. Various methods include:

First is comparison between domestic and international cost and prices. In general, a static approach is followed to compare costs of domestic producers against those of international producers. Second is a change in market share. Third measure is measurement of comparative advantages. The most popular concept of comparative advantage in economic literature is Revealed Comparative Advantages (RCA) of countries in individual commodities and manufactured goods (Balassa, 1965).

However, the first method will not work when different levels and degrees of competition characterize product and factor markets. Cost is only one among many factors that determine the competitiveness of an industry. The firm costs of production and export of a firm is difficult to determine. It is because, firms have enough incentives to keep these information secret and in private domain. In addition, as price, structures are generally distorted for both in China, India, costs, and prices do not indicate equilibrium or optimal conditions. The second method, market share as an indicator of countries share have certain limitations. Product differentiation and development of niche market may distort the measurement of market share. In addition, competitiveness may be the cause as well as result of higher market share. An estimation of direct and indirect labor and capital coefficients does not provide an appropriate measure of comparative advantages when inter-country differences exist in productivity and efficiency. Hence, relative export shares may be a better measure for revealing the comparative advantage of a country in a particular industry. Cost considerations are necessary but not

sufficient. Certain non-price factors such as quality repair and maintenance facilities, size of an economy is equally important in determining a country's dynamic comparative advantages. In the analysis, we shall use all the three methods to measure the competitiveness.

Section I
Complementarity of Indian Export to Chinese Import

Through Complementarity Index we measure how well the export profile of one country matches with the import profile of another country. In other words, it gives the measurement of the scope for trade co-operation through inter-industry trade. Furthermore, changes in the index over time can help to determine whether trade profiles are becoming more or less compatible.

The index of trade complementarities between two countries can be measured as:

$$C_{ij} = 100 - \Sigma(|m_{ik} - x_{ij}| / 2)$$

Where x_{ij} is the share of good i in the exports of India, and m_{ik} is the share of good i in the imports of China. The value of index ranges between 0 and 100. It takes the value 0 when there is no compatibility between export of country j and imports of country k. On the other hand, the index takes the value 100 when export of country j and imports of country k match perfectly with each other.

We have calculated the complementarity index for the period 1996 to 2003. And we found that the value of the index is substantially high. It ranges between 60 to 79 per cent with the exception of the year 2000. In the year 2003, the value of the index has gone up to 78.81 per cent. These high values show

that there is a scope of having trade co-operation through complementarities in terms of inter-industry trade (Table - 4.1).

Table - 4.1
Trade Complementarities Index

1996	1997	1998	1999	2000	2001	2002	2003
69.35	71.19	73.96	68.05	55.00	67.65	59.80	78.81

We have already mentioned that through intra-industry trade also we can build up the complementarities between two countries. With the emergence of MNCs as the most dominating players in the international commodity market, intra-industry trade has become an important component of world trade. However, in Indo-China bilateral trade, intra-industry seems to play a minor role. We have measured importance of intra-industry trade as compared to inter-industry trade by using trade overlap index.

Trade overlap index is calculated as:

$$TOI = 2\Sigma \min (X_i, M_i)/\Sigma(X_i+M_i)$$

Where X_i and M_i are exports to China and imports from China of product i by India. The value of index ranges between 0 and 1. The closer it comes to 1 more is the intra-industry specialization. Alternatively, if the index is closer to 0, it signifies the dominant role of inter-industry specialization and trade.

The value of trade overlap index is very low for the years 1996 to 2003. It has varied between 0.005 in the year 2003 to 0.13 in the year 2000. It means the importance of intra-industry trade is very low in Indo-China bilateral trade (Table - 4.2).

Table - 4.2
Trade Overlap Index

1996	1997	1998	1999	2000	2001	2002	2003
0.09	0.06	0.13	0.10	0.13	0.11	0.09	0.005

To measure the extent of intra-industry trade Grubel-Lloyd Index is being used.

This index is measured as:

$$GLI_i = [1 - \frac{|X_i - M_i|}{(X_i + M_i)}] \times 100,$$

where X_i and M_i are the values of exports to China and imports from China by India in product group i. for higher degree of intra-industry trade, the value of this index will be closer to 100. This has been calculated for Indo-China trade for the period 1996 to 2003.

The value of this index is showing a declining trend (Table - 4.3). In 1996, it was approximately 32 per cent. Then it has never crossed 15 per cent. In 2003, it was as low as 6.7 per cent. Therefore, the Grubel-Lloyd index also confirms that intra-industry trade has very little role in Indo-China bilateral trade.

Table - 4.3
Grubel-Lloyd Index for Intra-Industry Trade in Indo-China Bilateral Trade

1996	1997	1998	1999	2000	2001	2002	2003
31.77	10.04	15.7	9.7	11.4	14	13.8	6.7

However, the complementarity index has some limitations. First, use of index presumes that a country can expand production and exports on a relatively constant cost basis. Second, relative size differences can be very important. If exporter i can only supply a very small share of country j's import needs, it would be a negative factor, even if their trade complementarity indices were quite high. Finally, the index assumes that countries assign equal priorities for trade expansion to all goods. If there are different priorities for (say) manufactures as opposed to raw materials, this complicates the use of the index.

Looking at the trade data for India and China, there are enough reasons to be skeptical about the finding of high complementarities between

Indian and Chinese economies. At the macro level, we have already seen that India's share in Chinese import for the year 2003 was 1.03 per cent. In addition, more than 45 per cent of it is due to iron ore and slash, iron and steel products. Therefore, there is a huge gap between total Chinese import demand (except iron ore and iron and steel) and India's export (except iron ore, iron, and steel) to them. At individual product level, for most of the products there is a huge gap between Chinese import needs and Indian exports. In the year 2003, there are 64 products that India exported to the world that has a share of at least 0.25 per cent of total Indian export. In addition, all these products are imported by China from abroad (**Appendix 4.1**). In five products, mainly technologically sophisticated products, India did not have revealed comparative advantages[1] over the world. Therefore, there are 59 products, which China imports from India and India has revealed comparative advantages (RCA) over the world. Out of these 59 products, in 13 products China did not import from India. In total of 38 products, India has less than one per cent share in the Chinese market. Out of these 38

[1] To calculate a country's comparative advantage for a certain commodity, a measure proposed by Bela Balassa will be used. This measure is called *the Revealed Comparative Advantage (RCA)*. From the many variations of the formula proposed by Balassa, the measure, which he has used to compare the bilateral comparative advantage between Japan and USA, will be used. ("The Changing Comparative Advantage of Japan and The United States" in *Comparative Advantage Trade Policy and Economic Development*- Bela Balassa, Harvester Wheatsheaf, New York, 1989) This will measure the comparative advantages of India over China and visa versa.

The formula used for calculating the Revealed Comparative Advantage (RCA) is:

$$RCA_{ij} = \frac{Xij}{\sum_j Xij} \Big/ \frac{\sum_i Xij}{\sum_i \sum_j Xij}$$

Where...

Xij = *Export of ith Commodity by the j th Country*

$\sum_j Xij$ = *Total Export by the j th Country*

$\sum_i Xij$ = *Total Export of ith Commodity by all Countries*

$\sum_i \sum_j Xij$ = *Total export of all the commodities by all Countries.*

An RCA value of greater than one for a certain product signifies that the country has exported that commodity more intensively than the rest of the world in that year and generally this is taken as a proxy measure of a country's competitiveness.

products, in 4 products India's RCA is less than one. So, in 34 products, though India has revealed comparative advantages over the world, it does not fulfill even 1 per cent of Chinese import demand. In 9 products, India has more than 10 per cent share of total Chinese import from the world. The countries, which has highest market share in Chinese market in these 64 products, have at least 13 per cent market share. In 7 products India has highest market share[2]. So due to improvement of complementarities, in terms of increase in Chinese imports or special policy measures at the benefit of India exporters by Chinese authority will help India in these 7 products. However, in rest of the products we have to increase our competitiveness. The task is challenging, specially, for the products that has market share in China less than 5 per cent. 14 products (mentioned in table - 4.4) have market share of more than 5 per cent. All these 14 products are primary products, natural resource based or low technology manufacturing products. Out of these natural resource based products, some of them are exhaustible in nature like iron ore, granite crude, etc. Therefore, increase in exports in these products may not be desirable to India in the long run.

Table - 4.4
India's market share in China's Global Imports and Revealed Comparative Advantage (RCA)

HS 1996 code	*Product Groups*	*Market Share*	*RCA*
090240	Tea, black (fermented or partly) in packages > 3 kg	5.14	20.87
420231	Articles for pocket or handbag, leather outer surface	5.53	14.09
680223	Cut or sawn slabs of granite	5.84	8.11
390210	Polypropylene in primary forms	7.23	3.42
281820	Aluminum oxide, except artificial corundum	9.08	4.55
030613	Shrimps and prawns, frozen	15.76	12.26
260111	Iron ore, concentrate, not iron pyrites, unagglomerated	24.94	14.95
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	26.73	21.75
294190	Antibiotics nes, in bulk	31.21	4.94
710239	Diamonds (jewellery) worked but not mounted or set	38.02	30.41
251611	Granite, crude or roughly trimmed	45.87	32.96
570110	Carpets of wool or fine animal hair, knotted	47.69	26.55
120740	Sesamum seeds	66.12	31.14
230400	Soya-bean oil-cake and other solid residues	75.48	3.40

[2] For market share of a particular Indian product in Chinese market we shall use the ratio between exported amount of that product in China and the total import of that product by China.

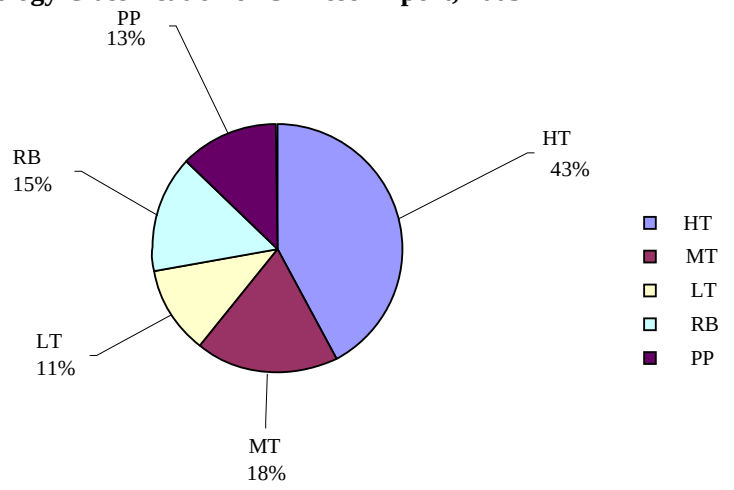
Out of the 64 products, in 28 products India has lower revealed comparative advantages than the countries, which have larger share in the Chinese market (**Appendix 4.1**). In 7 products, India has larger market share in China. In addition, we enjoyed greater RCA in these products. In 29 products, India has greater revealed comparative advantages than the countries, which have larger market share in China. It may be explained by the very nature of the definition of revealed comparative advantages that depends upon the relative export share of products. Therefore, to explain it, we need to examine the relative cost and quality differences in products. By comparing unit prices, we found 12 products, out of these 29 products, in which India has lower unit prices than the country with larger share in the Chinese market. In 10 products, India has greater unit prices than the country with larger share. In 7 products, the data required to calculate unit price is not reported in the database. Therefore, in 12 products, India has lower price, has shown greater comparative advantages but still has low market share (**Appendix 4.1**). These products are: 1) Motorcycles, spark ignition engine of 50-250 cc; 2) Handbags with outer surface of leather; 3) Articles of apparel of leather or composition leather; 4) Articles for pocket or handbag, leather outer surface; 5) Furnishing articles nes, of cotton, not knit, crochet; 6) Footwear uppers and parts thereof, except stiffeners; 7) Womens, girls blouses & shirts, of cotton, knit; 8) Bovine and equine leather, nes; 9) Woven fabric >85% silk (except noil silk); 10) Cotton yarn (except sewing thread) >85% cotton, retail; 11) Cut or sawn slabs of granite; 12) Petroleum oils&oils obta; 13) Made up articles (textile) nes, textile dress patterns. It may be due to inferiority in quality of Indian products. In these products, India may gain due to increase in complementarities.

Another important aspect is that out of 64 products of the list, in 22 products, India's unit price is lower than the countries that have larger share in Chinese market. These commodities are: 1) Motorcycles, spark ignition engine of 50-250 cc,; 2) Antibiotics nes, in dosage; 3) Handbags with outer surface of leather; 4) Articles of apparel of leather or composition leather; 5) Pneumatic tyres new of rubber for buses or lorries; 6) Articles for pocket or

handbag, leather outer surface; 7) Mens, boys shirts, of cotton, knit; 8) Footwear, soles, uppers of leather, over ankle, nes; 9) Furnishing articles nes, of cotton, not knit, crochet; 10) Medicaments nes, in dosage; 11) Footwear uppers and parts thereof, except stiffeners; 12) Womens, girls blouses & shirts, of cotton, knit; 13) Motor vehicle parts nes; 14) Bovine and equine leather, nes; 15) Woven fabric >85% silk (except noil silk); 16) Cotton yarn (except sewing thread) >85% cotton, retail; 17) Cut or sawn slabs of granite; 18) Granite, crude or roughly trimmed; 19) Polypropylene in primary forms; 20) Aluminium oxide, except artificial corundum; 21) Petroleum oils&oils obta; and 22) Coffee, not roasted, not decaffeinated. Therefore, in these products, India is having price advantages. In these products, also, India may gain from increase complementarities, as its unit price is lower.

If we look at the products that China imports from the world **(Appendix 4.2),** a very substantial part (43%) of it are technologically advanced products. Medium level technology products (18%) follow it. See Graph – 9. These two together constitute 61 per cent of China's imports from the world. To increase complementarities with China, what is needed is to diversify our export basket towards technologically advanced products. However, given India's industrial structure and advancement, for the immediate future, it seems highly difficult. In that case, we have narrower space for building complementarities between the two economies. We are left with, to build complementarities, specializing in mining products and products based on other natural resources. In fact, more than 50 per cent of our exports to China are either mining products or low technology products primarily based on the mining. As we have already mentioned that, these are exhaustible resources, so we need to think twice before further encouraging the exports of these products. Other option is to specialize in agricultural products. However, it has its own limitations. Therefore, the scope for building complementarities, for the interest of Indian exports, between the two countries appears limited.

Graph - 9
Technology Classification of Chinese Import, 2003



Note: HT- High Technology, MT- Medium Technology, LT- Low Technology, RB – Resource Based, PP- Primary Product

Section II

Competitiveness of Indian products into China Market

In this section we shall examine the extent of Competitiveness of Indian products in the Chinese market and Chinese products competitiveness in the Indian market. In the year 2003, 45 Indian products at HS 1996 code had a share of more than 0.25 per cent of total Indian export to China. Out of these products, in 22 products India has a market share of at least 10 per cent. Table - 4.5 describes 10 Indian products that enjoy the highest market share in China. In menthol, India has around 84 per cent market share. Cyclan-/cyclen-follow it/cycloterpen-monocarboxylic acid/derivs with 72.67 per cent market share. However, none of these products, mentioned in table - 5.5 [except diamonds (jewellery)] worked but not mounted or set and granite, crude or roughly trimmed), enjoy substantial share in total Indian exports to China. And these products are primarily natural resources and natural resource based manufacturing products, which require low technological skill.

Table - 4.5
Share of Select Indian Export Products to China

HS 1996 code	*Product Group*	*China's Import from India reported by China in $*	*Market Share*	*Share in Indian Export to China*
290611	Menthol	26721328	84.45	0.63
291620	Cyclan-/cyclen-/cycloterpen-monocarboxylic acid/derives	19996616	72.67	0.47
120740	Sesame seeds	30943018	66.12	0.73
261000	Chromium ores and concentrates	91214872	60.48	2.15
670300	Worked human hair, wool or animal hair, for wig making	38858856	48.57	0.91
251611	Granite, crude or roughly trimmed	118203320	45.87	2.78
710239	Diamonds (jewellery) worked but not mounted or set	161084256	38.02	3.79
722012	Hot rolled stainless steel sheet, w <600mm, t <4.75 mm	14016332	32.34	0.33
294190	Antibiotics nes, in bulk	66610128	31.21	1.57
410620	Goat or kid skin leather, nes	22764790	28.97	0.54

It is interesting to see the market shares of India's major exporting products to China. The market shares of top 5 products are substantial. All of them had at least 23 per cent market share (Table - 4.6). The most important product in Indian exports to China is iron ore, iron, and steel. They together constitute around 47 per cent of Indian exports to China. Five products sub-groups within this product group have the maximum share. They are Iron ore, concentrate, not iron pyrites, unagglomerated; flat rolled i/nas, coated with zinc, width >600mm, nes; iron ore, concentrate, not iron pyrites, agglomerated; hot rolled stainless steel coil, w >600mm, t <3mm. All these products have market share of around 25 per cent.

There are 10 products in which India, among all countries, is enjoying largest market share in China (**Appendix 4.3**). These products are: 1) Sesame seeds; 2) Granite, crude or roughly trimmed; 3) Chromium ores and concentrates; 4) Menthol; 5) Paper, coated, impregnated, covered with plastics, nes; 6) Worked human hair; 7) wool or animal hair, for wig making; 8) Diamonds (jewellery) worked but not mounted or set; 9) Cyclan-/cyclen-

Table - 4.6
China's Imports from India, its Share and RCA

Code No	*Product Description*	*China's Import from India Reported by China*	*Share in China's Import from India (in %)*	*Market Share (in %)*	*RCA*
260111	Iron ore, concentrate, not iron pyrites, unagglomerated	1018542336	23.96	24.94	14.97
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	384971744	9.06	23.76	8.80
260112	Iron ore, concentrate, not iron pyrites, agglomerated	199212320	4.69	25.81	6.03
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	179123456	4.21	26.73	21.86
710239	Diamonds (jewellery) worked but not mounted or set	161084256	3.79	38.02	30.39
390210	Polypropylene in primary forms	146381248	3.44	7.23	3.42
390120	Polyethylene - specific gravity >0.94 in primary forms	138647552	3.26	9.82	2.12
281820	Aluminium oxide, except artificial corundum	124897184	2.94	9.08	4.55
251611	Granite, crude or roughly trimmed	118203320	2.78	45.87	33.04
720839	Flat rld prod/coils>3mm	99216512	2.33	5.67	4.87

/cycloterpen-monocarboxylic acid/derives, antibiotics nes, in bulk; 10) Goat or kid skin leather, nes; In 7 products India enjoys second largest share. They are: 1) Aluminium oxide, except artificial corundum; 2) Iron ore, concentrate, not iron pyrites, agglomerated; 3) Shrimps and prawns, frozen; 4) Flat rld prod/coils<4.75; 5) Iron ore, concentrate, not iron pyrites,unagglomerated; 6) Cotton yarn >85% single uncombed 714-232 dtex,not ret; and 7) Flat rld prod/coils<10mm. In 18 products, India has at least third largest share. In the remaining 27 products, in terms of market share we are nowhere (for details, product wise, see **Appendix 4.3).**

For other products, on this list of Indian products (45 products group) having at least 0.25 per cent share in total Indian exports to China, the value of index of revealed comparative advantages (RCA) is greater than one (see

Appendix 4.4 for details). The only exception in this case is Flat rl p of silicon-el with HS 1996 code 722519. In this, the value of RCA is less than 1. In these products, India's share in Chinese import market ranges between 0.22 per cent to 84 per cent. As we mentioned earlier, in 35 products, India does not have large market share. However, out of these 35 products, in 8 products, India has greater RCA than the countries, which have larger market share. These products are: 1) Shrimps and prawns, frozen; 2) X-ray tubes; 3) Flat rolled i/nas, coated with zinc, width >600mm, nes; 4) Iron ore, concentrate, not iron pyrites, agglomerated; 5) Cotton yarn >85% single uncombed 714-232 dtex,not ret; 6) Flat rld prod/coils<10mm; 7) Petroleum oils&oils obta; and 8) Flat rld prod n/coils<10. We shall look in the relative unit price of these products. Out of these products, in 5 products, India's unit price is lower than the countries with larger share. They are: 1) Petroleum oils&oils obta; 2) Flat rld prod/coils<10mm; 3) Flat rld prod n/coils<10; 4) Flat rolled i/nas, coated with zinc, width >600mm, nes; and 5) X-ray tubes. So, for these products, lowering price and hence, lowering cost is not important. We have to search for some other factor to explain these facts that in certain products, though India has greater RCA and lower unit price than the countries with larger market share in China have lower market share there.

Another important aspect is that out of 45 products of the list, in 18 products, India's unit price is lower than the countries that have larger market share. These commodities are: 1) X-ray tubes; 2) Bovine and equine leather, full or split grain, nes; 3) Fish nes, frozen, whole; 4) Hot rolled stainless steel coil, w >600mm, t 3-4.75mm; 5) Cotton yarn >85% single combed 714-232 dtex,not retail; 6) Cotton yarn >85% multiple combed 714-232 dtex,not ret.; 7) Polystyrene, except expansible in primary forms; 8) Flat rld prod/coils<10mm; 9) Flat rld prod n/coils<10; 10) Polyethylene - specific gravity >0.94 in primary forms; 11) Petroleum oils&oils obta; 12) Flat rld prod/coils>3mm; 13) Flat rld prod/coils<3>4.; 14) Flat rld prod/coils>.5mm; 15) Aluminium oxide, except artificial corundum; 16) Flat rld prod/coils<4.75;

17) Flat rolled i/nas, coated with zinc, width >600mm, nes; and 18) Marble and travertine, crude or roughly trimmed. Therefore, in these products, India has price advantages.

Potential of Indian Export to China

After having fair bit of idea regarding India's complementarities and competitiveness in the Chinese market we shall look into the export potential of Indian products into China. First we shall find out the sectors that are most dynamic as exporting sectors. Those sector, whose market share have increased in 2003 as compared to 2002 can be identified as sectors that have shown dynamism in export activity for the year 2003. These sectors are: 1) Cyclan-/cyclen-/cycloterpen-monocarboxylic acid/derives; 2) Flat rld prod/coils>3mm; 3) Zinc ores and concentrates; 4) Flat rl p of silicon-el; 5) Flat rld prod/coils>.5mm; 6) Flat rld prod/coils>3mm; 7) Flat rolled i/nas, coated with zinc, width >600mm, nes; 8) Sesame seeds; 9) Flat rld prod/coils<10mm; 10) Transmission shafts and cranks, cam and crank shafts; 11) Flat rld prod/coils<.5<1; 12) Copper cathodes and sections of cathodes unwrought; 13) Goat or kid skin leather, nes; 14) Hot rolled stainless steel coil, w >600mm, t <3mm; 15) Flat rld prod/coils<4.75; 16) Flat rld prod/coils<3>4; 17) Bovine and equine leather, full or split grain, nes; 18) Cotton yarn >85% multiple combed 714-232 dtex,not ret.; 19) Cotton yarn >85% single uncombed 714-232 dtex,not ret; 20) Polypropylene in primary forms; 21) Worked human hair, wool or animal hair, for wig making; 22) Iron ore, concentrate, not iron pyrites,unagglomerated; 23) X-ray tubes; 24) Natural rubber in smoked sheets; 25) Antibiotics nes, in bulk; 26) Diamonds (jewellery) worked but not mounted or set; 27) Shrimps and prawns, frozen; 28) Polyethylene - specific gravity >0.94 in primary forms; 29) Granite, crude or roughly trimmed; 30) Hot rolled stainless steel coil, w >600mm, t 3-4.75mm; and 31) Menthol (for details along with growth rate see **Appendix 4.5**).

Though only 31 sectors have shown dynamism in exports, the potential for trade exists in more number of products. If India's export of a particular product to China is less than Chinese total import of that product, assuming that China has enough demand for that product, then there is an opportunity for increase in Indian export of those products. However, there is another factor that might limit the export potential, i.e. export-capacity of India. Total Indian export to world of a particular product may be a good indicator of export capacity for India. Taking all these aspects into consideration we shall use the following index for potential trade.

The Potential Trade is:

Potential trade = Minimum of (China's total import of product x, India's total export of product x) – India's existing exports of product x to China.

Among 45 listed products, we found that except one product, flat rl p of silicon-e,l, there is no further potential to increase India's exports to China. In this product, China's import demand is $603,762,112. The world demand is $1,394,028,935 and India's export is $11,065,858 only. Therefore, If India can increase its production, and then it can increase the export too. In rest of the products, India has export potential to China **(see Appendix 4.6).** Among these 44 products in one product, hot rolled stainless steel sheet, w <600mm, t <4.75 mm India has RCA less than 1.

Until now, the competitiveness and trade potential of Indian exports to China are discussed with the help of secondary data. However, we felt that this kind of study would remain incomplete if we do not take into account the experience of the economic agents who are actually involved in export activities. We have conducted a survey among the exporting companies (see Questionnaire-Appendix: 4.12). The enterprises are chosen such that they should be involved into export activities of product lines, which have at least 0.25 per cent of total exports from India to China for the year 2003. 88

exporting companies have responded to the questionnaire. There are 45 product lines (6 digits) in which India's share is more than 0.25 per cent of total exports to China. The share of these 45 product lines in India's total exports to China is 85.85 per cent. This indicates that the product concentration is more and diversification is marginal. Out of 45 product groups, we are able to obtain required information on 40 products, these amounts to 60.41 per cent of total exports to China. One major product group left out is iron ore, concentrate, not iron pyrites, unagglomerate, which has a share of 23.96 per cent of total exports. However, questionnaire on iron ore, concentrate, not iron pyrites, agglomerate takes care of this product, which is nearest to the product left out. Among 88 companies, as per the criteria adopted,* 34 are large, 19 medium and 35 are small. Among 88 companies, 32 companies export their own branded products and most of them are large in size. In other 56 companies, 52 companies export non-branded products and 4 companies export both branded as well as non-branded products. Out of 88 companies, 80 reported export figures (large 34, medium 18 and 28 small) to China and 68 provided trade margin figures (large 26, medium 13, and small 29). The product analysis provides a clear picture (for further details see the **Appendix 4.7**).

Fish and Fish Products: Five companies responded to the questionnaire. Two companies each from small and medium and one from large size. Their exports comprise fish, prawns, shrimps, sea fish, cuttle fish and squids. Their exports to China vary from 10 per cent to 60 per cent of their total exports. Three are exporting their own brand and other two are non-branded products. Their trade margin ranges from one to 20 per cent. They feel that the Chinese market is highly competitive. Their main competitors are Pakistan, Bangladesh, Shri Lanka, Malaysia, Indonesia, Vietnam, and Japan. They are of the view that their product quality is better than that of Bangladesh and Pakistan and inferior to that of Shri Lanka. It is almost the same with that of Vietnam. Except one company, others started exporting to

China in mid–1990s. Mostly, they sell it to trading companies and wholesalers. The competitors have better facility in packing and preservation capacity. From all counts, they are of the view that the Chinese market is tough but trade will be sustainable due to lower prices of Indian products. China is rapidly becoming self-sufficient in fish and prawns. China also reprocesses the products imported and they export the same to Europe and the US with some value addition.

Spices and Agricultural Products: Three companies responded to the questionnaire. All of them are medium-sized companies. Two companies export 100 per cent of their total exports to China and one company only 3 per cent. They export soyabean meal, rapeseed meal, groundnut kernels, sesame seed, rice bran, sorghum, maize, red spilt lintels, cottonseed, flour, Soya flour, agricultural products, spices, and gum. Two companies are exporting their own brand and one non-branded product. Trade margin ranges from 1 per cent to 6 per cent. They face competition from Nigeria, Myanmar, Mexico, and Ethiopia. These countries sell at lower prices but their quality is marginally inferior. Most of our exporters sell to those manufacturing and trading companies where the price bargaining is high. One company is looking for establishing joint venture. They do not face non-tariff barriers. Currently none of them buys any product from China. They feel that China is a competitive market and can be developed into a reliable partner.

Marbles and Granite: Four companies responded. Three are small and one is a medium sized- company. They export marbles, granite, textiles, food products and stationary items. Except one company, all of them export non-branded products. They export 10–22 per cent of their total exports to China. Two companies did not provide either the export volume or the trade margin and they consider it confidential. The trade margin on marbles varies from 8 to 15 per cent. Their main competitors are Italy, Brazil, and Finland, besides Chinese domestic producers. It is difficult to compare the quality of the

product but by and large they are on par except the Italian marbles. Indian product prices are lower and at times at par with the competitor's prices. Two companies started exporting in the recent years. None has any idea of setting up joint ventures. Only one company buys toys, textiles and gift items and sells them with 30–35 per cent trade margin. All of them sell their products to the trading companies. Since demand for marbles is on the rise they feel trade is sustainable.

Iron Ore: Two large companies responded and they export 80 to 100 per cent of their exports to China. One export branded products whiles the other exports non-branded products. One company has stated that its trade margin is 10-15 per cent while other has not given any indication. They export iron ore concentrates, iron pellets and iron ore in the form of lumps. The main competitors are Brazil, Australia, Canada, and South Africa. Indian ores are better in quality and higher in prices as compared to its competitors. They sell it to manufacturers and trading companies. Demand for steel in China is huge. Chinese buyers have tied up long-term contracts with major suppliers. Chinese government is encouraging formation of large steel mills with the amalgamation of small mills. Now, the emphasis is on quality. More thrust is on use of domestic iron ore and imports are discouraged to an extent by the government. Trade may not be sustainable over a long period.

Zinc ore and Concentrates: Two companies responded: one is large and other is medium-sized. One exports branded and the other non-branded products. They export zinc metal, zinc ore and concentrates, iron ore and aluminum ore. Their export to China varies in the range of 70 to 100 per cent. Trade margin is in the range of 1-5 per cent. The main competitors are Australia, Brazil, Argentina, and Canada. Indian companies have an advantage due to lower transport charges so they sell at lower prices. They sell them to manufacturers and trading companies. Both the companies have no plan to establish joint

ventures in China. They feel the present arrangement is working well. One company is importing lead to make use of it in their production.

Chromium ores: Three companies responded. All of them are large and export non-branded products. Their export items consist of Chromium ore, iron ore, fertilizers, Minerals, sugar, HMS, and petroleum products. Their exports to China varied between 26 to 50 per cent of their total exports. Their trade margin for iron ore varied between 3 to 5 per cent, chrome 1 to 5 per cent, manganese ore 1.5 per cent, sugar 4 per cent, HMS, and petroleum 3 per cent. Two of the three companies started exporting from 2003. The main competitors are Australia, Brazil, and South Africa. In terms of grades, Indian products are better and prices are more than that of competitors. They sell to trading houses and manufacturers. The pressure on the margin is high. The quality of the product is well accepted. Only one company buys coal and sells in the domestic market with the profit margin of 3 per cent. Trade appears sustainable.

Aluminum Oxide: Two companies responded. Both are large and onesells branded and the other non-branded products. They export primary aluminum ingots, primary aluminum sows, calcined alumina, monolvthetic and casting. They export 15 per cent and 43 per cent of their total exports to China. Trade margin for monolvthetic is 15 per cent and casting 20–22 per cent. Main competitors are Australia and Brazil. There is no difference in the quality of the products and also their prices. One company has its own plant in China. Both companies started exporting in 1990s. The companies also imports coke, baked anodes, caustic soda, magnesium metal, silicon metal, filter bags and aluminum fluoride. They sell their products to manufacturers and trading companies. Trade appears to be sustainable due to competitive strength and quality considerations.

Menthol: Three companies responded and all of them are small enterprises. They export non-branded products. They export menth oil, menthol, de mentholised oil, menthone, and essential oil. They export 7 per cent to 17 per cent of their exports to China. Trade margins range from 2 to 20 per cent. One company stated that trade margin is 15–20 per cent. This appears to be more acceptable. All of them started exporting in recent years. Main competitors are Singapore and Indonesia. The quality of the products and prices are at par with the competitors. Prices are competitive and product is slow moving. The companies are not looking for joint ventures. They sell it to the manufacturers and trading houses.

Monocarboxylic Acid: Two companies responded: one is small and other is large. Along with the products, one company is also selling technology with trade margin of 35–40 per cent. This company manufactures more than 300 chemicals and supplies more than 200 technologies and processes to various countries. Their products are branded. The other company exports solvents. The main products exported are acetic acid, acetone, alpha arbutin, ammonium nitrate, ammonium sulfate, calcium hypochlorite, caustic soda, citric acid monohydrate, citric acid anhydrous, chromic acid, hydrogen peroxide, and solvents. The large company exports only 4 per cent of its total exports to China while the small company has not revealed the percentage of its exports. Trade margins for the products vary from 2 per cent to 10 per cent. The main competitors are Russia, Saudi Arabia and the US. Petrochemical products are cheaper from Saudi Arabia, and technologies are cheaper from Russia. Both the companies started exporting in the 1970s. The products are sold to Chinese manufacturers and trading companies. The large company has a joint venture in China and it is teaming with universities to promote commercialized research. It imports around 30 basic chemicals. They are of the view that the Chinese market is price driven and competition is intensive. Since there is not much difference in quality, they feel trade is sustainable.

Terephthalic Acid: Three companies responded: one is large and two are small. All of them export non-branded products. Only two companies gave their export figure. The large company exports 14 per cent and the others 100 per cent. Trade margin is in the range of 10–20 per cent and at times it goes up to 25 per cent. The main competitors are South Korea, Taiwan, and Indonesia. Indian products price is slightly higher due higher transport costs. By and large, there is no difference in quality. Except one company, others have entered the Chinese market in recent years. They sell it to Chinese manufacturing companies and trading houses. This product faces 13 per cent antidumping duties, which is a deterrent to trade. None of them import from China.

Six Hexanelactam: Three companies have responded and all of them are large. They export non-branded products to Chinese manufacturers and trading houses. Their export volume varies from 80 to 100 per cent of exports. Trade margin is 5–10 per cent. Russia, Japan, Poland, and Ukraine are the main competitors. The qualities of Indian products are better but prices are higher. The demand for the product is growing in Chinese textile and tier cord manufacturing industry. They sell it to manufacturers. Exporting companies feel that trade is sustainable. Except one company, other two are exporting to China since mid-1990s.

Antibiotics: There are three respondents: one large and two small companies. All of them export non-branded products. They export antibiotics, anti T.B., and hypertension medicines. Their exports range from 3 to 45 per cent of their total exports. Trade margin varies from 10–12 per cent. Mostly Indians companies compete among themselves in this product group. Getting import permit for drugs appears to be a problem. There is not much difference in quality because the product is based on similar standards. They sell the products to the manufacturers and trading houses. All the companies import

bulk drugs, and intermediaries for antibiotics and they also sell it in the domestic market with the margin of 8–10 per cent.

Polyethylene: Five companies have responded: two small, and two large and one medium-sized company. They export polyethylene (HDPE, LLDPE-high density and low density), compounds of PS/PP, master batches, Di Ethyl Phthalate (DEP), Di Methyl Phthalate (DMP), polyester and polypropylene. Their export is in the range of 10 to 90 per cent. Two companies each export branded, non-branded products, and one exports both branded as well non-branded products. Trade margin varies from five to 20 per cent. Their main competitors are South Korea, Thailand, Taiwan, Middle East and European countries besides local Chinese companies. Indian companies consider their quality is better and prices are almost the same but local producers sell at a cheaper price. Except one company, others have started exporting in recent years. Competition is intensive but market is large so they are able to get better prices. They sell their products to manufacturers, trading companies and to MNCs. One large company has a joint venture. China is increasing its capacity of production; therefore, in future demand may not be stable. The quality consideration is not high but price is a critical factor. Trade does not seem to be sustainable over the long run.

Natural Rubber: Two companies responded and both of them are small. They have started exporting in recent years and export non-branded products. Natural rubber export amounts to 5 and 71 per cent of their total exports. The trade margin is in the range of 10–15 per cent. They face competition from Thailand, Vietnam, and Indonesia. Indian prices are generally lower than that of its competitors and sell it to trading houses and MNCs. They feel their trade is sustainable because of increasing domestic demand.

Leather and Leather Products: Six companies responded and all of them are the small companies. They export 40 to 60 per cent of their total exports to

China. The products exported are finish leather, leather handbags, wallets, key rings and leather accessories. Their trade margin varies from 10 to 30 per cent and 3 companies export branded and non-branded products. Except one company, others have recently entered the Chinese market. Most of them sell it to the manufacturers. Their competitors are Pakistan, Bangladesh, Thailand, Vietnam, and Italy. They feel the quality of the competitor's leather is better, so their prices are higher. The price consideration is in favour of Indian exporters. One-company imports shoe soles to sell in the domestic market. None of the companies is thinking in terms of setting up a joint venture in China. The companies feel that the trade with China is sustainable due to increasing demand for leather and leather products. None of the companies encounters any non-tariff barriers. The Chinese manufacturing companies have improved infrastructure for tanneries.

Paper and Paper Products: Two companies responded and both are small. They export paperboards, fine papers, specialty papers, decorative printing papers, and foils and laminated papers. One branded and other non-branded products. Their exports are 10 and 28 per cent of total exports and trade margin is 7.5–10 per cent. Both companies started exporting in recent times. U.S., Sweden, and Malaysia are the main competitors. The US products are priced higher about 5–7 per cent and Chinese products are priced lower by 10 per cent as compared to Indian products. Both companies import titanium dioxide fillers and base papers. The companies feel market is not sustainable.

Textiles: In this group of products, six companies responded: two are small and four are medium- sized companies. Four companies sell non-branded and two companies sell their own branded products. Own brands are sold by the medium-sized companies. They export cotton yarn, knitted fabrics, aluminum foils, T-shirts, knitwear, cotton knitted fabric, raw cotton, fiber, textile chemicals and different varieties of yarn. Their exports to China vary from two to 50 per cent of their total exports. Their other destinations of

exports are Europe, South Africa, Turkey, Hong Kong, South Korea, and the US. Trade margin varies from 1 per cent to 5 per cent. China is a very competitive market for textiles, therefore margin is small. Their competitors are Indonesia, Bangladesh, Pakistan, US, Egypt, and Thailand, besides local Chinese companies. Four companies started exporting in recent times. Largely, the competitor's quality is better and prices of Pakistan and Bangladesh are lower. They sell their products to manufacturers and trading companies. One company is planning for joint venture with the Chinese company. The Indian companies feel that trade is sustainable due to large-scale production of garments in China. Four of the six companies are expecting to expand their business operations.

Human Hair for Wig making: Three companies responded and all of them are small in size. All of them are exporting non-branded products. Only one company indicated that it exports 10 per cent of its total exports to China. All of them export human hair and their trade margin varies from 10 to 30 per cent. One company indicated that at times trade margin may go up to 200 per cent and the market is highly volatile. They export to the US, Europe, and Switzerland where the trade margins are higher. Their main competitors are Taiwan, Japan, and South Korea. The competitor's products are cheaper because of different kinds of processing. They mainly sell it to the manufacturers. Only one company imports synthetic fiber. The size of the Chinese market makes them to think that trade is sustainable.

Diamonds, Jewelry and Silver: Three companies have responded: one each large, medium and small. Two companies sell non-branded products and one its own brand. They export diamond, jewellery, and silver. Their exports vary from 1 to 3 per cent of their total exports. For them China is not a main market. They export to the US, Switzerland, Hong Kong, France, Germany, Spain, Netherlands, Denmark, Australia, and Belgium. Trade margin varies from 20 to 30 per cent. Main competitors are Belgium and Israel. Indian

products are cheaper and quality of the product is at par. China produces in bulk and Indian products are handmade and ethnic. Largely, they sell it to the trading houses and at times in retail outlets. They view the Chinese market is growing and trade appears to be sustainable.

Steel Products: On steel products, the response has been received from 20 companies: 11 are large, 5 are medium and 4 are small. They export flat steel products, cold rolled and hot rolled coils, HDG, corrugated and plain sheets, blit, electrical steel, color coated sheets, galvanized coils, rolled products, ERW black pipes, galvanized steel, castings, sheets, flat rolled coils, foils, steel billets, engineering items, cold rolled and hot rolled plates, stainless steel hot rolled coils, stainless steel and pipes. Ten companies export their own branded products, eight export non-branded products and two companies export both branded and non-branded products. Eight large companies export their own brand. Large company's exports vary from 5 to 60 per cent of their total exports. However, many of them export in the range of 25 to 40 per cent. Medium-sized company's exports vary from 5 to 30 per cent and that of small companies 5 to 20 per cent of their total exports. Out of 20 companies, 17 of them started exporting after the year 2000 and majority of them after 2002. Of the 20 companies, 15 indicated their trade margin and others declined on the grounds of business confidentiality. Two companies said their trade margin vary in the range of 15–20 per cent, 3 companies 10–15 per cent, five each said their trade margin vary in the range of 5–10 per cent and 1–5 per cent. Majority of the companies said their trade margin is thin because of an intensive bargaining by the buyers. Major destinations of Indian exporters are European countries, African countries, Middle East, US, ASEAN, Australia, Sri Lanka, and Bangladesh. Some companies said they face competition from Indian entities and some from local Chinese companies. Besides, they also face competition from Japan, South Korea, Taiwan, and ASEAN countries. It is indeed difficult to make quality and price comparisons due to grades and subtle differentiation in products. However,

broad comparisons could be made based on the response of the companies. For flat steel products, Indian quality is better and prices are higher to some extent. In case of cold and hot rolled coils, quality is the same as that of foreign competitors but prices are low. For sheets and rolled products, the quality is better and prices lower. For round bars, angled bars and flat bars, the Indian quality is inferior compared to products from South Korea and Japan but prices are at par. For flat rolled coils, cold rolled and hot rolled plates, the competitor's prices are lower and quality is at par. In case of hot rolled stainless steel coil (w>600 mm, T 3-4.75 mm) Indian prices are at par but the quality is superior. In most of the other products, the Indian quality is at par with that of competitors but prices are lower to a small extent. Most of the companies that responded sell their products to the manufacturers, MNCs, and few of them to trading houses. The problems faced are delay of shipment, quality claims, credit risk, and discrepancies in documents. Except three companies, all others felt that trade is sustainable. Out of 20 companies, nine of them import products such as calcium carbide, coke, laptops, zinc wrought, mild steel slabs, stainless steel pipes and steel sheets. Most of them buy for their use in the company and few of them sell to make a profit. One large company is having joint venture, which is doing well. Five companies are exploring possibilities of setting up a joint venture. Some of the Indian exporters are happy because China is an organized market and decisions are implemented quickly. At the outset, it appears that the quality concern is less as compared to price considerations.

Copper and Aluminum Products: There are three responses and all of them are large companies. They export copper cathodes, copper rods, aluminum products, aluminum ingots, aluminum sheets and aluminum rolled products to China. Two of them export non-branded and one branded product. Other main destinations are US, UAE, Taiwan, Singapore, and South Korea. Their export volume varies from 2 to 40 per cent of their total exports. Their trade margin is 3 per cent. Their main competitors are South Korea, Japan,

Indonesia, Malaysia, Taiwan, and Australia. All of them started exporting in recent years. The quality of the product is more or less the same as that of competitors. For copper cathodes and copper rods Indian prices are lower by 10 per cent and for other products prices are more or less the same. They sell their products to Chinese manufacturers and trading companies. There are non-tariff barriers in the form of fumigation and chemical treatment to wood containers. Only one company buys calcium phosphates and sells in the domestic market with 5 per cent margin. The demand for the products are huge in the Chinese market, therefore, trade is sustainable. The language is the problem.

Transmission Shafts and Cranks: Two companies responded and one is large and other is of medium size. They export transmission shafts, cranks, camshafts, axle shafts, beams, engine, and chaffy components and automotive components. Both the companies export their branded products. They export 5 and 15 per cent of their total exports. Both have started exporting in recent years. Their trade margin is 1–2 per cent. They face competition from Japan, European countries, and Brazil. The prices are at par but European countries, products are better. The products are sold to the manufacturers. The market for the product in China is volatile but growing rapidly. One company is planning to establish joint venture. Currently the market appears sustainable.

IC Diesel Engines and Spare parts: One large company responded and it exports 4 per cent of its total exports to its subsidiary in China. The products are manufactured according to global specifications and quality norms. They do not envisage any problem in exporting in future. They do face competition from UK, US, Singapore, and Mexico.

Summing up: There are 45 product lines in which India's share is 85.85 per cent of total exports to China. This indicates product concentration. The main product exported is iron ore concentrate, not iron pyrites unagglomerated

whose share is nearly 25 per cent of the total exports. India exports 31.51 per cent of 85.85 per cent of total exports in resource based category. On the other hand, China exports 8.15 per cent resource based products in its total exports to India. Among 88 respondents, 34 are large, 19 medium and 35 are small-sized, 32 companies export their own branded products, and most of them are large in size. In the group of large companies, 16 export their own branded products and 18 non-branded products. Among the small companies only 7 export branded, 25 non-branded products and 2 both. Medium-sized companies export 8 each branded and non-branded products. Only 2 companies export both, branded and non-branded products. Among other 56 companies, 52 companies export non-branded products and 4 companies export both branded and non-branded products. The fact is that brand consciousness is developing amongst Indian companies slowly and gradually. Out of 88 companies, 31 and 53 export branded and non-branded products respectively. Among the companies interviewed, 68 provided trade margin figures, 26 large, 29 small and 13 medium size companies gave trade margin. They refused to give this information on grounds of business confidentiality.

By and large, trade margin for fish and fish products appears to be in the range of 10–15 per cent on an average. Prices in the Chinese market are subject to many fluctuations because of seasonal factors. The competition is intensive particularly from Bangladesh, Pakistan, and Indonesia. Packing and preservation facilities are better in case of Japan. However, there are no substantial differences in quality. Indian fish products are reprocessed and value added to export to Europe and the US by the Chinese enterprises. In general, Indian fish product prices are higher as compared to Bangladesh and Pakistan products. Indian exporters are not sure about the sustainability of export to China. Exports of agricultural products and spices hold better promise for Indian exporters. The trade margin is thin, which is around 6–10 per cent. The competitors are developing countries; they sell at lower prices. However, Indian product quality is considered better, so the exporters view

that China be developed into a reliable market. The trade margin on marbles and granite are modest in the range of 8–15 per cent. Quality differs considerably from country to country. It is a difficult market without big brand name.

India exports to China iron ore and concentrates, iron ore pellets, aluminum ore, zinc ore and concentrates, zinc metals, and chromium ore. The trade margin for iron ore is 10-15 per cent. Indian iron ore are considered better in quality and therefore prices are higher compared to their competitors. Demand for iron ore increased in China due to demand for steel in construction activities. Now, the emphasis has shifted on restructuring the industry and improving the quality of the steel. Trade margin is thin in the case of zinc ores, concentrates, and chromium ore, which are in the range of 1–5 per cent. The pressure on the margin is high. The quality of Indian ore is well accepted by the Chinese buyers. Therefore, trade appears to be sustainable.

India's exports to China also consist of aluminum oxide, menthol, monocarboxylic acid, terephthalic acid, 6 hexanelactam, antibiotics and polyethylene. Trade margin for monolvthetic is 15 per cent, menthol 10–20 per cent , monocarboxylic acid 5–10 per cent, terephthalic acid 10–20 per cent, 6 hexanelactam 5–10 per cent, antibiotics 10–12 per cent and polyethylene 15–20 per cent. In this product group, 21 companies have responded and ten each are large and small companies and one is medium-sized company. In fact, 15 companies export non-branded, five branded and one both branded and non-branded product. The quality differences are not much between Indian exporters and their competitors except in the case of 6 hexanelactam and polyethylene. Indian product quality is better in these two products and so prices are higher. Demand for these products is growing. Obtaining import licenses appears to be little bit of a problem. There are no non-tariff barriers that adversely affect exports from India. Two companies are in joint ventures.

The exporter feel that trade is sustainable and expected do well in the coming years.

For natural rubber, leather and products group, all 8 companies interviewed are small companies and three export branded and five non-branded products. Their trade margin is in the range of 10–30 per cent but for rubber it is 10–15 per cent. The quality of the Indian leather is inferior as compared to those competitors and prices are lower. The preference for Indian leather and leather products is growing in China due to lower prices. However, competition is getting intensive from the local manufacturers. They have an advantage due to bigger manufacturing and better infrastructure facilities for tanneries.

As for paper and paper products, only two companies responded and they export both branded and non-branded products. Their trade margin is 7.5–10 per cent. The local products are 10 per cent cheaper than that of Indian products. They are of the view that trade is not sustainable. Three respondent companies in human hair export are small and they export small proportion of their non-branded products. Their trade margin is in the range of 10–30 per cent. The competitor's products are cheaper because of different kinds of processing. However, the size of Chinese market creates optimism for sustainable trade. Diamond, jewellery and silver are exported in small quantum by one each small, medium and large companies. Two of them sell non-branded products. Their trade margin is in the range of 20–30 per cent. In terms of quality, Indian products are at par with that of their competitors but prices are lower. Except the paper and paper products, trade is sustainable in other two product segments.

Among the six companies that responded in textile group, two are small and four are medium- sized companies. Four companies sell non-branded products and two branded. The trade margin is in the range of 1–5

per cent. China is highly a competitive market for textiles; therefore, trade margin is thin. The product quality of the competitors is better except Bangladesh. Indian product prices are lower. Trade does not appear to be sustainable due to installation of large capacity in China.

Twenty companies responded in steel product category: 11 are large, 5 are medium and 4 are small companies. They export large varieties of products of which 10 are branded, 8 non-branded and two both branded and non-branded products. Out of 20 companies, 17 of them started exporting in recent years. For 10 companies their trade margin varies in the range of 5 to 20 per cent. It appears that for large-sized companies trade margins are relatively small. For some products, the competition is intensive from local Chinese companies. It is indeed difficult to make product comparison in terms of quality. However, it can be said that for plat steel products, Indian quality is better and prices are higher to some extent. In case of cold and hot rolled coils, our quality is almost the same as that of our competitors but our prices are lower. For round bars, angled bars and flat bars, Indian quality is inferior compared to products from Japan and South Korea but prices are at par. For rolled coils and rolled plates, the competitor's prices are lower and quality is at par. In case of hot rolled stainless steel, coil Indian prices are at par with that of its competitors but the quality is superior. The problem faced by the exporter is delay of shipment, quality claims and credit risk. Some of the companies import industrial inputs either to sell in the home market or to make use of them in their manufacturing units.

Three companies responded in the copper and aluminum products and all of them are large companies. Two of them export non-branded products. Their trade margin is 3 per cent. The quality of the products are more or less the same but for copper cathodes and copper rods Indian prices are 10 per cent lower as compared to that of their competitors. The non-tariff barriers are in the form of fumigation and chemical treatment to wood containers.

Exporters view that trade will be sustainable. One each large and medium companies responded in transmission shafts, crank category products, and export their own branded products. Their trade margin is 2 per cent. They compete with the European and Japanese companies. Indian products are relatively inferior to these countries products, however, Indian product prices are lower. Indian exporter feels that trade will be sustainable.

Tariff Faced by Indian Products

Another important factor that has influenced the increase of Indian exports to China is the tariffs they face. 17 products have at least 1 per cent share in Indian exports to China. Also these products have substantial market share of minimum 5 per cent excluding Flat rld prod/coils< 0.5<1. Out of these 17 products, in 3 products, chromium ores and concentrates, iron ore concentrate, not iron pyrites, unagglomerated and agglomerated, tariff rates are zero (Table - 4.7). Rest of the fourteen products face positive tariff. Interestingly, among these products, relatively technologically more products that are sophisticated are facing higher tariff rate. May be the reduction of tariff rates in these products will help to increase the Indian exports. However, out of these 17 products, there are 4 products[3] that did not show any export dynamism in terms of increasing market share in China. Rather 20 products have shown export dynamism. In addition, these products, excluding flat rl p of silicon-el, have showed positive potential for export to China. These 19 products are described in table - 4.8. Among these products, sesame seeds enjoy zero tariffs. Rest of the products faces positive tariffs. It ranges between 2 to 20 per cent. If there is a reduction of tariffs for these products, it will benefit India.

[3] These products are: 1) Chromium ores and concentrates, 2) Iron ore, concentrate, non iron pyrites, agglomerated, 3) Flat rld prod n/coils<10, 4) paper, coated, impregnated, covered with plastics, nes, 5) Aluminium oxide, except artificial corundum.

Table - 4.7
Tariff Rates of Products with Substantial Share in Indian Export Basket for the Year 2003

HS1996 code	*Commodity*	*Tariff*	*MFN*	*no of tariff lines*	*0.25% share*	*mkt share*
390120	Polyethylene - specific gravity >0.94 in primary forms	Item 1 of 1Tariff Lines	12.9	1	3.26	9.82
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	Item 1 of 1Tariff Lines	10		9.05	23.8
390210	Polypropylene in primary forms	Item 1 of 1Tariff Lines	10	4	3.44	7.23
281820	Aluminium oxide, except artificial corundum	Item 1 of 1Tariff Lines	10		2.93	9.08
710239	Diamonds (jewellery) worked but not mounted or set	Item 1 of 1Tariff Lines	8	6	3.78	38
481139	Paper, coated, impregnated, covered with plastics, nes	Item 1 of 1 Tariff Lines	7.5	1	1.01	17.2
720918	Flat rld prod/coils>.5mm	Item 1 of 1 Tariff Lines	6		2.31	8.79
720851	Flat rld prod n/coils<10	Item 1 of 2 Tariff Lines	6		1.6	7.27
520522	Cotton yarn >85% single combed 714-232 dtex,not retail	Item 1 of 16 Tariff Lines	5		1.61	8.56
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	Item 1 of 1Tariff Lines	4	14	4.21	26.7
251611	Granite, crude or roughly trimmed	Item 1 of 2 Tariff Lines	4		2.78	45.9
294190	Antibiotics nes, in bulk	Item 1 of 3 Tariff Lines	4		1.56	31.2
720839	Flat rld prod/coils>3mm	Item 1 of 2 Tariff Lines	3	3	2.33	5.67
720917	Flat rld prod/coils<.5<1	Item 1 of 1 Tariff Lines	3		1.86	3.99
260111	Iron ore, concentrate, not iron pyrites, unagglomerated	Item 1 of 1 Tariff Lines	0		24	24.9
260112	Iron ore, concentrate, not iron pyrites, agglomerated	Item 1 of 1Tariff Lines	0		4.69	25.8
261000	Chromium ores and concentrates	Item 1 of 2 Tariff Lines	0	6	2.14	60.5

Table - 4.8
India's Dynamic Export Sectors' Tariff rate in China, 2003

HS 1996 code	*Commodity*	*tariff*	*MFN*	*no of tariff lines*
670300	Worked human hair, wool or animal hair, for wig making	Item 1 of 2 Tariff Lines	20	20
400121	Natural rubber in smoked sheets	Item 1 of 18 Tariff Lines	20	
410620	Goat or kid skin leather, nes	Item 1 of 1 Tariff Lines	14	1
30613	Shrimps and prawns, frozen	Item 1 of 5 Tariff Lines	8	
720836	Flat rld prod/coils<10mm	Item 1 of 2 Tariff Lines	6	7
848310	Transmission shafts and cranks, cam and crank shafts	Item 1 of 1 Tariff Lines	6	
410431	Bovine and equine leather, full or split grain, nes	Item 1 of 2 Tariff Lines	5	
720838	Flat rld prod/coils<3>4.	Item 1 of 1 Tariff Lines	5	
720837	Flat rld prod/coils<4.75	Item 1 of 1 Tariff Lines	5	
720827	Flat rld prod/coils>3mm	Item 1 of 1 Tariff Lines	5	
720851	Flat rld prod n/coils<10	Item 1 of 2 Tariff Lines	6	
520542	Cotton yarn >85% multiple combed 714-232 dtex,not ret.	Item 1 of 1 Tariff Lines	5	
290611	Menthol	Item 1 of 5 Tariff Lines	5	
291620	Cyclan-/cyclen-/cycloterpen-monocarboxylic acid/derives	Item 1 of 5 Tariff Lines	4	
721913	Hot rolled stainless steel coil, w >600mm, t 3-4.75mm	Item 1 of 2 Tariff Lines	4	
740311	Copper cathodes and sections of cathodes unwrought	Item 1 of 2 Tariff Lines	2	3
902230	X-ray tubes	Item 1 of 1 Tariff Lines	2	
260800	Zinc ores and concentrates	Item 1 of 1 Tariff Lines	0	
120740	Sesamum seeds	Item 1 of 1 Tariff Lines	0	

Section III
Structure of Chinese Export to India

We have already mentioned during the discussion of complementarities between Indian exports and Chinese imports that there is a very little intra-industry trade between these two countries. However, Chinese exports have substantial complementarities with Indian imports through inter-industry trade. However, the trend in complementarities index of Chinese export with Indian import shows a declining trend, but in absolute terms, the value of index is substantially high for all the years between 1996 to 2003. It has ranged within 69 to 93. (See table - 4.9)

Table - 4.9
Complementarity Index between Chinese Exports with Indian Import

1996	1997	1998	1999	2000	2001	2002	2003
92.27	82.41	81.28	75.55	70.57	72.49	69.94	70.16

China's export basket consisted of 67 products in the year 2003, (that has share of at least 0.25 per cent in total Chinese exports to the world); there are 48 products on which they have enjoyed share of more than 5 per cent in India's import of those products from the World (**Appendix 4.8**). This information, coupled with the high value of Complementarities index indicates that Chinese export has substantial complementarities with Indian imports.

In addition, out of 48 products that China enjoys, it has the largest market share in India for 27 products. There are 12 products in which China enjoys second largest market share. So, most of the Chinese products are substantially competitive in the Indian market.

China's export basket for India (following 0.25 percent criteria, i.e products have at least 0.25 per cent share in total export of China to India) consists of 52 products for the year 2003. In addition, all of them have minimum of 5 per cent share in the Indian market. In addition, in 31 products group, China is enjoying the largest share in the Indian market. China also enjoys the second largest market share in another 9 products. So most of the Chinese products are competitive in the Indian market (**Appendix 4.9**).

Similar to our analysis of Indian export to China, we have extended our analysis further based on primary survey among Indian importers of Chinese products. The importers are chosen such that they should belong to the product lines, which have at least 0.25 per cent of imports into India from China for the year 2003. 52 import product lines at 6-digit level meet this criterion. Among them, we found two categories of importers: 1)

Manufacturers; and 2) Trader (not involved in any kind of manufacturing). We prepared separate questionnaires for each category of companies. We got the response from 55 manufacturing and 48 trading companies.

Manufacturing Companies

There are 52 product lines (6-digit) in which China's share is 0.25 per cent of its total imports into India. This accounts for 56.19 per cent of total imports into India (import volume of $224.82 million) in 2003. This implies that China has diversified its exports into India. A survey was conducted to elicit response from Indian importers about the advantages derived from importing from China and the problems they encounter in the process. All-important cities such as Mumbai, Kolkata, Dehli, Chennai, Banglore, Hydrabad, Ahmedabad, and Pune were covered. We were able to obtain response from 55 companies, which were importers, distributors, and some of them were exporters. Most of them were importing manufacturing inputs. Some sold these inputs partly with or without value addition. Out of 52 product lines (6-digit), we could obtain information on 39 product lines whose imports were more than 0.25 per cent of the total imports. In fact, survey covered 45.41 per cent of imports from China. Information could not be obtained for 13 product lines that formed 10.78 per cent of total imports from China (**Appendix 4.10**).

Among 55 companies that responded, 21 were small companies whose turnover is Rs.10 crore or less, 11 were medium-sized companies whose turnover is more than Rs.10 crore and less than Rs. 100 crore and 21 were large companies whose turnover was more than Rs.100 crores. Out of 55 companies, 14 companies observed that the imported products from China are superior in quality as compared to similar products available within the domestic market, 23 companies felt that there is no difference in quality, 12 companies noted that the imported product from China are inferior as compared to the products available within the domestic market and 6

companies did not respond and said the product they import from China is not available in the domestic market. To a large extent, it proves that Chinese products are not of low quality, they are as good as Indian domestic products. The survey revealed that out of 104 products imported from China, 49 (47 per cent) are of the same quality and there is not much difference between the imported and the domestic products. 26 products (25 per cent) are superior and 17 are inferior as compared to the available similar products in the domestic market. It is found that for 12 products there is no response. Nearly 72 per cent of the products imported from China either are of the same quality or are superior to the products available in the domestic market. The top consideration for imports is the relative low prices and efficient delivery of the products. It may be useful to make product category analysis [For details see **Appendix 4.11].**

Electronics and Electrical

In this category of products, 22 companies responded to our questionnaire. It covered 38 products such as electric parts, circuit boards, IC's, crystal, relays, microwave ovens, refrigerators, washing machines, computer cabinets, power supply equipment, key boards, speakers, hard glass tops, perforated sheets, storage units, capacitors, transformers, telephone equipment, portable digital data equipment, E-board mouse, DVD writers, mother boards, picture tubes, cathode ray tubes, electronic gun, glass panels, fibre optic equipment, networking equipment, LVD, monitoring model, static converter, rectifier, C.T. transformer, amplifiers, cable anodes, led pins, transistors and components, compressors, electric motor, and T.V. transit/receiving equipment. The share of these products in total imports from China is 25.71 per cent. The table - 4.10 provides the picture of low prices of products imported from China as compared to Indian products.

In importing of electronic items, the low price of the Chinese products is the most important consideration. The interviewed companies categorically

Table - 4.10
Chinese Electronic and Electrical products Cheaper to Indian Products

Percent Cheaper	*Products*
Above 30	Chemical garnet, electric parts, circuit boards, I.C.s crystal, relays, microwave ovens, refrigerators, washing machines, storage units, capacitors, transformers, electric equipment, portable digital data equipment, E-board mouse, mother boards.
20 to 30	Telephonic and electronic equipment, DVD writers, color picture tubes, cathode ray tubes, electronic gun, glass panels, speakers, amplifiers, cable anodes, LED pins, transistors and components.
10 to 20	Computer cabinets, power supply equipment, key boards, LVD, monitoring model, static converter, rectifier, C.T. transformer, plastic items.
5 to 15	Hard glass tops, perforated sheet, fibre optic equipment and networking equipment, electric motor.

stated that they do not face any problems in importing. They also noted that China's electronic and electric product market is price centric and there is intensive competition in providing the products at the lowest price. Many of the Indian companies feel that our local manufacturers do not have the capacity to fulfill the requirements. Out of 21 respondents, 4 of them said that their only import source is China. Other sources of imports of electronic and electrical products are Singapore, South Korea, U.S., Thailand, Hong Kong, and Malaysia. The problem faced by the importers is from the Indian side, which emanate from port congestion, non-availability of flights, and high charges on transportation. All respondents are of the view that their trade transaction with China is sustainable mainly because of low prices.

Organic Chemicals and Compounds

There are 15 respondents in this product group and all of them are using Chinese imports as inputs. It covered 10 categories of products (6 digits). The share of these products from Chinese imports into India was 8.33 per cent in 2003. These 15 companies have imported 42 products from China, out of which 18 products are of the same quality that is available in the home market. Nine each product is superior and inferior to the products available in the Indian market. Only four products could not be compared with the products in the domestic market. Bulk drugs, intermediates, organic

chemicals, API, N.W.acid, naphthylamines, psosa, 4 MEP, clorophome, astone, mipa 13 DEB, napthols, salts, CPC and alpha napthols are considered to be of same quality that are available in the domestic market. Penicillin and penicillin derivatives, trazin, sodium sulphide, titanium tubes/pipes, ammonia salts, sulphonic acid, DMPAT, and white phosphorus are considered superior to that of available similar products in the domestic market. Whereas dyes, napthols, certain kinds of salts, napthylamines, red phosphorus, phosphoric acid and phosphoric penta sulphide are considered inferior to the available products from the domestic market. The table - 4.11 provides the picture of low prices compared to Indian products in percentages.

Table - 4.11
Chinese Organic Chemicals and Compounds Cheaper to Indian Products

Per cent cheaper	*Products*
Above 30	API, Organic chemicals, Bulk drugs, intermediaries, Penicillin derivatives, Trazin
20-30	Chemical intermediates, NW acid, Naphthylamines, PSOSA, 4 MEP, Clorophome, Asotone, Mipa 13 DEP,
10-20	Dyes, Naphthols, Salts, Sodium sulphide, Titanium tubes and pipes, Ammonia salts, Sulphonic acid, Yellow phosphorus, DMPAT, CPC, Alpha Naphthol.
1-10	Minerals, Oil field chemicals, Ground natural calcium phosphates

The products such as DCDA, Gentamvcin, Neomvcin, and certain types of antibiotics are not produced domestically but they are imported from China because it is cheaper by 10 –15 per cent as compared to South East Asian countries. Aluminums are imported from China though there is no price difference between the domestic products and imported one. This is due to better supply capabilities. The products are inferior as compared to available products in the domestic market. Other sources of imports of organic chemicals and compounds are Europe, Japan, US, and Chile. As many as eight respondents said that their total supply comes only from China. Except one respondent, all others said that their trade with China is sustainable because of the low price, prompt delivery and acceptable quality.

Minerals and Concentrates

Six companies responded in the minerals and concentrates group of products. It covered 10 product lines (6-digit level) including coal and non-cooking coal. The share of these products from Chinese import into India accounted for 3.77 per cent. Coal and coke, manganese metal flake, iron ore, iron powder, oil field chemicals, and ground natural calcium phosphates are of the same quality that are available in the domestic market. Silicon materials imported from China are superior and manganese oxide is inferior to that of domestic products. Manganese metal flake, iron ore and iron powder are cheaper from China in the range of 25–30 per cent. Rest of the products namely silicon, coal and coke, magnesium oxide, minerals, oilfield chemicals and ground natural calcium phosphates are cheaper in the range of 5–10 per cent as compared to domestic products. Other sources of imports are Russia, Ukraine, Egypt, Thailand, and South Korea. All the respondents said that their trade with China is sustainable mainly due to low prices and acceptable quality.

Paper and Paper products

There are only two product groups (6 digits) in which India's share is more than 0.25 per cent of China's total imports into India. Only two companies responded. They imported unexposed color photographic paper and paperboards, papers, films and hard disks. Unexposed color photographic paper is superior to domestically available products and cheaper in the range of 15–20 per cent to the comparable domestic product. Papers, films and hard disks are not manufactured in India, therefore, they have to be imported. Since the respondents are MNCs, they view that trade with China is sustainable. They also import from South-East Asian countries.

Silk and other Fabrics

There are six product groups (6 digits) in which India's share was more than 0.25 per cent of imports from China. The share of these products in

China's imports into India was 5.70 per cent. Ten companies responded to the questionnaire. Among all the products, natural and raw silk is the main item. Other items are silk yarn and fabrics, shawls, tyre cord and impregnated fabrics. Except tyre cord, all products are superior to the similar products available in the domestic market. Natural and raw silk, silk yarn and fabrics, wool yarn and shawls and tyre cord are cheaper in the range of 20–30 per cent and impregnated fabrics are cheaper in the range of 10–15 per cent. The obvious reason for imports from China is superior products and cheaper prices. All the companies said that they do not face any problem in importing from China and felt trade is sustainable.

Other products

Other products that are imported included items of casings, lead, PVC and zinc (not alloyed) and their share is 1.24 per cent of imports from China. Five companies responded to the questionnaire. Items of casings are cheaper in the range of 20–30 per cent, where as lead, PVC, and zinc are cheaper in the range of 5–10 per cent as compared to similar products from the domestic market. PVC, and casings are inferior and zinc is of the same quality available from the domestic market. The importers do not face any problem (for details see the Table - 5.11)

To sum up we can say that among the manufacturing companies large, medium and small companies imported inputs to use it in their manufacturing processes. The main consideration is the low prices of Chinese inputs as compared to similar products available within the domestic sources. Second is the quality. Other reasons are promptness in delivery and relative lower cost of logistics. It is indeed wrong to conclude that Chinese products are inferior to our domestic products. Out of 55 companies, only 12 companies (22 per cent) observed that Chinese products are inferior compared to similar products available in India. As many as 37 companies opined that Chinese products are superior and similar to that of local

products. In fact, 14 companies (25 per cent) viewed that the Chinese products are superior and cost effective. In terms of products, out of 104 products imported from China, 49 are of the same quality that is available in India, 26 products are superior and 17 are inferior to domestic products. In the opinion of the manufacturing companies 72 per cent of the products imported from China are either of similar qualities available in the domestic market or superior to the products from the domestic market. Among the product category, electronic and electrical is the largest segment of imports from China, which account for 29.24 per cent of 56.19 per cent of imports covered by the survey. China has supremacy in consumer electronics due to large-scale mass production. Slowly and gradually, China is becoming the sole source for electronic products for many Indian companies. This is mainly due to low prices. In organic chemicals and compounds, except a few product lines, a large number of products are cheaper in the range of 10 to 30 per cent. In fact, bulk drugs and intermediaries are cheaper over 30 per cent comparing to similar products in the local market. In minerals and concentrate group, coal and coke are cheaper in the range of 5–10 per cent. The government intervention is there in pricing of minerals and concentrates. Raw silk, silk yarn, and silk fabrics are cheaper in the range of 20 to 30 per cent, which attracts silk manufacturers to increasingly go for Chinese silk. Similar is the case with paper and paper products and casings. Most of the companies expressed that their trade with China is sustainable due to cheaper prices for products and prompt delivery. The manufacturing companies interviewed are not looking for joint ventures or setting up their own units because most of them buy input for their units in India. Importing is not a problem for them. Since the scale of production in China is large, there is no constraint on availability of supplies. Not even one company complained about procedural hassles or any kind of non-tariff barriers. The interviewed manufacturing companies noted that their purchase would increase in future.

Trading Companies

There are 48 companies, which responded to the questionnaire. As per the earlier categorization, 36 are small, 4 medium and 8 are large companies (see **Appendix 4.12**). Among the large companies, four of them are buying telephone related systems and equipments. This purchase is related to the services they provide in the domestic market. A large number of small companies buy non-branded products from China to trade in the domestic market. In the total number of companies, 15 are engaged in both export and import activities and 33 are exclusively engaged in imports. In terms of product-wise categorization, 16 companies are in electronics and electrical, 9 in textiles, 8 in minerals and concentrates, 7 in chemical and allied products, 3 in metals, 2 each in machines and silver and one in films. 20 companies imported branded products, 24 non-branded products and 3 companies both branded and non-branded. 39 companies indicated their trade margin. 18 companies viewed that the imported product and available domestic products have no quality differences, 12 said the imported products are superior and 7 noted the imported products are inferior. Others said since their imported product is not domestically produced there is no question of quality comparison.

Electronics and Electrical

In this product group, 18 companies responded to the questionnaire. 13 companies are only importers and 5 companies are both importers and exporters. 16 companies imported branded products and one each non-branded and both branded and non-branded products. Branded embroidery and sewing machines are imported, whereas embroidery machines are not available in the local market. Both companies are small and their trade margin is in the range of 5–10 per cent. The obvious reasons are low price, easy availability, besides better quality in the case of embroidery machines. Both the companies import only from China. They feel China provides customized products with right kind of warranty and customer services. The products

imported in electronic segments are laptop, hard disks, optical drives, rams, mother boards, batteries, electric motors, transformers and parts, primary cells, digital loop carrier system, telecom switching, apparatus for carrier, GSM/CDMA equipment, transmission equipment, telephonic equipment, handsets, wireless phones, PDA, DVD player, audio, millimeters, recorders, recorded media, cathode ray tubes and medical equipment. Except the transformers and parts, all products are branded. The trade margin for this wide category of products varies from 5 to 40 per cent (see table - 4.12)

Table - 4.12

Chinese Electric and Electronic Products Cheaper to Indian Products

Per cent of trade margin	*Products*
5-10	Embroidery machines, Sewing machines, DVD player and Audio.
10-15	Lap top, hard disks, optical drives, batteries, rams, mother boards, primary cells, parts of telephones.
15-30	Electric motors, transformers and parts, multimetres, recorders, recorded media.
30-40	Telecom switching system, apparatus for carrier, GSM/CDMA equipment, transmission equipment, cathode ray tubes, x-ray tubes.

Lap top, hard disks, optical drives, all types of batteries, and digital loop carrier system are viewed as superior to the products available in the local market. Rests of the products are of the same quality or are not available in the domestic market. None of the Indian companies expressed any problem in dealing with China except the language. All of them said that delivery from China is prompt and their trade is sustainable.

Silk and other Fabrics

There are nine respondents to the questionnaire. Only two companies are engaged in both import and export activities and seven others are the importers. All the companies import non-branded products. The exporting items are textiles, woolens and embroidery. The products imported are textile machinery, fabrics, raw silk, silk yarn, silk fabrics, woolens, woven polyester,

tyre cord fabrics, coated fabrics and blankets. For raw silk and silk fabrics, the manufacturing companies say that trade margin is above 15 per cent whereas the trading companies say that trade margin is 1-5 per cent. It is learnt from reliable sources that trade margin for these products is largely above 15 per cent. The trade margins for the products are given in Table - 4.13.

Table - 4.13
Chinese Silk and Textile Products Cheaper to Indian Products

Per cent of trade margin	*Products*
1-5	Raw silk, Silk yarn, Silk fabrics, Woven fabrics for silk
5-10	Textile machinery
10-15	Ready made garments, Fabrics
15-20	Woven Polyester
20-30	Woolen, Tyre cord fabrics, Blankets

It is viewed by the importers that there is no quality difference in raw silk, silk products, woven polyester and tyre cord fabrics. However, woolen fabrics and blankets are considered inferior in quality. The problems of the importers are limited to customs offices in India. Except one respondent, all others are of the view that trade with China is very much sustainable. The reasons for import from China are due to low prices and prompt delivery.

Minerals and Metals

There are 13 companies, which responded to the questionnaire. Among them seven are engaged in both exporting and importing activities. Six are only into imports. The exporting activity is confined to iron ore, Ferro alloys, manganese ore, chrome, silicon, aluminum oxide, galvanized steel, aluminum scrap, and non-ferrous alloys. However, most of them are mainly engaged in importing. The imported products are Ferro alloys, magnesia, lithium, bauxite, dead brunt magnesia, steam coal, mate coke, manganese ore, chrome, silicon, Ferro-silicon, iron ore, betanaphtanol, lead, tin, zinc, bismuth, manganese metal, hot rolled coil, iron and steel scrap, tiles, agricultural tools, casings and turbings. Out of 13 respondents, 10 companies imported non-

branded products, two companies imported both branded as well as non-branded and one company imported branded products. Trade margins of these products are given Table - 4.14

Table - 4.14
Chinese Steel Products Cheaper to Indian Products

Per cent of trade margin	*Product*
1-5	Ferro-alloys, magnesia, lithium, silicon (pure), Ferro-silicon, tin, bismuth metal, manganese metal, manganese ore, iron ore, lead.
5-10	Coal, steam coal, betanaphtanol.
10-20	Bauxite, dead brunt magnesia, coke, met coke, minor metals.
20-30	Hot rolled coils, iron and steel scrap.

The preference for the Chinese products are mainly due to cheaper prices and secondly for the quality. The respondents consider Ferro alloys, magnesia, lithium, dead brunt magnesia, coal, coke, mete coke and hot rolled coils as superior and silicon, lead, tin, zinc, steam coal as inferior to the domestic products. Rest of the products is more or less of the same quality available in the domestic market. Over ridding preference for the Chinese product is the low prices and meeting the required quantity.

Chemicals and Allied Products

Seven companies responded to the questionnaire. Three companies are involved in both exports and imports. These companies exported phosphoric acid, magnesium chloride, petro-chemicals, steel, rubber and rubber chemicals. However, for these companies, the main activity is imports. Two companies imported branded products and one company both branded and non-branded products. Four companies imported only non-branded products. The products imported are tri sodium phosphates, natural calcium phosphates, ferrous sulphates, tartaric acid, citric acid, hydrogen peroxide, amino sulphonic acid, vitamin B12, aminophenol, calcium carbide, antibiotics, pharmacy raw materials, and solvents, petro-chemicals, rubber and rubber chemicals. The trade margins are given in Table - 4.15.

Table - 4.15
Chinese Chemical and Allied Products Cheaper to Indian Products

Per cent of trade margin	*Products*
1- 5	Tartaric acid, citric acid,, hydrogen peroxide, amino sulphonic acid,
10-15	Vitamin B12, amino phenol, antibiotics, pharmaceutical raw materials
25-30	Tri sodium phosphates, natural calcium phosphates, ferrous sulphate, solvents, rubber and rubber chemicals.

Tri sodium phosphates, natural calcium phosphates, ferrous sulphates, tartaric acid, hydrogen peroxide, amino sulphonic acid, vitamin B12, calcium carbide, antibiotics, pharmaceutical raw materials, and solvents are of the same quality that is available in the domestic market. Whereas aminophenol, rubber and rubber chemicals are inferior to the comparable products in domestic market. The importers do not face any problems and view that their trade is sustainable due to low prices and quality considerations.

Other manufactured products

In this group, there are only three respondents. All of them are importers. Two are small and one is a medium-size enterprise. The imported products are tableware, silver and gold jewellery, photographic films, cameras and binocular. The trade margin in the case of tableware is 14–16% and the product is superior to that of domestic product. In the case of silver and gold jewellery, the trade margin is 5–10%. The Chinese products are superior. For photographic films, cameras and binoculars the company did not specify the trade margin, noted that the products are of international standard, and said that these are not produced domestically. Main criteria for importing are the low price and quality.

Summing up: Out of 48 trading companies that responded, 36 are small, 4 medium and 8 are large companies. Among the large companies, four of them buy telephone related systems and equipments. This purchase is related to the services they provide in the domestic market. It is found that a number of

small companies buy non-branded products from China to trade in the local market. In the total number of companies, 15 are engaged in both export and import activities and 33 are exclusively engaged in import activities. Out of 48 companies, 39 companies indicated their trade margins and 11 companies declined to respond on the grounds of business confidentiality. Many companies, particularly the small companies, understated their trade margins but the large companies' understatement is not that high. Further, small companies also understate their export figures. In general, no company buys from the foreign sources unless its trade margin is 5 per cent or more. A large company buys in huge volumes and may afford to have 3–4 per cent trade margin. The trade margin is as high as 30–40 per cent in case of telephone switching system, apparatus for carrier, transmission equipment, cathode ray tubes and x-ray tubes. In case of raw silk, silk yarn, silk fabrics and woven fabric for silks trade margin is low to the extent of 1–5 per cent and woolens, tyre code fabrics and blankets have a trade margin of 20–30 per cent. Minerals and metals have relatively low trade margin for large number of products. Trade margin is relatively higher in chemicals and allied products. In comparison to the manufacturing companies, trading houses obtained less of trade margin in majority of products. There is no problem in importing from China. All of them are of the view that their trade is sustainable.

Appendix 4.1

Competitiveness in Chinese market for Major Indian Exports to World, 2003

		China's Import from world (in US $)	*India's Mkt Share in China (in per cent)*	*India's RCA*	*Country with Top Most share*	*Mkt. Share of the Top Country (in per cent)*	*RCA of the Top Country*	*Difference between Col. 5 and 8*	*Unit price of India (in US $)*	*Unit price of country with largest mkt share (in US $)*	*Difference between Col. 10 and 11*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
020230	Bovine cuts boneless, frozen	10609694	0	4.24	USA	57.84	1.63	2.61		1.74	
030613	Shrimps and prawns, frozen	121915144	15.76	12.26	Canada	31.82	0.49	11.77	3.39	1.34	2.05
070310	Onions and shallots, fresh or chilled	335503	0.00	7.98	USA	90.12	0.90	7.08		0.26	
080132	Cashew nuts, shelled dri	6828731	0.00	55.64	Viet Nam	99.80	94.57	-38.93		1.64	
090111	Coffee, not roasted, not decaffeinated	10111896	0.03	2.95	Vietnam	75.76	30.77	-27.82	0.67	0.69	-0.02
090240	Tea, black (fermented or partly) in packages > 3 kg	2283021	5.14	20.87	Sri Lanka	37.57	228.81	-207.94	3.90	3.07	0.83
100190	Wheat except durum wheat, and meslin	8527909	0.00	4.33	USA	93.72	2.41	1.92		0.19	
100630	Rice, semi-milled or wholly milled	95707096	0.00	20.73	Thailand	99.96	26.32	-5.59		0.37	
120740	Sesamum seeds	46798608	66.12	31.14	India	66.12		31.14	0.71		
170199	Refined sugar, in solid form, nes, pure sucrose	38345472	0.00	3.16	Korea	81.97	0.33	2.83		0.28	
230400	Soya-bean oil-cake and other solid residues	576299	75.48	3.40	India	75.48				0.28	

		China's Import from world (in US $)	*India's Mkt Share in China (in per cent)*	*India's RCA*	*Country with Top Most share*	*Mkt. Share of the Top Country (in per cent)*	*RCA of the Top Country*	*Difference between Col. 5 and 8*	*Unit price of India (in US $)*	*Unit price of country with largest mkt share (in US $)*	*Difference between Col. 10 and 11*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
251611	Granite, crude or roughly trimmed	257709312	45.87	32.96	India	45.86			0.16	0.29	-0.13
260111	Iron ore, concentrate, not ironpyrites,unagglomerated	4084268288	24.94	14.95	Australia	39.49	38.20	-23.25	0.03	0.02	0.01
271000	Petroleum oils&oils obta	5863486976	0.22	2.15	Rep. of korea	26.35	1.43	0.72	0.17	0.20	-0.03
281820	Aluminium oxide, except artificial corundum	1375761280	9.08	4.55	Australia	72.56	40.24	-35.69	0.21	0.24	-0.03
290243	P-xylene	574332864	0.00	8.35	Japan	53.46	3.48	4.87	51.44	8.57	42.87
294190	Antibiotics nes, in bulk	213429648	31.21	4.94	India	43.33					
294200	Organic compounds, nes	1151171	4.17	5.73	Japan	25.28	1.08	4.65	51.44	8.58	42.86
300420	Antibiotics nes, in dosage	135164720	0.95	3.99	Japan	20.20	38.55	-34.56	66.32	314.46	-248.14
300490	Medicaments nes, in dosage	660936320	0.19	0.60	Germany	20.67	1.76	-1.16	58.49	72.20	-13.91
380810	Insecticides, packaged for retail sale	28848398	3.64	3.15	USA	30.99	1.54	1.61	7.83	5.50	2.33
390210	Polypropylene in primary forms	2023336960	7.23	3.42	Rep. of Korea	28.67	3.73	-0.31	0.67	0.73	-0.06
401120	Pneumatic tyres new of rubber for buses or lorries	48610576	0.57	1.66	Japan	47.77	2.44	-0.78	55.30	171.36	-116.06
410439	Bovine and equine leather, nes	619229248	1.68	3.28	Korea	15.82	2.07	1.21	9.42	13.49	-4.07
420221	Handbags with outer surface of leather	17533302	0.02	5.23	France	69.66	3.44	1.79	20.23	215.14	-194.91
420231	Articles for pocket or handbag, leather outer surface	6267414	5.53	14.09	France	45.99	0.00	14.09	0.69	91.19	-90.50
420310	Articles of apparel of leather or composition leather	5560491	1.40	12.44	Italy	45.59	2.44	10.00	117.10	263.34	-146.24

		China's Import from world (in US $)	*India's Mkt Share in China (in per cent)*	*India's RCA*	*Country with Top Most share*	*Mkt. Share of the Top Country (in per cent)*	*RCA of the Top Country*	*Difference between Col. 5 and 8*	*Unit price of India (in US $)*	*Unit price of country with largest mkt share (in US $)*	*Difference between Col. 10 and 11*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
500720	Woven fabric >85% silk (except noil silk)	74751768	2.36	25.89	Japan	26.92	5.32	20.57	3.88	6.31	-2.43
520100	Cotton, not carded or combed	1162801280	0.25	1.40	USA	56.77	4.04	-2.64	1.46	1.29	0.17
520511	Cotton yarn >85% single uncombed >714 dtex,not retail	60763324	1.33	10.15	Pakistan	22.60	80.55	-70.40	1.68	1.53	0.15
520521	Cotton yarn >85% single combed >714dtex, not retail	10182075	0.00	29.77	Pakistan	28.15	74.71	-44.94		1.78	
520710	Cotton yarn (except sewing thread) >85% cotton, retail	830704	0.45	3.73	Hongkong, SAR	13.88	1.23	2.50	5.15	6.06	-0.91
540710	Woven hi-ten filament, nylon, polyamide or polyester	17573038	0.00	1.30	Korea	31.29	1.48	-0.18		0.89	
540752	Woven fabric >85% textured polyester, dyed, nes	227793264	0.01	1.31	Korea	22.18	6.69	-5.38	2.15	1.36	0.79
570110	Carpets of wool or fine animal hair, knotted	304354	47.69	26.55	India	47.69		26.55	27.98		
570231	Carpets of wool or hair, woven pile, not made up, nes	48281	0.00	3.17	Swit-zerland	88.27	3.24	-0.07		64.31	
610510	Mens, boys shirts, of cotton, knit	6067773	0.68	9.15	Italy	32.09	13.58	-4.43	6.02	37.68	-31.66
610610	Womens, girls blouses & shirts, of cotton, knit	1658010	0.69	4.47	Korea	32.22	0.47	4.00	14.01	21.07	-7.06
610910	T-shirts, singlets and other vests, of cotton, knit	47564644	0.19	4.04	Hongkong, SAR	46.37	3.18	0.86	15.08	0.61	14.47
620342	Mens, boys trousers & shorts, of cotton, not knit	46637188	0.11	1.34	Hongkong, SAR	65.80	5.65	-4.31	11.06	1.36	9.70

		China's Import from world (in US $)	*India's Mkt Share in China (in per cent)*	*India's RCA*	*Country with Top Most share*	*Mkt. Share of the Top Country (in per cent)*	*RCA of the Top Country*	*Difference between Col. 5 and 8*	*Unit price of India (in US $)*	*Unit price of country with largest mkt share (in US $)*	*Difference between Col. 10 and 11*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
620442	Womens, girls dresses, of cotton, not knit	2198979	0.22	18.23	Hongkong, SAR	76.08	8.02	10.21	19.31	1.52	17.79
620462	Womens, girls trousers & shorts, of cotton, not knit	79299776	0.01	1.46	Hongkong, SAR	80.09	9.95	-8.49	12.81	1.27	11.54
620520	Mens, boys shirts, of cotton, not knit	88224336	0.61	9.52	Hongkong, SAR	88.52	11.59	-2.07	21.61	1.87	19.74
620630	Womens, girls blouses & shirts, of cotton, not knit	41821076	0.02	21.04	Hongkong, SAR	89.94	1.39	19.65	7.47	2.13	5.34
630492	Furnishing articles nes, of cotton, not knit, crochet	439140	2.13	29.70	Turkey	17.69	3.83	25.87	3.43	19.01	-15.58
630790	Made up articles (textile) nes, textile dress patterns	24627888	0.59	2.69	Korea	20.62	0.44	2.25	8.75	8.42	0.33
640351	Footwear, soles, uppers of leather, over ankle, nes	767626	1.64	2.83	Italy	73.97	11.20	-8.37	36.76	59.49	-22.73
640610	Footwear uppers and parts thereof, except stiffeners	29816206	0.17	11.24	Korea	77.27	0.01	11.23	4.01	17.48	-13.47
680223	Cut or sawn slabs of granite	2543061	5.84	8.11	Italy	26.94	4.64	3.47	0.36	0.52	-0.16
710239	Diamonds (jewellery) worked but not mounted or set	423723488	38.02	30.41	India	38.02					
710399	Precious & semi-precious stones, nes, worked, not set	27547736	1.16	23.02	Thailand	36.17	11.90	11.12			
711319	Jewellery and parts of precious metal except silver	42021472	2.17	11.56	Hongkong, SAR	24.59	8.25	3.31			
711719	Imitation jewellery nes of base metal including plated	15194759	0.05	3.23	Korea	54.76	3.14	0.09			

		China's Import from world (in US $)	*India's Mkt Share in China (in per cent)*	*India's RCA*	*Country with Top Most share*	*Mkt. Share of the Top Country (in per cent)*	*RCA of the Top Country*	*Difference between Col. 5 and 8*	*Unit price of India (in US $)*	*Unit price of country with largest mkt share (in US $)*	*Difference between Col. 10 and 11*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	670089984	26.73	21.75	India	26.73			0.94		
732393	Table/kitchen articles, parts, stainless steel	15155143	0.49	6.79	Hongkong, SAR	26.16	1.95	4.84	9.61	7.69	1.92
732394	Table/kitchen articles, parts, enamelled iron or steel	385454	0.00	1.90	Germany	24.81	5.41	-3.51		27.81	
732599	Cast articles of iron or steel, nes	9207141	0.01	2.80	Korea	46.97	0.96	1.84	8.15	1.63	6.52
740311	Copper cathodes and sections of cathodes unwrought	2421559808	1.32	1.71	Chile	48.87	150.80	-149.09	1.87	1.83	0.04
847330	Parts and accessories of data processing equipment nes	11478397952	0.01	0.11	FreeZones	32.10	5.61	-5.50	47.37	45.49	1.88
870321	Automobiles, spark ignition engine of <1000 cc	4467435	0.00	2.93	Korea	96.20	3.54	-0.61		5863.18	
870322	Automobiles, spark ignition engine of 1000-1500 cc	13115507	1.84	0.62	Poland	82.19	5.03	-4.41	12094.75	7699.94	4394.81
870899	Motor vehicle parts nes	1968129920	0.19	0.37	Germany	35.51	2.09	-1.72	4.56	9.97	-5.41
871120	Motorcycles, spark ignition engine of 50-250 cc	2041875	0.07	5.19	Italy	68.21	3.55	1.64	760	2409.39	-1649.39
970190	Collages, similar decorative plaques	113913	0.00	0.35	USA	57.53	0.92	-0.57			
Note: The product list consists of products that has share of more than 0.25 per cent of Indian export to World											

Appendix 4.2
China's Import from World, 2003

HS1996 Code	*Commodity*	*Trade Value (million $)*	*Share (in per cent)*	*Technology Status*
854230	Monolithic integrated ci	14088.41	3.71	HT
847330	Parts and accessories of data processing equipment nes	11478.40	3.02	HT
901380	Optical devices, appliances and instruments, nes	11378.30	3.00	HT
847170	Storage units	6233.98	1.64	HT
847989	Machines and mechanical appliances nes	4848.79	1.28	HT
854240	Hybrid integrated circui	4728.06	1.25	HT
853400	Electronic printed circuits	3634.30	0.96	HT
880240	Fixed wing aircraft, unladen weight > 15,000 kg	3464.40	0.91	HT
852290	Parts and accessories of recorders except cartridges	2866.83	0.75	HT
847160	I/O units w/n storage u	1763.14	0.46	HT
853890	Parts, electric switches, protectors & connectors nes	1489.85	0.39	HT
851790	Parts of line telephone/telegraph equipment, nes	1463.72	0.39	HT
854110	Diodes, except photosensitive and light emitting	1435.03	0.38	HT
854121	Transistors, except photosensitive, < 1 watt	1425.84	0.38	HT
854140	Photosensitive/photovoltaic/LED semiconductor devices	1398.11	0.37	HT
851750	Apparatus for carrier-cu	1336.08	0.35	HT
850440	Static converters, nes	1305.81	0.34	HT
850780	Electric accumulators, nes	1278.88	0.34	HT
903180	Measuring or checking equipment, nes	1257.71	0.33	HT
901390	Parts and accessories of optical appliances nes	1204.33	0.32	HT
853224	Electric capacitors, fixed, ceramic, multilayer,	1166.98	0.31	HT
842952	Shovels and excavators with revolving superstructure	1165.21	0.31	HT
840991	Parts for spark-ignition engines except aircraft	1095.59	0.29	HT
854040	Data/graphic display tub	1089.46	0.29	HT
853690	Electrical switch, protector, connecter for < 1kV nes	1053.96	0.28	HT
850110	Electric motors of an output < 37.5 watts	1029.98	0.27	HT
847149	Dig auto data proc units	1027.37	0.27	HT
854011	Colour cathode-ray television picture tubes, monitors	1022.90	0.27	HT
853669	Electrical plugs and sockets	977.97	0.26	HT
854160	Mounted piezo-electric crystals	965.91	0.25	HT
720917	Flat rld prod/coils<.5<1	1991.18	0.52	LT
720839	Flat rld prod/coils>3mm	1751.39	0.46	LT
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	1620.35	0.43	LT
870324	Automobiles, spark ignition engine of >3000 cc	1597.67	0.42	LT
410431	Bovine and equine leather, full or split grain, nes	1299.68	0.34	LT
720918	Flat rld prod/coils>.5mm	1122.23	0.30	LT

HS1996 Code	*Commodity*	*Trade Value (million $)*	*Share (in per cent)*	*Technology Status*
721913	Hot rolled stainless steel coil, w >600mm, t 3-4.75mm	1045.94	0.28	LT
721030	Flat rld prod elctr zinc	1031.03	0.27	LT
854213	Metal oxide semiconductor	21315.96	5.61	MT
852990	Parts for radio/tv transmit/receive equipment, nes	7034.02	1.85	MT
852520	Transmit-receive apparatus for radio, TV, etc.	4149.88	1.09	MT
870323	Automobiles, spark ignition engine of 1500-3000 cc	2819.60	0.74	MT
870899	Motor vehicle parts nes	1968.13	0.52	MT
390330	Acrylonitrile-butadiene-styrene (ABS) copolymers	1881.73	0.50	MT
870829	Parts and accessories of bodies nes for motor vehicles	1844.44	0.49	MT
390120	Polyethylene - specific gravity >0.94 in primary forms	1411.59	0.37	MT
390319	Polystyrene, except expansible in primary forms	1155.70	0.30	MT
390410	Polyvinyl chloride in primary forms	1121.56	0.30	MT
392690	Plastic articles nes	1031.19	0.27	MT
390740	Polycarbonates, in primary forms	1028.53	0.27	MT
390110	Polyethylene - specific gravity <0.94 in primary forms	987.02	0.26	MT
270900	Petroleum oils, oils from bituminous minerals, crude	19782.40	5.21	PP
120100	Soya beans	5416.86	1.43	PP
740311	Copper cathodes and sections of cathodes unwrought	2421.56	0.64	PP
390210	Polypropylene in primary forms	2023.34	0.53	PP
151190	Palm oil or fractions simply refined	1431.15	0.38	PP
740400	Copper/copper alloy waste or scrap	1333.33	0.35	PP
520100	Cotton, not carded or combed	1162.80	0.31	PP
470329	Chem wood pulp, soda/sulphate, non-conifer, bleached	1012.54	0.27	PP
150710	Soya-bean oil crude, whether or not degummed	984.69	0.26	PP
271000	Petroleum oils&oils obta	5863.49	1.54	RB
260111	Iron ore, concentrate, not iron pyrites,unagglomerated	4084.27	1.08	RB
291736	Terephthalic acid, its salts	2566.68	0.68	RB
290250	Styrene	1843.02	0.49	RB
381800	Chemical element/compound wafers doped for electronics	1616.67	0.43	RB
290531	Ethylene glycol (ethanediol)	1586.35	0.42	RB
281820	Aluminium oxide, except artificial corundum	1375.76	0.36	RB
720449	Ferrous waste or scrap, nes	1320.67	0.35	RB
271113	Butanes, liquefied	1303.95	0.34	RB
260300	Copper ores and concentrates	1291.28	0.34	RB
382490	Chemical prep, allied in	1251.07	0.33	RB
9999AA	Commodities not elsewhere specified	1265.43	0.33	

Appendix 4.3
Comparative share in Chinese Market for Major Indian Export to China

HS1996 code	*Product Group*	*Share of top country*	*Share of 2nd top country*	*Share of 3rd top country*	*Share of 4th top country*	*Share of 5th top country*	*India's share*
030379	Fish nes, frozen, whole	Norway 18.08	Russia 12.25	India 7.76	New Zealand 6.31	Iceland 5.62	7.76
030613	Shrimps and prawns, frozen	Canada 31.82	India 15.76	Greenland 14.63	Denmark 9.00	Indonesia 5.62	15.76
120740	Sesamum seeds	India 66.12	Myanmar 16.13	Sudan 9.71	United Rep. of Tanzania 2.32	Viet Nam 1.49	66.12
251511	Marble and travertine, crude or roughly trimmed	Turkey 29.57	Iran 17.32	Italy 10.97	Spain 10.59	India 8.93	8.93
251611	Granite, crude or roughly trimmed	India 45.87	Brazil 22.97	South Africa 6.94	Finland 5.37	Norway 4.09	45.87
260111	Iron ore, concentrate, not iron pyrites,unagglomerated	Australia 39.49	India 24.94	Brazil 24.59	South Africa 6.83	Peru 1.28	24.94
260112	Iron ore, concentrate, not iron pyrites, agglomerated	Brazil 44.48	India 25.81	Canada 5.97	Sweden 5.26	Mexico 3.96	25.81
260800	Zinc ores and concentrates	Australia 27.95	Peru 22.47	India 19.59	Iran 13.65	Chile 5.06	19.59
261000	Chromium ores and concentrates	India 60.48	Australia 7.73	Pakistan 6.14	Iran 5.87	Viet Nam 5.73	60.48
271000	Petroleum oils&oils obta	Rep. of Korea 26.35	Singapore 23.90	Russian 16.14	Japan 5.49	Indonesia 5.07	0.22
281820	Aluminium oxide, except artificial corundum	Australia 72.56	India 9.08	Jamaica 7.65	Venezuela 3.54	Kazakhstan 1.28	9.08
290611	Menthol	India 84.45	Singapore 11.83				84.45
291620	Cyclan-/cyclen-/cycloterpen-monocarboxylic acid/derivs	India 72.67	Japan 21.90	USA 2.39			72.67

HS1996 code	*Product Group*	*Share of top country*	*Share of 2nd top country*	*Share of 3rd top country*	*Share of 4th top country*	*Share of 5th top country*	*India's share*
291736	Terephthalic acid, its salts	Rep. of Korea 33.71	Other Asia, nes 26.41	Japan 12.35	Indonesia 10.34	Thailand 6.15	1.41
293371	6-hexanelactam (epsilon-captolactam)	Russian Federation 17.91	Japan 12.68	Ukraine 10.06	Poland 9.93	Belgium 9.30	3.62
294190	Antibiotics nes, in bulk	India 31.21	Italy 18.34	Rep. of Korea 14.99	Japan 10.88	Switzerland 6.61	31.21
390120	Polyethylene - specific gravity >0.94 in primary forms	Rep. of Korea 27.44	Other Asia, nes 11.99	India 9.82	Saudi Arabia 8.55	Japan 6.38	9.82
390210	Polypropylene in primary forms	Rep. of Korea 28.67	Other Asia, nes 15.09	Singapore 10.75	Thailand 8.98	Japan 7.34	7.23
390319	Polystyrene, except expansible in primary forms	Other Asia, nes 31.88	Rep. of Korea 18.31	China, Hong Kong SAR 17.30	Thailand 11.00	Japan 8.61	1.04
400121	Natural rubber in smoked sheets	Thailand 80.99	Indonesia 5.67	USA 4.41	India 3.14	Viet Nam 2.57	3.14
410431	Bovine and equine leather, full or split grain, nes	Other Asia, nes 23.26	Rep. of Korea 22.55	Italy 10.43	Free Zones 10.23	Brazil 7.46	1.76
410620	Goat or kid skin leather, nes	India 28.97	Italy 19.95	Rep. of Korea 17.25	Other Asia, nes 8.71	Pakistan 5.71	28.97
481139	Paper, coated, impregnated, covered with plastics, nes	India 17.20	Singapore 14.11	Japan 13.80	Brazil 11.38	USA 11.20	17.20
520512	Cotton yarn >85% single uncombed 714-232 dtex,not ret.	Pakistan 47.90	India 16.46	Free Zones 12.79	Other Asia, nes 6.63	China, Hong Kong SAR 6.03	16.46
520522	Cotton yarn >85% single combed 714-232 dtex,not retail	Free Zones 48.00	Pakistan 24.35	India 8.56	Indonesia 7.69	China, Hong Kong SAR 4.83	8.56
520542	Cotton yarn >85% multiple combed 714-232 dtex,not ret.	Free Zones 57.06	Pakistan 18.54	China, Hong Kong, SAR 10.17	Other Asia, nes 3.99	India 3.86	3.86

HS1996 code	*Product Group*	*Share of top country*	*Share of 2nd top country*	*Share of 3rd top country*	*Share of 4th top country*	*Share of 5th top country*	*India's share*
670300	Worked human hair, wool or animal hair, for wig making	India 48.57	Japan 24.34	Rep. of Korea 19.17	China, Hong Kong SAR 3.57	Indonesia 1.55	48.57
710239	Diamonds (jewellery) worked but not mounted or set	India 38.02	Belgium 17.58	South Africa 16.60	Israel 12.96	USA 6.94	38.02
720827	Flat rld prod/coils>3mm	Other Asia, nes 20.33	Japan 18.84	Rep. of Korea 16.56	Indonesia 13.65	India 12.56	12.56
720836	Flat rld prod/coils<10mm	Rep. of Korea 29.25	India 25.42	Indonesia 7.88	Germany 6.74	Russian Federation 6.68	25.42
720837	Flat rld prod/coils<4.75	Russian Federation 18.16	India 15.49	Japan 11.12	Kazakhstan 6.13	Ukraine 5.51	15.49
720838	Flat rld prod/coils<3>4.	Japan 26.89	Rep. of Korea 10.09	Ukraine 9.62	Other Asia, nes 8.47	India 7.15	7.15
720839	Flat rld prod/coils>3mm	Ukraine 14.49	Russian Federation 12.38	Japan 12.09	Other Asia, nes 9.11	USA 8.06	5.67
720851	Flat rld prod n/coils<10	Japan 24.05	Rep. of Korea 21.86	Ukraine 19.20	India 7.27	Russian Federation 7.09	7.27
720917	Flat rld prod/coils<.5<1	Russian Federation 17.91	Rep. of Korea 15.25	Other Asia, nes 13.51	Japan 8.81	Brazil 6.70	3.99
720918	Flat rld prod/coils>.5mm	Other Asia, nes 27.54	Japan 26.61	Rep. of Korea 10.33	India 8.79	South Africa 5.46	8.79
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	Japan 24.54	India 23.76	Other Asia, nes 19.29	Rep. of Korea 7.69	Russian Federation 4.26	23.76
721913	Hot rolled stainless steel coil, w >600mm, t 3-4.75mm	Rep. of Korea 39.06	Japan 17.87	Other Asia, nes 13.02	South Africa 7.08	Finland 4.64	1.92
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	Other Asia, nes 29.43	India 26.73	Italy 10.10	Germany 6.27	Finland 5.71	26.73

HS1996 code	*Product Group*	*Share of top country*	*Share of 2nd top country*	*Share of 3rd top country*	*Share of 4th top country*	*Share of 5th top country*	*India's share*
722012	Hot rolled stainless steel sheet, w <600mm, t <4.75 mm	Other Asia, nes 46.15	India 32.34	Japan 12.02	Rep. of Korea 3.88	Free Zones 1.74	32.34
722519	Flat rl p of silicon-el	Japan 42.67	Rep. of Korea 16.95	Other Asia, nes 15.25	Russian Federation 5.60	Free Zones 5.11	1.83
740311	Copper cathodes and sections of cathodes unwrought	Chile 48.87	Kazakhstan 16.26	Philippines 7.65	Japan 4.69	Poland 3.84	1.32
760110	Aluminium unwrought, not alloyed	Free Zones 45.51	Australia 21.91	Russian Federation 16.63	South Africa 4.51	Singapore 3.43	1.60
848310	Transmission shafts and cranks, cam and crank shafts	Japan 28.37	Germany 17.97	India 8.23	Brazil 7.36	Other Asia, nes 6.80	8.23
902230	X-ray tubes	USA 37.19	India 28.72	Germany 20.48	Japan 5.81	Switzerland 2.06	28.72
Note: The product list consists of products, on which India has atleast 0.25 per cent share in Chines market							

Appendix 4.4
Competitiveness in Chinese Market for Major Indian Export s to China

		Country with Largest Market Share				*Country with 2nd Largest Market Share*				*Country with 3nd Largest Market Share*				*India*		
HS96 code	*Product Group*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit Price*	*Mkt. Share*	*RCA*	*Unit price*
030379	Fish nes, frozen, whole	Norway	18.08	3.92	0.97	Russia	12.25	586.65	1.34	India	7.76			7.76	2.36	0.45
030613	Shrimps and prawns, frozen	Canada	31.82	0.49	1.35	India	15.76			Green-land	14.63	351.95	1.75	15.76	12.27	3.40
120740	Sesamum seeds	India	66.12			Myan-mar	16.13	110.39	0.66	Sudan	9.71	411.73	0.82	66.12	31.04	0.72
251511	Marble and travertine, crude or roughly trimmed	Turkey	29.57	47.27	0.15	Iran	17.32	35.10	0.18	Italy	10.97	14.93	0.18	8.93	6.90	0.14
251611	Granite, crude or roughly trimmed	India	45.87			Brazil	22.97	0.02	0.19	South Africa	6.94	26.15	0.17	45.87	33.05	0.16
260111	Iron ore, concentrate, not iron pyrites,unagglomerated	Aus-tralia	39.49	38.20	0.03	India	24.94			Brazil	24.59	62.58	0.03	24.94	14.97	0.04
260112	Iron ore, concentrate, not iron pyrites, agglomerated	Brazil	44.48	0.02	0.04	India	25.81			Canada	5.97	3.83	0.05	25.81	6.04	0.06
260800	Zinc ores and concentrates	Aus-tralia	27.95	22.46	0.23	Peru	22.47	206.21	0.25	India	19.59			19.59	2.60	0.27
261000	Chromium ores and concentrates	India	60.48			Australia	7.73	7.43	0.09	Pakistan	6.14	0.27	0.10	60.48	38.52	0.08
271000	Petroleum oils&oils obta	Rep. of Korea	26.35	1.43	0.21	Singa-pore	23.90	3.90	0.21	Russian	16.14	5.00	0.19	0.22	2.16	0.17
281820	Aluminium oxide, except artificial corundum	Aus-tralia	72.56	40.24	0.24	India	9.08			Jamaica	7.65	566.67	0.28	9.08	4.56	0.22
290611	Menthol	India	84.45			Singa-pore	11.83	4.43	8.06					84.45	58.94	7.84
291620	Cyclan-/cyclen-/cycloterpen-monocarboxylic acid/derivs	India	72.67			Japan	21.90	4.34	10.55	USA	2.39	1.47	11.01	72.67	17.80	10.88

		Country with Largest Market Share				*Country with 2nd Largest Market Share*				*Country with 3nd Largest Market Share*				*India*		
HS96 code	*Product Group*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit Price*	*Mkt. Share*	*RCA*	*Unit price*
291736	Terephthalic acid, its salts	Rep. of Korea	33.71	11.47	0.56	Other Asia, nes	26.41			Japan	12.35	1.24	0.58	1.41	1.85	0.58
293371	6-hexanelactam (epsilon-captolactam)	Russian Fede-ration	17.91	6.99	1.06	Japan	12.68	1.62	1.16	Ukraine	10.06	10.97	1.15	3.62	1.26	1.16
294190	Antibiotics nes, in bulk	India	31.21			Italy	18.34	3.27	80.19	Rep. of Korea	14.99		122.32	31.21	4.86	70.89
390120	Polyethylene - specific gravity >0.94 in primary forms	Rep. of Korea	27.44	3.24	0.64	Other Asia, nes	11.99			India	9.82			9.82	2.12	0.58
390210	Polypropylene in primary forms	Rep. of Korea	28.67	5.40		Other Asia, nes	15.09			Singa-pore	10.75	3.18		7.23	3.42	
390319	Polystyrene, except expansible in primary forms	Other Asia, nes	31.88			Rep. of Korea	18.31	4.50	0.84	China, Hong Kong SAR	17.30	6.85	0.81	1.04	1.51	0.69
400121	Natural rubber in smoked sheets	Thai-land	80.99	72.07	0.99	Indo-nesia	5.67	6.09	0.98	USA	4.41	0.18	0.97	3.14	1.96	1.04
410431	Bovine and equine leather, full or split grain, nes	Other Asia, nes	23.26			Rep. of Korea	22.55	2.85	13.33	Italy	10.43	6.93	12.54	1.76	3.11	8.22
410620	Goat or kid skin leather, nes	India	28.97			Italy	19.95	4.99	16.67	Rep. of Korea	17.25	0.82	19.48	28.97	41.55	18.93
481139	Paper, coated, impregnated, covered with plastics, nes	India	17.20			Singa-pore	14.11	2.01	2.33	Japan	13.80	0.63	3.34	17.20	1.81	4.32
520512	Cotton yarn >85% single uncombed 714-232 dtex,not ret.	Pakistan	47.90	1.78	1.61	India	16.46			Free Zones	12.79	3.44	1.44	16.46	7.64	1.76
520522	Cotton yarn >85% single combed 714-232 dtex,not retail	Free Zones	48.00	46.87	2.53	Pakistan	24.35	1.78	1.93	India	8.56			8.56	13.34	2.16
520542	Cotton yarn >85% multiple combed 714-232 dtex,not ret.	Free Zones	57.06	54.84	2.05	Pakistan	18.54	3.14	1.76	China, Hong Kong, SAR	10.17	9.64	2.05	3.86	4.68	1.74

		Country with Largest Market Share				*Country with 2nd Largest Market Share*				*Country with 3nd Largest Market Share*				*India*		
HS96 code	*Product Group*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit Price*	*Mkt. Share*	*RCA*	*Unit price*
670300	Worked human hair, wool or animal hair, for wig making	India	48.57			Japan	24.34	1.86	6.67	Rep. of Korea	19.17	3.90	3.63	48.57	35.28	22.43
710239	Diamonds (jewellery) worked but not mounted or set	India	38.02			Belgium	17.58	68.61		South Africa	16.60	2.56		38.02	30.39	
720827	Flat rld prod/coils>3mm	Other Asia, nes	20.33			Japan	18.84	1.64	0.41	Rep. of Korea	16.56	2.26	0.38	12.56	1.89	0.37
720836	Flat rld prod/coils<10mm	Rep. of Korea	29.25	5.31	0.38	India	25.42			Indo-nesia	7.88	2.65	0.31	25.42	9.47	0.30
720837	Flat rld prod/coils<4.75	Russian Fede-ration	18.16	13.98	0.31	India	15.49			Japan	11.12	1.23	0.35	15.49	5.11	0.30
720838	Flat rld prod/coils<3>4.	Japan	26.89	4.24	0.36	Rep. of Korea	10.09	2.31	0.37	Ukraine	9.62	15.15	0.28	7.15	2.55	0.33
720839	Flat rld prod/coils>3mm	Ukraine	14.49	24.62	0.28	Russian Fede-ration	12.38	31.53	0.32	Japan	12.09	2.42	0.37	5.67	4.88	0.33
720851	Flat rld prod n/coils<10	Japan	24.05	2.40	0.39	Rep. of Korea	21.86	1.97	0.40	Ukraine	19.20	37.25	0.29	7.27	2.69	0.31
720917	Flat rld prod/coils<.5<1	Russian Federati on	17.91	6.67	0.41	Rep. of Korea	15.25	4.62	0.49	Other Asia, nes	13.51			3.99	2.20	0.45
720918	Flat rld prod/coils>.5mm	Other Asia, nes	27.54			Japan	26.61	4.40	0.48	Rep. of Korea	10.33	3.73	0.49	8.79	6.69	0.45
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	Japan	24.54	1.98	0.54	India	23.76			Other Asia, nes	19.29			23.76	8.81	0.53
721913	Hot rolled stainless steel coil, w >600mm, t 3-4.75mm	Rep. of Korea	39.06	7.97	1.33	Japan	17.87	2.72	1.16	Other Asia, nes	13.02			1.92	1.39	0.87

		Country with Largest Market Share				*Country with 2nd Largest Market Share*				*Country with 3nd Largest Market Share*				*India*		
HS96 code	*Product Group*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit price*	*Name*	*Mkt Share*	*RCA*	*Unit Price*	*Mkt. Share*	*RCA*	*Unit price*
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	Other Asia, nes	29.43			India	26.73			Italy	10.10	2.53	1.22	26.73	21.86	0.95
722012	Hot rolled stainless steel sheet, w <600mm, t <4.75 mm	Other Asia, nes	46.15			India	32.34			Japan	12.02	1.61	3.74	32.34	11.16	0.81
722519	Flat rl p of silicon-el	Japan	42.67	5.65	0.51	Rep. of Korea	16.95	3.35	0.55	Other Asia, nes	15.25			1.83	0.95	0.51
740311	Copper cathodes and sections of cathodes unwrought	Chile	48.87	150.80	1.83	Kazak-hstan	16.26	38.59	1.72	Phili-ppines	7.65	4.10	1.90	1.32	1.72	1.87
760110	Aluminium unwrought, not alloyed	Free Zones	45.51	4.44		Australia	21.91	11.50	1.44	Russian Fede-ration	16.63	76.36	1.40	1.60	1.03	1.46
848310	Transmission shafts and cranks, cam and crank shafts	Japan	28.37	2.15	0.71	Ger-many	17.97	2.52	14.45	India	8.23			8.23	1.14	185.82
902230	X-ray tubes	USA	37.19	3.19	7912.59	India	28.72			Ger-many	20.48	6.45	18303.57	28.72	12.25	7548.39
Note: The product list consists of products that has share of more than 0.25 per cent of Indian export to China																

Appendix 4.5
Dynamicity of Export Sectors (Growth Rate of Market Share)

HS1996 code	*Commodities*	*2001*	*2002*	*2003*
291620	Cyclan-/cyclen-/cycloterpen-monocarboxylic acid/derives	no trade	no trade	100.00
720827	Flat rld prod/coils>3mm	no trade	no trade	100.00
260800	Zinc ores and concentrates	100.00	no trade	100.00
722519	Flat rl p of silicon-el	100.00	8.10	96.16
720918	Flat rld prod/coils>.5mm	no trade	100.00	89.00
720839	Flat rld prod/coils>3mm	91.68	-67.57	83.72
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	no trade	100.00	59.17
120740	Sesamum seeds	-31.39	-8.64	55.83
720836	Flat rld prod/coils<10mm	no trade	100.00	53.87
848310	Transmission shafts and cranks, cam and crank shafts	90.40	99.57	50.54
720917	Flat rld prod/coils<.5<1	100.00	66.37	47.80
740311	Copper cathodes and sections of cathodes unwrought	-110.70	52.54	44.76
410620	Goat or kid skin leather, nes	39.71	-1.30	39.36
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	92.56	45.42	38.99
720837	Flat rld prod/coils<4.75	82.81	-29.05	37.91
720838	Flat rld prod/coils<3>4.	72.69	-157.57	37.50
410431	Bovine and equine leather, full or split grain, nes	34.86	62.31	36.63
520542	Cotton yarn >85% multiple combed 714-232 dtex,not ret.	-155.37	-46.57	30.90
520512	Cotton yarn >85% single uncombed 714-232 dtex,not ret.	-30.13	-3.77	26.89
390210	Polypropylene in primary forms	42.63	30.72	25.80
670300	Worked human hair, wool or animal hair, for wig making	-1.92	25.09	25.52
260111	Iron ore, concentrate, not iron pyrites,unagglomerated	17.00	7.65	23.83
902230	X-ray tubes	80.08	34.46	23.55
400121	Natural rubber in smoked sheets	no trade	100.00	19.76
294190	Antibiotics nes, in bulk	51.92	10.04	18.72
710239	Diamonds (jewellery) worked but not mounted or set	42.70	-50.05	15.34
30613	Shrimps and prawns, frozen	15.17	-45.64	12.97
390120	Polyethylene - specific gravity >0.94 in primary forms	71.67	47.86	9.94
251611	Granite, crude or roughly trimmed	-5.63	1.73	4.32
721913	Hot rolled stainless steel coil, w >600mm, t 3-4.75mm	-612.98	84.54	4.23
290611	Menthol	7.36	-7.75	4.12
720851	Flat rld prod n/coils<10	100.00	99.63	3.68
260112	Iron ore, concentrate, not iron pyrites, agglomerated	-12.23	11.56	-2.11
281820	Aluminium oxide, except artificial corundum	-67.46	58.04	-2.26

HS1996 code	*Commodities*	*2001*	*2002*	*2003*
760110	Aluminium unwrought, not alloyed	32.97	-27.37	-7.43
251511	Marble and travertine, crude or roughly trimmed	33.56	13.40	-9.11
481139	Paper, coated, impregnated, covered with plastics, nes	100.00	62.86	-10.35
722012	Hot rolled stainless steel sheet, w <600mm, t <4.75 mm	no trade	100.00	-12.62
261000	Chromium ores and concentrates	13.61	-0.88	-19.66
293371	6-hexanelactam (epsilon-captolactam)	-189.43	56.18	-22.67
390319	Polystyrene, except expansible in primary forms	44.25	62.48	-51.42
291736	Terephthalic acid, its salts	-43.18	78.16	-84.58
520522	Cotton yarn >85% single combed 714-232 dtex,not retail	-16.22	-30.69	-86.99
30379	Fish nes, frozen, whole	-35.24	-57.78	-96.70
271000	Petroleum oils&oils obta	no trade	100.00	-118.95

Appendix 4.6
Potential Export of Indian Products to china

HS1996 Code	*Commodity*	*Potential Trade*	*India's RCA*
722012	Hot rolled stainless steel sheet, w <600mm, t <4.75 mm	1222045	0.95
740311	Copper cathodes and sections of cathodes unwrought	114559686	1.03
760110	Aluminium unwrought, not alloyed	114323672	1.14
293371	6-hexanelactam (epsilon-captolactam)	63975	1.26
721049	Flat rolled i/nas, coated with zinc, width >600mm, nes	283167529	1.39
390319	Polystyrene, except expansible in primary forms	41043531	1.51
722519	Flat rl p of silicon-el	0	1.72
410620	Goat or kid skin leather, nes	214362223	1.81
291736	Terephthalic acid, its salts	28282841	1.85
710239	Diamonds (jewellery) worked but not mounted or set	7666300042	1.89
400121	Natural rubber in smoked sheets	10265552	1.96
390120	Polyethylene - specific gravity >0.94 in primary forms	15375138	2.12
271000	Petroleum oils&oils obta	2806003890	2.16
720851	Flat rld prod n/coils<10	40772943	2.2
30379	Fish nes, frozen, whole	39811262	2.36
720837	Flat rld prod/coils<4.75	28027042	2.55
260800	Zinc ores and concentrates	19395783	2.6
720839	Flat rld prod/coils>3mm	179816712	2.69
410431	Bovine and equine leather, full or split grain, nes	163029591	3.11
390210	Polypropylene in primary forms	112395749	3.42
281820	Aluminium oxide, except artificial corundum	96897925	4.56
520522	Cotton yarn >85% single combed 714-232 dtex,not retail	102082342	4.68
294190	Antibiotics nes, in bulk	180836475	4.86
720838	Flat rld prod/coils<3>4.	40971846	4.88
720836	Flat rld prod/coils<10mm	28655309	5.11
260112	Iron ore, concentrate, not iron pyrites, agglomerated	2984445	6.04
720917	Flat rld prod/coils<.5<1	17348541	6.69
251511	Marble and travertine, crude or roughly trimmed	4494921	6.9
481139	Paper, coated, impregnated, covered with plastics, nes	5508727	7.64
720918	Flat rld prod/coils>.5mm	40835657	8.81
720827	Flat rld prod/coils>3mm	18464770	9.47
721914	Hot rolled stainless steel coil, w >600mm, t <3mm	32881011	11.16
848310	Transmission shafts and cranks, cam and crank shafts	22795622	12.25
902230	X-ray tubes	58207523	12.25
30613	Shrimps and prawns, frozen	918018025	12.27
520512	Cotton yarn >85% single uncombed 714-232 dtex,not ret.	51923191	13.34

HS1996 Code	*Commodity*	*Potential Trade*	*India's RCA*
260111	Iron ore, concentrate, not iron pyrites,unagglomerated	504349131	14.97
291620	Cyclan-/cyclen-/cycloterpen-monocarboxylic acid/derivs	37522692	17.8
721913	Hot rolled stainless steel coil, w >600mm, t 3-4.75mm	5591551	21.86
670300	Worked human hair, wool or animal hair, for wig making	21510332	30.39
120740	Sesamum seeds	114290458	31.04
251611	Granite, crude or roughly trimmed	154113377	33.05
520542	Cotton yarn >85% multiple combed 714-232 dtex,not ret.	10965801	35.28
261000	Chromium ores and concentrates	21716015	38.52
410439	Bovine and equine leather, nes	70269059	41.55
290611	Menthol	60958096	58.94

Appendix 4.7
Products Exported by Exporting Company

Code No	*Product description*	*Brand or non-brand*	*Size*	*Per cent of export to China*	*Trade margin in per cent*
030379	Fish, Prawns etc	Non-brand	Small	26	20
030379	Fish	Non-brand	Large	55	10-15
030379	Fish	Brand	Medium	60	0-1
030613	Frozen prawns, shrimps, sea fish	Brand	Small	20	2
030613	Frozen shrimps, cuttle fish, Squids	Brand	Medium	10	-
120740	Soya meal, Rapeseed meal, Groundnut kernels, Sesame seed, Rice bran, Sorghum, Maize, Red spilt lentils, Cotton seed, Flour, Soya flour, Agricultural products	Non-brand	Medium	3	0.5-1.0
120740	Sesame seed, Spices, Gum	Brand	Medium	100	1-2
120740	Sesame seed, Groundnut kernel, Spices	Brand	Medium	100	5-6
251611	Marbles, Textiles, Food products, Stationary.	Non-brand	Small	22	Marble-15 Textile-7
251611	Granite	Non-brand	Small	-	-
251611	Marbles	Brand	Small	10	8-10
251611	Granite	Non-brand	Medium	-	-
260112	Iron ore concentrate, iron ore pellets	Brand	Large	80	-
260112	Iron ore	Non-brand	Large	100	10-15
260800	Iron ore, Aluminum ore	Non-brand	Medium	100	1-2
260800	Zinc metal, Zinc ore and concentrates	Brand	Large	70	3-5
261000	Chromium ore, Iron ore, fertilizers	Non-brand	Large	45	Iron ore-3%, Manganese ore-1.5%, Chrome-1%
261000	Iron ore, Chromium ore, Minerals	Non-brand	Large	26	5
271000	Iron ore, Sugar, HMS, Petroleum products	Non-brand	Large	50	Iron ore-5%, Sugar-4%, HMS-3%, petroleum products-3%
281820	Primary Aluminum ingot, aluminum sows, Calcined alumina	Brand	large	43	-
281820	Monolvthetic, casting	Non-brand	Large	15	15-22

Code No	*Product description*	*Brand or non-brand*	*Size*	*Per cent of export to China*	*Trade margin in per cent*
290611	Mentha oil, Menthol, De mentholised oil, Menthone	Non-brand	Small	17	5-8
290611	Menthol	Non-brand	Small	7	2
290611	Menthol, Essential oil	Non-brand	Small	15	15-20
291620	Solvents	Both	Small	-	5-10
291620	Acetic acid, Acetone, Caustic soda, Chromic acid and several other products and technology.	Brand	Large	4	Chemicals-5%, Technology -35-40%
291736	Terephthalic Acid	Non-brand	Large	14	10
291736	Terephthalic Acid	Non-brand	Small	-	15-20
291736	Terephthalic Acid	Non-brand	Small	100	10-20
293371	Caprolactam, Mekoxime, Melamine, Fertilizer	Non-brand	Large	80	5-10
293371	Caprolactam, Ammonium sulphate, complex fertilizer	Non-brand	Large	88	-
293371	6 hexanelactam	Non-brand	Large	100	1
294190	Antibiotics	Non-brand	Large	25	10-15
294190	Antibiotics	Non-brand	Small	3	3-4
294190	Antibiotics	Non-brand	Small	45	10-12
390120	Polyethylene (DEP, DMP)	Non-brand	Small	10	-
390120	Polyethylene in primary form	Brand	Large	56	-
390210	Polypropylene	Both	Medium	30	5
390120	Polystyrene, compounds of PS/PP, master batches	Brand	Large	28	5-10
390120	Polystyrene	Non-brand	Small	90	20
400121	Natural Rubber	Non-brand	Small	71	-
400121	Natural Rubber	Non-branded	Small	5	10-15
410431	Finish leather, leather hand bags, Wallets, Key rings	Brand	Small	54	-
410431	Finish leather, Leather hand bags	Brand	Small	2	10
410439	Finish leather, Leather bags, Wallets	Non-brand	Small	-	10-15
410439	Finish leather and leather accessories.	Non-brand	Small	-	25-30
410620	Goat leather	Brand	Small	40	30
410620	Goat leather	Non-brand	Small	60	10
481139	Paperboards, Fine papers and Specialty papers	Non-brand	Small	28	7.5-10
481139	Decorative printing papers, Foils, Laminated papers	Brand	Small	10	-
520512	Cotton Yarn	Non-brand	Small	50	5
520512	Cotton Yarn, Knitted Fabrics, Aluminium Foils	Brand	Medium	6	-
520512	Cotton Yarn	Brand	Medium	5	-

Code No	*Product description*	*Brand or non-brand*	*Size*	*Per cent of export to China*	*Trade margin in per cent*
520542	Raw Cotton, Cotton Yarn, Fiber, Textile Chemicals	Non-brand	Medium	35	1
520542	Textiles, Fabrics, Yarn	Non-brand	Small	17	-
520542	Textile Yarn	Non-brand	Medium	2	1
670300	Human Hair for Wig making	Non-brand	Small	-	20-25
670300	Human Hair for Wig making	Non-brand	Small	-	30
670300	Worked Human Hair for Wig making	Non-brand	Small	10	10-15
710239	Diamonds	Non-brand	Medium	3	20
710239	Diamond, Jewelry	Non-brand	Large	3	20
710692	Silver	Brand	Small	1	25-30
720827	Flat Steel Products	Brand	Large	30	10-15
720827	Cold Rolled Coils, HDG, Corrugated Sheets, Plain Sheets	Non-branded	Medium	24	-
720836	Blit, HR Coils, Electrical steel	Non-brand	Large	19	10-15
720836	HR Coils, Cold rolled Coils, Color coated Sheets, Galvanized Coils	Brand	Large	30	-
720837	Coils, Sheets, Rolled products	Brand	Large	40	15-20
720837	ERW Black Pipes, HR Coils	Both	Medium	5	2
720839	Flat Rolled Coils, Galvanized steel, Castings	Non-brand	Medium	1	1
720851	Galvanized steel Coils and Sheets, Flat Rolled and Cold Rolled Coils, Foils, Steel billets	Non-brand	Small	10	2
720851	Engineering Items, Coils	Brand	Small	10	5
720917	Rolled Coils	Non-brand	Small	5	5-10
720917	HR Coils in hot stainless Steel	Non-brand	Medium	5	2-3
720918	Flat Rolled Coils, Hot Rolled Plates (Galvanized)	Brand	Large	5	10-15
721049	Cold Rolled/Galvanized sheets coils	Brand	Large	30	5
721913	Hot Rolled Stainless Steel coils W>600mm, T 3-4.75 mm	Brand	Large	2.5	-
721913	Stainless Steel (hot rolled)	Non-brand	Large	50-60	-
721914	Hot Rolled Stainless Steel, Hot Rolled Coil w>600 mm, t>3 mm	Brand	Large	10	10
721914	Pipes and Rolled items	Both	Small	20	5-10
722012	Cold Rolled Coils, Hot Rolled Coils, HDG, Corrugated Sheets, Plain Sheets	Brand	Medium	25-30	-
722012	Stainless Steel Sheet	Non-Brand	Large	29	5-10
722519	Coils, Sheets, Rolled products	Brand	Large	30-40	15-20

Code No	*Product description*	*Brand or non-brand*	*Size*	*Per cent of export to China*	*Trade margin in per cent*
740311	Copper Cathodes, Copper Rods	Brand	Large	10	3
740311	Aluminum products, Copper Cathode	Non-brand	Large	2	3
760110	Aluminum Ingots, Aluminum Sheets, Aluminum Rolled products	Non-brand	Large	40	3
840820	IC Diesel Engines and spare parts	Non-brand	Large	4	-
848310	Transmission Shafts and Cranks, Cam Shafts, Axle Shafts, Beams	Brand	Medium	5	2
848310	Automotive Components, Engine and Chafy Components	Brand	Large	15	1

Appendix 4.8
Comparative share in Indian Market for Major Chinese Export to World

HS96 code	*Product Group Name*	*Mkt. Share of China*	*Country having largest market share*	
			Country	*Market*
950410	Video games used with a television receiver	90.32	China	
611030	Pullovers, cardigans etc of manmade fibres, knit	84.27	China	
950341	Stuffed toys - animals or non-human creatures	82.12	China	
851650	Microwave ovens	79.07	China	
640219	Sports footwear nes, soles, uppers of rubber, plastic	76.42	China	
852290	Parts and accessories of recorders except cartridges	71.26	China	
950390	Toys nes	66.94	China	
852190	Video record/reproduction apparatus not magnetic tape	63.41	China	
950510	Articles for Christmas festivities	60.30	China	
640319	Sports footwear, except ski, uppers of leather	57.28	China	
841451	Table, window, ceiling fans, electric motor <125 watts	55.59	China	
420212	Trunks, suit-cases, etc, outer surface plastic/textile	53.06	China	
600292	Knit or crochet fabric of cotton, nes	50.21	China	
852731	Radio-telephony receiver, with sound reproduce/record	48.04	China	
611020	Pullovers, cardigans etc of cotton, knit	47.28	China	
270400	Coke, semi-coke of coal, lignite, peat & retort carbon	46.51	China	
851711	Line telephone sets,cord	43.86	China	
640399	Footwear, sole rubber, plastics uppers of leather, nes	42.79	China	
540752	Woven fabric >85% textured polyester, dyed, nes	39.39	China	
640299	Footwear, outer soles/uppers of rubber or plastic, nes	35.71	China	
852520	Transmit-receive apparatus for radio, TV, etc.	*34.22	Korea	38.31
871200	Bicycles, other cycles, not motorized	30.99	China	
850110	Electric motors of an output < 37.5 watts	30.32	China	
940360	Furniture, wooden, nes	*30.17	Malaysia	30.89
901380	Optical devices, appliances and instruments, nes	29.89	China	
392640	Plastic statuettes and other ornamental articles	28.02	China	
851999	Sound reproducing apparatus, non-recording, nes	*27.94	Malaysia	30.55
847130	Portable digital data pr	27.62	China	
620462	Womens, girls trousers & shorts, of cotton, not knit	*27.42	Spain	41.68

HS96 code	*Product Group Name*	*Mkt. Share of China*	*Country having largest market share*	
			Country	*Market*
940540	Electric lamps, lighting fittings, nes	26.99	China	
847160	I/O units w/n storage u	*25.89	Singapore	29.31
847170	Storage units	*22.53	Singapore	31.74
850440	Static converters, nes	17.92	China	
841510	Air conditioners window/wall types, self-contained	*16.39	Thailand	41.24
852540	Still image video camara	*16.35	Japan	45.96
852812	Color television receive	15.23	Korea	33.89
850780	Electric accumulators, nes	*15.06	Thailand	18.43
854451	Electric conductors, 80-1,000 volts, with connectors	*14.83	USA	25.58
847330	Parts and accessories of data processing equipment nes	14.49	Singapore	18.60
854213	Metal oxide semiconducto	12.48	Singapore	29.83
852990	Parts for radio/tv transmit/receive equipment, nes	12.38	USA	18.08
851790	Parts of line telephone/telegraph equipment, nes	11.15	USA	30.64
620293	Womens, girls anoraks etc of manmade fibres, not knit	*11.01	Spain	86.77
853400	Electronic printed circuits	9.42	Hungary	17.28
760110	Aluminium unwrought, not alloyed	7.41	Iran	32.54
392690	Plastic articles nes	6.77	USA	15.38
940490	Articles of bedding nes	6.24	USA	40.83
851750	Apparatus for carrier-cu	*6.04	USA	23.89
Note: * indicates that China has 2nd largest market share in India				

Appendix 4.9
Comparative share in Indian Market for Major Chinese Export to World

HS1996 code	*Commodity Name*	*China's Share*	*Country with largest share*	
			Country Name	*Share*
251020	Natural calcium phosphates, ground	28.11	Jordan	38.5
251990	Magnesia, fused, dead-burned etc and magnesium oxide	54.98	China	54.98
260111	Iron ore, concentrate, not iron pyrites,unagglomerated	67.80	China	67.80
270119	Coal except anthracite or bituminous, not agglomerated	6.53	Australia	73.42
270400	Coke, semi-coke of coal, lignite, peat & retort carbon	46.51	China	46.51
280461	Silicon, >99.99% pure	94.23	China	94.23
280470	Phosphorus	98.41	China	98.41
290715	Naphthols, salts	47.50	China	47.50
292145	Naphthylamines, derivatives, salts thereof	91.77	China	91.77
292221	Aminohydroxynaphthalenesulphonic acids and salts	93.84	China	93.84
292229	Amino-naphthols/phenols nes, their ethers/esters/salts	60.40	China	60.40
294110	Penicillins, derivatives, in bulk, salts	50.93	China	50.93
294150	Erythromycin, derivatives, in bulk, salts	*26.41	USA	49.23
294190	Antibiotics nes, in bulk	45.70	China	45.70
294200	Organic compounds, nes	34.63	China	34.63
370320	Unexposed colour photograhic paper, board or textile	49.56	China	49.56
370390	Unexposed photographic paper, board or textile nes	51.22	China	51.22
500200	Raw silk (not thrown)	82.80	China	82.80
500400	Silk yarn (except from waste) not retail	81.88	China	81.88
500710	Woven fabric of noil silk	97.66	China	97.66
500720	Woven fabric >85% silk (except noil silk)	92.14	China	92.14
500790	Woven fabric of silk, nes	93.14	China	93.14
510129	Degreased wool nes, not carded, combed or carbonized	14.14	New Zealand	21.28
540761	Woven polyester fab>=85%	61.48	China	61.48
590210	Tyre cord fabric of nylon, polyamides	41.03	China	41.03
590320	Fabric impregnated, coated, covered with polyurethane	69.25	China	69.25
701120	Glass envelopes for cathode-ray tubes	65.49	China	65.49
710691	Silver in unwrought forms	13.68	UK	26.9
710692	Silver semi-manufactured including gold/platinum plate	*22.43	UK	41.47
730429	Casings,tubing u in dril	*23.96	Russia	32.88
780110	Lead refined unwrought	52.92	China	52.92
790111	Zinc, not alloyed, unwrought, >99% pure	*18.16	Russia	21.03
844790	Tulle, lace, embroidery, trimmings etc making machines	17.99	Japan	29.79
847130	Portable digital data pr	27.62	China	27.62
847160	I/O units w/n storage u	*25.89	Singapore	29.31

HS1996 code	*Commodity Name*	*China's Share*	*Country with largest share*	
			Country Name	*Share*
847170	Storage units	*22.53	Singapore	31.74
847330	Parts and accessories of data processing equipment nes	14.49	Singapore	18.61
850110	Electric motors of an output < 37.5 watts	30.32	China	30.32
850431	Transformers electric, power capacity < 1 KVA, nes	47.91	China	47.91
850440	Static converters, nes	17.92	China	17.92
850680	Primary cells & primary	39.90	China	39.90
851730	Telephonic or telegraphic switching apparatus	15.51	Sweden	34.58
851750	Apparatus for carrier-cu	6.04	USA	23.89
851790	Parts of line telephone/telegraph equipment, nes	*11.15	USA	30.65
852190	Video record/reproduction apparatus not magnetic tape	63.41	China	63.41
852290	Parts and accessories of recorders except cartridges	71.26	China	71.26
852491	Recorded media for ot/so	5.61	USA	23.87
852510	Transmission apparatus for radio, telephone and TV	*29.81	Sweden	38.95
852520	Transmit-receive apparatus for radio, TV, etc.	*34.22	Korea	38.32
852990	Parts for radio/tv transmit/receive equipment, nes	12.38	USA	18.08
854011	Colour cathode-ray television picture tubes, monitors	20.29	Malaysia	26.69
854230	Monolithic integrated ci	6.94	Singapore	24.05

Note: * indicates that China has 2nd largest market share in India

Appendix 4.10
Product Status of Import and Export of Indian Importing (Manufacturing Companies)

Product code No.	*Product Description*	*Product share in imports from China in %*	*Product imported*	*Product manufactured*	*Product status*	*Product comparison*
Electrical & Electronics						
852520	Transmission Receiving Apparatus for Radio, T.V. etc.	15.75	Chemical garnet, electric parts and circuit boards, IC,s, crystal, relays, microwave owens, refrigerators, washing machines	Picture tubes & other manufacturing processes, transmitter, radio remote system, and circuit boards.	30 % cheaper	Same as domestic product
847330	Parts & accessories of data processing equipment	2.92	Computer cabinets, power supply equipment, key boards, speakers etc.	Computer cabinets, key boards, speakers	10-15% cheaper	Superior to domestic product
847 170	Storage units	1.73	Hard glass tops, perforated sheets, storage units	Deep freezes, verticals & bottle coolers	Hard glass & perforated sheet 5 % & storage units 35-40 % cheaper	Same as domestic product
852290	Parts & accessories of recorders except cartridges	0.97	Capacitors, transformers, electric equipment	Capacitors & transformers and electric equipment	30 % cheaper	Same as domestic products
851790	Parts of line telephone/ telegraphic equipment	0.55	Telephonic & electronic equipment	Voice mail & logger, auto attendant, telephone equipment	20% cheaper compared to Southeast Asian countries	Not produced domestically
847130	Portable digital data products	0.52	Portable digital data equipment, E-board mouse, DVD writers, mother boards and engineering items	Printing machines, document processing, computer hardware, DVD writers, mother boards	15-35 % cheaper, mother board 35% and other items 25% cheaper.	Same as domestic product

Product code No.	*Product Description*	*Product share in imports from China in %*	*Product imported*	*Product manufactured*	*Product status*	*Product comparison*
854011	Color cathode-ray television picture tubes, monitors	0.51	Parts of color picture tubes, cathode ray tube, electronic gun, glass panels	Color monitor & picture tubes	20-25 % cheaper	More or less same as domestic product
851730	Telephonic or telegraphic switching apparatus	0.45	Fiber optic equipment & networking equipment	Use in telecommunication, Lan and Van	5-10% cheaper	Same as domestic product
850440	Static converters	0.43	LVD, Monitoring model, static converter, rectifier, CT. transformer	IDC power, UPS, monitoring model, static converter, rectifier	15-20 % cheaper	Same as domestic product
854230	Monolithic integrated circuits	0.39	Plastic items, Electric items, capacitors, speakers, amplifiers.	Monolithic integrated circuits	Plastic items 15% & electrical items 30% cheaper	Superior compared to domestic product.
852510	Transmission apparatus for radio, T.V.& telephone	0.33 %	Cable anodes, LED pins, transistors, components	Power variable compressor, plugs	20-30 % cheaper	Same as domestic product
850110/ 850431	Electric motors of an output more than 37.5 watts & more than 1 kva	0.30	Compressors, electric motors, color cathode ray tube & capacitors	T.V., Refrigerator, washing machine & air conditioners	10-15 % cheaper.	Product is superior than the domestic product
852990	Parts of radio, T.V. transmit/ receiving equipment	0.86	CFLs, resistors, transmitters, diodes, ballasts, etc	Compact fluorescent light bulbs	Not price advantage, advantage in manufacturing	Superior than the domestic product.
Organic Chemicals and compounds						
294200	Organic compounds	3.05	API, organic chemicals, intermediates.	Bulk drugs, API, Formulation.	Intermidiates-15% & others – 50% cheaper	Same as domestic product.
294110	Penicillins, derivatives in bulk, salts	2.35	Bulk drugs intermediaries, pencillin derivatives, trazin etc.	Bulk drugs, pencillian & derivatives	35-40 % cheaper	Superior than the domestic product.

Product code No.	*Product Description*	*Product share in imports from China in %*	*Product imported*	*Product manufactured*	*Product status*	*Product comparison*
294190	Antibiotica nes, in bulk	0.69	DCDA, Gentamycin, Neomvcin, Antibiotics	Medicines, Antibiotics, Emetine	Cheaper compare to other Southeast Asian countries by 10-15%.	Domestically not produced.
292145	Naphthylamines, derivatives, salt thereof	0.32	NW acid, naphthylamines & PSOSA	Dyes and intermediaries, synthetic food colors	Cheaper by 25-30 %	Same as the domestic product.
292221	Aminohydro Xynaphthalen sulphonic Acids and salts	0.30	Minerals, oil field chemicals, ground natural calcium phosphates	Mud chemicals	2-5% cheaper	Same as domestically produced product
294150	Erythromycin, derivatives in bulk, salts	0.28	4 MEP, Clorophome, Asotone, Mipa 13 DEB and chemical intermediates	Clorobitonol, Fluconazole, Erythromycin, Metprolol Tatrete Olazapine Bulk drugs	20-25 % cheaper. Only chemical intermediates cheaper by 5-10% cheaper.	Same as domestic product
290715	Naphthols, salts	0.26	Dyes, Naphthols, salts,	Adhesives, colors	18-20% cheaper	Inferior as compared to domestic products
292229	Amino- acids and salts	0.28	Sodium sulphide, Titanium tubes & pipes, Ammonia salts, Sulphonic acid	Ammonia phosphate, Soda ash, Caustic soda, Urea, salt, ammonia.	15-20% cheaper	Superior to domestic products
280470	Phosphorus	0.55	Yellow phosphorus, DMPAT, CPC, Alpha Naphthol	Zinc Phosphide, Aluminium Phosphide, PCL 3, PCL 5, POCL 3	10-15 cheaper	Superior than the domestic product
281820	Aluminums oxide	0.25	Aluminums	Al. wire, rod, Al powder	No difference in price	Inferior to domestic products

Product code No.	*Product Description*	*Product share in imports from China in %*	*Product imported*	*Product manufactured*	*Product status*	*Product comparison*
Minerals and concentrates						
280461	Silicon	0.50	Silicon	Ferro chemicals	8-10 cheaper	Superior to domestic products
270119	Coal, non-cooking coal	1.75	Coal and coke	Portal cement, coke	10 % cheaper	Same quality
260111	Iron ore, concentrate	0.96	Manganese metal flake, iron ore, iron powder	Manufacturing of metal	25-30 cheaper	Same in quality
251990	Mangnesia & magnesium oxide	0.28	Magnesium oxide	Magnesium ingots	5-10 % cheaper	Inferior to domestic product.
251020	Natural calcium phosphates, ground	0.28	Minerals, Oil field chemicals, Ground natural calcium phosphates	Mud chemicals	5% cheaper	Same as the domestic product.
Paper and paper products						
370320	Unexposed color photographic paper, board or textiles	0.52	Unexposed color photographic paper, board or textiles	Adhesive for paints, plastic, rubber, textile adhesives	15-20 % cheaper	Superior to domestic product
370390	Unexposed photographic paper, board or textile nes	0.27	Papers, films, hard disks	Cameras, roll films, x-rays, photographic chemicals	Not manufactured in India.	-
Silk and other fabrics						
500200	Raw silk	2.79	Natural and raw silk	Ladies suits	20-30 % cheaper	Superior to domestic product.
500400	Silk yarn	0.45	Silk yarn and fabrics	Silk fabrics, made-ups, garments, woven polyster	25-30 % cheaper	Superior To domestic product
500720	Woven fabric	0.85	Silk fabrics	Designer sarees	15-16% cheaper	Superior to domestic product

Product code No.	*Product Description*	*Product share in imports from China in %*	*Product imported*	*Product manufactured*	*Product status*	*Product comparison*
510129	Degreased wool	0.30	Yarns, Shawls	Shawls	30-35% cheaper	Superior to domestic product.
590210	Tyre cord fabric of nylon, polyamides	0.92	Tyre cord	Tyre	20-30 cheaper	Inferior to domestic product.
590320	Fabric impregnated	0.39	Impregnated fabric	Fabrics	10-15 % cheaper	Superior to domestic product
Other manufactured products						
730429	Casings	0.26	Items of casings	A-Z Casings	20-30% cheaper	Inferior to domestic product
780110	Lead refined unwrought	0.70	Lead, PVC	PVC Compounds, master batch, XLPE, Lead	3-4% cheaper	PVC-inferior Lead-inferior
790111	Zinc, not alloyed	0.28	Zinc, not alloyed, unwrought	Coal rolled, Galvanized coil/ sheets, cables, wires, ropes	5-10% cheaper	Same as the domestic product.

Appendix 4.11
Products imported by the Trading companies.

Product Exported	*Product Imported*	*Trading in Branded or non-branded*	*Trade margin on imported product*	*Quality consideration*
Phosphoric Acids, Magnesium Chloride	Tri sodium Phosphates, Natural Calcium Phosphates, Ferrous Sulphate,	There is no branded products	25%	Same quality
Iron ore, Ferro Alloys	Ferro Alloys, Magnesia, Lithium	Non-branded	3-5%	Superior quality
	Bauxite, Dead brunt magnesia.	Non-branded	20%	Superior
	Coal, Coke, Betanaphtanol	Non-branded	Coke-15% and rest 10%	Superior
	Silicon, Lead, Tin, Zinc	Branded	15%	Inferior
Silicon	Silicon(pure), Ferro silicon, Tin, Bismoth metal, Manganese metal	Non-branded	2%	Not available
	Tatric Acid, Citric Acid, Hydrogen Peroxide, Amino Sulphonic Acid	Non-branded	5%	Same
	Vitamin B12, Amino Phenol	Branded	10-20%	Vitamin B12-same &Aminophenol-inferior
	Calcium Carbide, Antibiotics, Pharmaceutical raw material	Branded	-	Same
Manganese, Chrome, Silicon, Iron ore	Manganese ore, Chrome, Silicon, Iron ore	Non-branded	3-5%	Same
Aluminum Oxide, Iron ore	Coal, Met-coke	Non-branded	15-20%	Superior
Manganese ore, Iron ore	Steam coal, Met coke	Non-branded	5-10%	Inferior
	Solvents	Non-branded	15-25%	Same
	Photographic films, Cameras, Binoculars	Branded	-	Not locally produced
Steel, Petro-chemicals	Plant and machinery, Steel, Petro-chemicals	Non-branded	-	-
	Rubber and rubber chemicals	Both	15-20%	Inferior
Ready made garments, Fabrics	Ready made garments, Fabrics	Non-branded	10-15%	Inferior
Textiles	Textile Machinery, Fabrics	Non-branded	5-10%	Inferior
	Silk yarn, Silk fabrics	Non-branded	3-5%	Same
	Raw silk, Woven fabrics for silk	Non-branded	3-5%	Same
Woolen, Embroidery	Woolen, Furniture, Blankets	Non-branded	25-30%	Inferior
	Woven polyester	Non-branded	15-20%	Same
	Tyre code fabrics	Non-branded	20%	Same
	Coated fabrics	Non-branded	-	-
	Raw silk, Silver, Gold	Non-branded	-	Superior
	Silver tableware	Non-branded	14-16%	Superior
	Silver and Gold jewelry	Non-branded	5-10%	Superior

Product Exported	*Product Imported*	*Trading in Branded or non-branded*	*Trade margin on imported product*	*Quality consideration*
Galvanized zinc coating	Hot rolled coils, Scrap iron and steel	Non-branded	30%	Superior
	Lead, Ferrous alloys	Non-branded	5%	Inferior
Iron ore, Aluminum scrap, Non-ferrous alloys	Ferro alloys, Metals	Both	10-15%	Same
Embroidery machines	Embroidery machines	Branded	5-10%	Not available
	Sewing machines	Branded	5-10%	Same
	Laptop, Hard disks, Optical drives, Batteries	Branded	10-15%	Superior
	Hard disks, Rams, Mother boards	Branded	10-15%	Not available
	Electric motors	Branded	30%	Same
	Transformers and parts	Non-branded	20%	-
	Automotive batteries, primary cell	Branded	10-15%	Superior
	Lead acid batteries, Mobile batteries	Branded	10-15%	Superior
	Digital loop carrier system	Branded	-	Superior
	Telecom switching system, Apparatus for carrier, GSM/CDMA equipment, Transmission equipment	Branded	30-40%	Same
	Telephonic equipment	Branded	-	Not available
	Handsets, Wireless phones, PDA	branded	-	Not available
	Parts of telephone	Branded	10-12%	Not comparable
	DVD Player, Audio	Branded	5-10%	Same
	Multimeters, Recorders	Branded	20%	Not comparable
Recorded media	Recorded media	Both	20-30%	Same
	Cathode ray tubes, X-ray tubes	Branded	40%	Same
X-ray tubes	Medicinal equipment	Branded	-	Same

Survey Questionnaire Appendix: 4.12

(For Exporting Companies)

1. Name of the Company and address :

   Telephone :
   Fax :
   E-Mail :

2. Major Activity: Manufacturing/Exporting/Selling in Indian Market
   (tick mark the relevant)

3. Product/Products (More Specific) :

4. Major destination countries of exports :

5. Value of Turnover in Rs lakhs or crores :
   (in recent years)

2003-04	2004-05

6. Brand name if any :

7. Value of exports (total):
   (in recent years)

2002- 2003	2003 - 2004	2004 - 2005

8. Value of export to China :
   (in recent years)

2002- 2003	2003 – 2004	2004 - 2005

9. Trade margin from exporting to China :
   (in range and in per cent)

10. When you started exporting to China (year) :

11. Who are your main competitor in the Chinese market? (name 2 or 3 countries) :

12. Are the products of your competitors cheaper than yours :

13. Are the products of your competitors have better quality than yours :

14. To whom do you sell (tick mark the relevant) : Households/Chinese Manufacturers/ Trading companies /MNCs

15. Is there any problems in exporting to China? :

16. Is your export volume is sustainable in coming years? What is the reason? :

17. Do you already have or planning to have Joint ventures with Chinese or other countries companies in China? :

18. Do you face any non-tariff barriers in exporting to China :

19. What policy support you need from the Govt? :

20. Are you importing any product/products from China :

21. At what price you sell them? :

22. General Impression about Chinese market :

Appendix: 4.13

Survey Questionnaire
(For Importing Manufacturing Companies)

1. Name of the Company and address :

   Telephone :
   Fax :
   E-Mail :

2. Major Activity: Manufacturing along with
   (tick the relevant) Selling in the home market/Exporting

3. Value of Total turnover :
   (in most recent year/years)

2003-04	2004-05

4. Products you manufacture :

2003-04	2004-05

5. If you are importing, major sources :

6. Do you import from China? : yes/no
   (tick the relevant)

7. What are the products you import :
   from China?

2003-04	2004-05

8. What you do with imported product :
   Use in the manufacturing or sell in
   the domestic market? (product-wise)

Product	Usage

9. Are the Chinese products cheaper : yes/no
than domestically produced products?

10. If yes, please give the price difference:
in per centage (product wise)

2003-04	2004-05

11. Are Chinese products comparable :
with Indian products in terms of quality?
(Tick mark the relevant product-wise)

Product	yes / no
a.	Superior/Inferior/Same
b.	Superior/Inferior/Same
c.	Superior/Inferior/Same
d.	Superior/Inferior/Same

12. What can be other reasons for :
importing Chinese products?

13. Do you get your supply of product :
promptly from Chinese suppliers?

14. Is there any specific problem you face :
to import from China?

15. Is importing from China sustainable? :

16. General impression gathered :

Appendix: 4.14

Survey Questionnaire
(For Trading Companies)

1. Name of the Company and address :

   Telephone :
   Fax :
   E-Mail :

2. Major Activity : Export/Import/Trading in the home market
   (Tick the relevant)

3. Product/Products handled :

Export	Import

4. Sales Turnover (in Rs. Lakh) : in recent years

2003-04	2004-05

5. Turnover of imports (in Rs. Lakh) : in recent years (product-wise)

2003-04	2004-05

6. Turnover of Exports (in Rs lakhs or crores) : in recent years (product-wise)

2003-04	2004-2005

7. Do you sell Chinese branded or : non-branded products

8. What are the prices of Chinese products : being sold in India? (per unit)

2003-04	2004-05

9. Are they sold lower than prices of equivalent home products? If yes, difference give in percentages :

2003-04	2004-05

10. What is the trade margin in selling Chinese products? (in per centages) :

11. Do you get your supply of product promptly from Chinese suppliers? :

12. Is there any specific problem? :

13. Are Chinese products comparable with Indian products in terms of quality? (Tick mark the relevant) : yes / no

14. What is the most important feature of the Chinese product you sell? :

15. What is your customers preference (Tick mark the relevant) : lower price/ quality/ sales after service/ durability/ more functions/ appearance and warranty/any other thing (specify it)

16. Is buying from China sustainable? :

17. General impression gathered :

Chapter 5

Competition in Third Market

The rapid emergence of China as world trade power has raised concerns in developing and developed countries alike over its potential impact on the world market. In 2003, China's share in the world trade was 5.74 per cent, exports and imports amounting to 6.02 per cent and 5.74 per cent respectively. In the current decade, both exports and imports are growing approximately 20 per cent. With China's entry into the WTO, the pattern of world trade was expected to undergo dramatic changes. To fulfill its membership requirements at the WTO, China has to implement its commitment to adopt broad and deep trade liberalization measures to bring its trade regime in accordance with WTO rules. Implementation of liberalization measures implies a substantial reduction in tariff and non-tariff barriers across all economic sectors. This will change its resource allocation in domestic production and export sectors and affect the structure of its trade with trading partners. In this context, it raises questions such as; what opportunities will the growing and liberalizing Chinese markets likely to bring to developing and developed countries around the world? What challenges will the rest of the world face as the low cost Chinese labor force is integrated into the world economy? How will the increase in export competitiveness of Chinese products affect world markets? Who will gain? Who will lose? What are the geographical and sectoral distribution of the gains and losses? Many studies indicate that China will gain most from its WTO accession, the rest of the world, particularly developed countries, Asian newly industrialized economies and least developed countries would benefit due to the expansion of world trade. Some developing countries with an endowment structure similar to China, like those in South and South-East

Asia may experience keener competition in labor-intensive exports and lower price for their products[1].

The market forces will drive Production and trade of China in the face of liberalization. As a land-scarce economy, it is a net importer of land-intensive agricultural products, but a net exporter of labor-intensive agricultural commodities such as non-grain crops. The implementation of WTO commitments by China will reinforce market forces and push China's agricultural production and trade further away from its grain self-sufficiency policy in the years ahead. The factor endowment would force China to produce and export labor-intensive products such as textiles and garments and light manufactured products. Joining the WTO, particularly when industrial countries eliminate restrictions on imports of labor-intensive manufactures such as textiles and garments from China, would further add to China's comparative advantage in producing such goods and increase its net exports. The expansion of labor-intensive manufactures in China would cause resources to be bid away from farming and drive up demand for agricultural and capital/technology-intensive goods. This would increase China's net agricultural and capital/technology-intensive imports and push up world market prices for such products. The opposite impact would occur in most developed economies because of their different endowment structures. Developing countries whose endowment structures are similar to China's will encounter keener competition in labor-intensive goods markets and face lower prices for their exports. The impact of China's WTO accession is also affected by China's current import protection structure and structure of tariff cuts in its WTO offers. The larger the initial distortion, the deeper the tariff cuts in the offers, the greater the induced impact. Production resources will be released from those previously highly protected industries in China and draw

[1] Wang, Zhi, The Impact of China's WTO Accession on Patterns of World Trade, Journal of Policy Modeling (North-Holland), No. 25, 2003, pp.1-41

into sectors where China has comparative advantages thus enabling it to become a more efficient supplier in world manufactured goods markets.

Low wages are the main source of China's comparative advantage. Unfortunately, comprehensive data at the sectoral level is not available for labor costs. Some data are, however, available for the manufacturing sector (Table - 5.1), textiles, and clothing (Table - 5.2). In table, one average wage for China is manufacturing sector, as a whole is much lower than those are for all other countries. The relative position of China deteriorates considerably when one uses unit labor cost as an indicator. In other words, differences in productivity performance have adverse effects on relative unit labor cost of China for the manufacturing sector as a whole, which includes many inefficient state-owned enterprises. Notwithstanding productivity differences, China still shows lower labor unit costs than the majority of its competitors in developing countries. Table - 5.2 compares hourly labor costs in textiles and clothing of China with a number of developed and developing countries. However, textiles and clothing in developed countries are more skill intensive than in China and other developing countries. Textile industry is more capital-intensive in developed countries, thus requiring more skills. In the case of clothing, quality and design is different in developed countries and requires more skill and expertise. Therefore, the figures on wages and labor costs are not comparable as quality of labor is different in the two groups. China and the developing countries produce and export mostly standard products. Therefore, they use more or less similar skills in production process. The table indicates that China has an advantage over most countries, but it is no longer a low wage economy as compared with India, Bangladesh and Indonesia— in the latter case mainly due to devaluation after the Asian crisis. Nevertheless, the non-coastal areas of China show lower wages than in the coastal areas where export activities are located[2].

[2] Sachs, J.D and Woo, W.T. (2000), Understanding China's Economic Performance, Policy Reform,4: pp. 1-50.

Table - 5.1
Ratio of wages and unit labor cost of selected countries to China for the Manufacturing – 1998*

Countries	*Wages*	*Unit labor cost*	*Countries*	*Wages*	*Unit labor cost*
India	1.49	1.39	Mexico	7.78	0.72
Indonesia (1996)	2.21	0.87	Chile	12.51	0.81
Egypt	2.76	1.48	Taiwan (1997)	20.61	2.26
Philippines (1997)	4.14	0.72	Republic of Korea	12.85	0.81
Malaysia	5.17	1.09	Singapore	23.42	1.30
Turkey	7.54	0.85	Sweden	35.55	1.81
Japan	29.90	1.22	U.S	47.80	1.34
Source: Based on UNIDO's Industrial Statistic Database and China's Statistical Yearbook. Wages and unit labor costs include social changes and fringes. For calculation of unit labor cost, wages were divided by value added.					

Table - 5.2
Ratio of hourly labor cost of selected countries to China in Textiles and clothing industry, 1998

Country	Ratio in Textiles	Country	Ratio in Clothing
Italy	25.50	US	23.10
US	20.92	Hong Kong	12.10
Taiwan	9.44	Republic of Korea	6.26
Hong Kong	9.11	Mexico	3.51
Republic of Korea	5.89	India	0.91
Turkey	4.00	Indonesia	0.37
India	0.97	Bangladesh	0.70
China (US $)	0.62	China (US $)	0.43
Source: Based on USITC (1999), table 8-2 and 8-4 which are in turn based on Werner International Management Consultants, " Hourly Labor Costs in Textile Industry", 1998, New York and "Hourly Labor Costs in Apparel Industry", 1998, New York.			

It is indeed difficult to measure all the sources of competitive advantage of a country because, in addition to wage cost, a number of price and non-price factors are at work. However, the technique of revealed comparative index[3] is used quite often for this purpose. The advantage of this

[3] This indicator is referred to in the literature as "revealed comparative advantage". Nevertheless, as other factors than cost influence the market share, it may be preferable to use the term "competitive" instead of comparative. This has been made use of by S.M. Shafaeddin. in his discussion paper "The Impact of China's Accession to WTO on the Exports of Developing Countries" UNCTAD, No. 160, June 2002.

method is that it show whether a country will gain and improve its market share in a product in the international market[4]. S.M. Shafaeddin has calculated Index of China's competitive advantage for some products[5]. It provides data on R (revealed comparative advantage) and Cr (the ratio of R for 1997-98 to the R 1992-93) for major products of China whose exports accounts 1 percentage point or more of the country's total exports. These products are grouped into three categories: labor-intensive, capital/technology-intensive and natural based.

The table - 5.3 indicates that China has a competitive advantage mainly in labor-intensive products. The first four products shown in table - 6.3 accounted for over 16 per cent of China's exports in 1997—98 and for all those products R is greater than 4.6. Moreover, for all 16 labor-intensive products whose share exceeds 1 per cent of exports of China, R is greater than one and in some cases, R is extremely high. In addition, 10 capital/technology intensive products (based mostly on labor-intensive assembly operation) also accounted for nearly 18 per cent of exports of China in 1997/98. For some of these products R is high. For three products, namely office machinery, switchgear and transistors, China does not show revealed comparative advantage; in another case (data processing equipment) R is not high. However, even for this product, it is gaining market share rapidly and Cr is well above one for all these products. Overall, the gain in market in capital-technology- intensive goods is impressive. Cr for 10 products concerned is on an average 1.89 as against 0.89 for the rest, i.e. 18 labor-intensive and natural-based products included in table - 5.3. Moreover, China has gained markets share in a number of other capital goods whose export value exceeded $1 billion, and their share in world exports ranges between 4 to 10 per cent although its share in China's export is under 1 per cent. They include for

[4] Its main shortcoming is that it does not reveal whether a country also has advantage in its production, or only in assembly operation as the data on exports show output rather than value added.

[5] For details see Shafaeddin S.M. " The Impact of China's Accession to WTO on the Exports of Developing Countries", Discussion Paper, No. 160, UNCTAD, June 2002.

Table - 5.3
Indicators of the main export products of China (Average 1997–98)

*FI**	*SITC*	*Items*	*Country share (per cent)*	*Share in world exports (per cent)*	*R*	*Cr*
L	894	Toys and sports goods	4.49	24.49	7.00	1.10
L	851	Footwear	4.42	22.97	6.56	1.01
L	845	Outer garments knit non-elastic	3.65	16.69	4.77	1.13
L	843	Women's outer wear non-knit	3.60	16.12	4.61	0.71
KT	752	Autom. Data processing equipment	3.39	3.87	1.11	5.17
L	842	Men's outerwear non-knit	3.26	19.02	5.43	0.80
KT	764	Telecom equipment, parts, accessories	3.24	4.32	1.23	1.39
L	846	Under garments knitted	2.68	17.25	4.93	1.13
L	893	Articles of plastic nes	2.06	6.97	1.99	1.33
L	831	Travel goods, hand bags	1.80	31.03	8.86	1.03
KT	778	Electrical machinery nes	1.79	4.20	1.20	1.44
L	848	Headgear, non-textile clothing	1.70	26.38	7.53	1.12
KT	759	Office, adp machinery, parts, accessories	1.64	2.82	0.81	1.75
L	899	Other manufactured goods	1.60	16.37	4.68	0.93
KT	775	Household type equipment nes	1.58	8.83	2.52	1.31
L	652	Cotton fabrics, woven	1.58	12.28	4.08	0.73
KT	762	Radio broadcast receivers	1.49	18.94	5.41	1.17
L	658	Textile articles nes	1.45	18.59	5.31	0.74
L	821	Furniture and parts thereof	1.45	5.03	1.44	1.27
L	653	Woven, man-made fiber and fabrics	1.39	8.46	2.42	1.13
KT	771	Electric power machinery nes	1.24	8.57	2.45	1.46
L	844	Undergarments non-knit	1.24	16.97	4.85	0.63

*FI**	*SITC*	*Items*	*Country share (per cent)*	*Share in world exports (per cent)*	*R*	*Cr*
L	651	Textile yarn	1.21	6.50	1.86	0.86
KT	776	Transistors, valves	1.18	1.14	0.33	1.95
RB	333	Crude petroleum	1.16	1.02	0.29	0.48
KT	772	Switch gear, parts nes	1.15	2.91	0.83	1.36
RB	669	Base metal man. nes	1.04	4.40	1.26	1.06
KT	855	Watches and clocks	1.02	12.00	3.43	0.92

Total of above…….59.7

Of which: L…….37.6

KT …….17.7

RB…….2.2

Total value of exports ($ billion)…183.3

Source: Calculations based on United Nations Department of Economic and Social Affairs (UN/DESA), Commodity Trade Statistics database.

Notes: Products included are those at 3-digit level with a minimum of 1 per cent share in total exports of China. The classification is based on UNCTAD, TDR 1996 except for SITC 699, which is included in resource base here.

- FI, factor intensity, L stands for labor intensive; KT for capital and technology intensive; RB for natural resource base; R for revealed comparative advantage and Cr for the ratio of R for 1997-98 to the R for 1992-93.

example ship and boats, rotating electric plants, trailers, non-motor vehicles, sound recorders, office machines and cements. By contrast, a number of labor-intensive light manufactured products have shown a loss in market share. In case of textiles except for woven fabrics, China has been losing market share in all other textile products. This is partly because the processing of textiles into clothing has been expanding. It is interesting to note that in case of clothing also China has lost market share in women and men's non-knit outwear and non-knit underwear garments.

There are some items that are capital/technology intensive and belong to assembly plants involving final stages of production process, these are labor-intensive in nature. A new pattern of specialization is emerging among the ASEAN, first tier NIE's, Japan and China. China and other low wage

countries have advantage in the assembly of parts and components. By contrast, more advanced countries of the region Japan, Taiwan, Singapore and South Korea have more advantage in the production and exports of components. Yet China competes with others in international market for final products of these items. In their production, however, the country relies mainly on imports of components, particularly from Japan, first-tier NIE's, partly through product sharing, thus providing "complementary effects" with those countries. Therefore, it will be useful to know to what extent China is specializing in the final stage of production, and/or trade in parts and components of these products.

When RCA indicator is applied to import of components of a product it will reveal whether or not a country has a competitive advantage in the assembly operation. If RCA is greater than unity for a component, it implies competitive advantage in assembly operation. Similarly, if RCA is greater than unity for a finished product, it implies that a country has disadvantage in production of those products. An increase in RCA between two periods for components implies that China has gained further advantage in assembly operation and vice versa. By contrast, an increase in RCA for finished products implies intensification of disadvantage in production of that product.

Table - 5.4 provides the share of the most important import items of China in total imports of the country and the world and the necessary data on RCA for 1997–98 and Cr, the ratio of RCA for 1997–98 to RCA for 1992–93 for each item. The items included cover all products whose share in total imports of China was around 1 per cent or greater in 1997–98; these items account for nearly 63 per cent of imports of China. Firstly, it indicates that except for items, intermediate products and components constitute the bulk of the items shown in the table. Secondly, most items figure among capital goods (SITC 7). Thirdly, in 1997–98 China had competitive advantage in assembly operation in all items of components and parts shown in the table.

Table - 5.4
Indicators of the main product imports of China at 3-digit level average, 1997-98

	SITC	*Products*	*Import of China per cent share*	*World import of product in per cent*	*R*	*Cr*
1	583	Polymerization and copolymerization	5.47	9.84	3.83	1.31
2	776	Thermionic valves, tubes and parts	5.16	3.45	1.34	1.56
3	764	Telecommunication equipments and parts	4.72	4.68	1.82	0.82
4	728	Other machinery, equipment and parts	3.57	7.83	3.05	0.69
5	333	Petroleum	3.09	2.00	0.78	1.77
6	653	Fabrics, woven, of man-made fibers	3.87	11.96	4.66	1.20
7	674	Universal plates sheets iron or steel	2.57	6.76	2.63	2.26
8	759	Parts and accessories for 751 and 752	2.56	3.12	1.22	2.30
9	792	Aircraft and accessories, equipment and parts	2.27	3.84	1.49	1.07
10	334	Petroleum products	2.20	3.23	1.26	1.17
11	641	Paper and paper board	2.17	4.17	1.63	1.66
12	651	Textile yarn	2.06	7.92	3.09	1.12
13	772	Fuses and plugs	2.03	3.80	1.48	1.59
14	562	Fertilizers, manufactured	1.92	14.79	5.76	0.90
15	778	Electrical machinery, apparatus, nes	1.85	3.19	1.24	1.33
16	611	Leather	1.43	13.96	5.44	1.09
17	736	Machine tools for working metals and parts	1.30	6.03	2.35	0.77
18	724	Textiles and leather machinery and parts	1.30	8.00	3.12	0.48
19	874	Measuring, checking and analyzing instrument	1.29	2.83	1.10	0.98
20	686	Copper	1.26	5.74	2.24	0.90
21	716	Rotating electric parts	1.15	5.59	2.28	0.90
22	652	Cotton fabrics, woven	1.13	7.72	3.01	1.58
23	81	Unmilled cereals	1.13	6.45	2.51	3.20
24	749	Non-electric accessories of machinery	1.09	2.39	0.93	0.97

	SITC	*Products*	*Import of China per cent share*	*World import of product in per cent*	*R*	*Cr*
25	281	Iron ore and concentrates	1.09	11.88	4.63	1.40
26	582	Polyadalition products	1.07	4.92	1.92	1.66
27	752	Automatic data processing machines	1.05	0.83	0.33	1.27
28	744	Mechanical handling equipments and parts	1.04	3.99	1.55	1.23
29	741	Heating and cooling equipment and parts	0.96	3.20	1.25	0.80
30	657	Special textile fabrics and related products	0.95	7.42	2.89	0.86
		Total share of above items of which: SITC (7) SITC (6+8) SITC (5)	62.75 30.05 16.73 8.46			
Source: Calculation based on UN/DESA, Commodity Trade Statistics database.						

Further, for five items, namely telecommunication equipment and parts, rotating electric parts, non-electric accessories of machinery, heating and cooling equipment and parts, China has reduced its advantage in assembly operation over 1992-93. In other words, it has improved on its advantage in production of those components. Although these items still figure among its main imports, China is improving its production capabilities. Finally, for some finished products (electric machinery, measuring and checking instruments) their share imports have declined, it indicates that the country's disadvantage in production has declined. In short, while China continues to have strong competitive advantage in the assembly stage of technology/capital-intensive products and processing trade for a number of products, it is also improving its capacity in the production of components. Further, China has a great potential to deepen the degree of its industrialization and increase the value added in exports by expanding production of components. The supply of skilled labor is also high, which increases its potential to produce skill intensive products.

The competitive strength of China indicates that developing countries relying on production and exports of labor-intensive products, and assembly operations will be subjected more to the "competition effects" of China's access than to its "complementarity effects". The situation of more industrialized developing countries, specifically in Asia, will be the opposite. China competes mainly with developing countries in the third market, which are developed countries. More advanced developing countries will benefit from China's import liberalization (expansion of imports of final products) and rise in imports of parts and components as inputs to exports of finished capital and technology-intensive goods.

Table - 5. 5 give information on the main markets for China's exports of manufactured products and the list of main exporting developing country groups for various export categories. China has similar export structure, in terms of share of light manufactured goods (SITC 6+8-68) in total export, mainly with South Asian countries, Hong Kong, Macao, Taiwan, Indonesia and Thailand. Light manufactured goods account for the bulk of exports of these countries. The share of machinery and equipment (SITC 7) in the export structure of China (30 per cent) is not high as those of NIE's (60 per cent), Taiwan (56 per cent) and ASEAN (62 per cent). China may be a serious competitor in the final product of these items because of its large export volume, high growth in exports and its significant gains in world market share in these products. The Five Year Plan (1999—2005) intends to increase the share of electrical and electronic products/machinery and high technology products in total exports to 50 per cent and 20 per cent respectively[6]. In short, while China continue to have strong competitive advantage in the assembly stage of technology/capital intensive products, and processing trade for a number of products. At the same time, China improves its capacity in production of components.

---

[6] Shi Gunagsheng, Minister of Foreign Trade and Economic Cooperation of China, quoted in Sit, China.com, 23.3.2001.

Table - 5.5
The main markets in Developed countries for China's principal exports of manufactured goods and main developing country group exporters, 1999

Export items	*US*	*Japan*	*EU*	*Main competing countries*
All manufactured goods	1	3	2	CG, NIE's, ASEAN, SA, AF, LA
Chemicals (SITC 5)	2	3	1	NIE's, CG, ASEAN, LA, SA, AF
Light manufacturers (SITC 6+8)	1	2	3	SA, CG, ASEAN, AF
Machinery and equipment (SITC 7)	1	2	3	NIE's, ASEAN, CG, SA, AF
Main items*				
Clothing	2**	1	3	
Textiles and Textile fibers	3**	1	2	
SITC75, 76, 77***	1	3	2	
Toys and articles of plastic	1	2	3	
Leather and leather item	1	3	2	
Travel goods	1	3	2	
Heat/cool and mechanical machinery	1	3	2	
Power generating machines	3	1	2	

Source: UN/DESA, commodity Trade Statistics database.
Note: Numbers indicate the order of importance of the destination of China's exports CG= China group including Hong Kong, Taiwan, Macao, NIE's= Singapore, Republic of Korea, SA= South Asia, LA= Latin America, AF= Africa. Areas are reported in the order of similarities in their export structure with China.
* In order of importance in China's exports.
** Does not include re-exports through Hong Kong.
*** Office machinery, television, telecom equipment and electric power machinery respectively.

China has a great potential to deepen its degree of industrialization and increase value added in its exports by expanding production of components, in particular, where skilled labor is essential for export growth. African countries concentrate mostly in export of primary commodities. The labor-intensive products, namely textiles and clothing are prominent in their exports. Hence, China can be their important competitor in these products. This will be true for Europe that receives about two-thirds of exports textiles and clothing from Africa. Latin American countries, except Mexico, mainly export light manufactured products, particularly to the US market. China can be an important competitor for them in that market. Except for chemicals for which EU is the main market for Chinese exports, China has a closer link with the US, particularly for capital goods. The EU takes second place for most

products, except for clothing and toys. It is, therefore, more likely that in future China will also compete with Asian NIE's and the ASEAN for the export, particularly to Japan, of final products for power-generating machinery, and with the US and EU for other capital goods (Table - 6.5). Similarly, China is in competition with Mexico and Brazil in the market for final products for SITC 7 group mainly in the US, which is also the main market for these countries. For light manufactured goods, the US market is again the main destination for Chinese exports, particularly for leather and leather products, toys, articles of plastic. Japan and the EU take second and third place respectively for most products, except for travel goods, articles of plastic, toys and sports goods, for which the EU is the main market. For China, the US is the main market for textiles and clothing where it will compete mainly with South Asian and Latin American countries. Nevertheless, Asian NIE's may also lose to China in these products as well as in other light manufactured goods. On balance, South Asia, Africa and Latin America may suffer from the competition effect of China's accession in the third market.

China may eventually intensify competition with developing countries in their domestic markets. However, the "safeguard measure" and restrictions that are included in the protocol of accession, limit China's ability to penetrate developing countries market for some time. China has now a more established trade and links with Asian countries than Latin America and African countries. Other than Hong Kong and West Asia, less than 10 per cent of exports of light manufactured products of China (mainly textiles, textile fibers, travel goods, clothing and leather products) go to Asian developing countries. Light manufactured goods, primarily textiles and clothing and capital goods account for around 35 per cent of exports of China to select Asian countries. To that, extent China's market access to these countries has improved due to China's accession to the WTO. Small volume of China's light manufactured products (2.1 per cent), except for textiles (4.2 per cent), leather,

and leather products (2.4 per cent) go to Africa. A somewhat similar kind of pattern could be observed in the case of Latin America where clothing and travel goods are also among important items of exports of China to these countries. On balance, one would not notice a significant competitive advantage for China in the domestic markets of developing countries at least during the early years of accession.

South Asia, Africa and Latin America, unlike South of Korea, Singapore and Taiwan and to some extent ASEAN, will benefit little from the complementarities effect from China's import liberalization due to the accession. Manufactured goods, particularly capital goods, take considerable weight in imports of China. China imports little from Africa and Latin America because their production and export structure are similar and they do not have much trade links (see table - 5.6). The only important manufactured products imported from Latin America are leather and leather products. Nevertheless, as China is undertaking significant trade liberalization in agriculture, Latin America could benefit from China's expansion of imports of agricultural products, particularly food. The only benefit for Africa may be in the field of agricultural raw materials.

Table - 5 .6
Share in China's total Imports (percentage)

Categories	*SITC*	*US*	*Japan*	*HK*	*EU*	*Asia**	*LA*	*AF***
Food	0+1+22 +4	21	4	1	11	19	18	2
Agricultural raw materials	2-(22+27 +28)	12	7	1	9	35	5	10
All manufactured goods	5 to 8-68	12	24	5	17	33	0	0
Chemicals	5	15	19	3	10	42	0	1
Machinery and equipment	7	14	26	4	24	25	0	0
Light manufactures	6+8-68	8	23	8	8	41	1	0
All products	1 to 8	12	21	4	15	34	2	2

Source: UN/DESA, Commodity Trade Statistics database.
Note: * Excluding Japan, Hong Kong and West Asia.; ** Africa includes South Africa, whose share is nearly 50 per cent of total imports.

The Asian countries account for a significant part of China's imports of agricultural goods and manufactured products, particularly textiles, metal and metal products, leather and leather products, chemicals, machinery and components, agricultural raw materials and food. However, while both light manufactured goods and food are the main items of South Asia's exports, Chinese imports from these countries were only about 1 per cent of its total imports in 1998. This is mainly because of similarities in their production and export structure. By contrast, newly industrialized countries (Taiwan, Republic of Korea, Hong Kong and Singapore) are the main sources of Chinese imports. Therefore, these countries will be the main beneficiaries of expansion of China's import liberalization. Imports of foreign-funded enterprises account for over 60 per cent and 50 per cent of imports of China from NIE's and ASEAN. Trade in differentiated products and product sharing and outsourcing for exports to third markets can partially explain imports of China from Asian NIE's and ASEAN. Nevertheless, they are not the only reason[7]. The main reason is differences in the production and export structure of China and those countries as China's capacity in production of capital goods and parts and components of technology intensive products is still limited. Imports from Republic of Korea are expanding due to Chinese investment in that country. China increased its foreign investment in apparel and electronic production. The Republic of Korea has been relocating labor-intensive assembly segments of production into China.

The developed countries will be the main beneficiaries of the complementarities effect of China's accession as they have been the main sources of supply of China's imports (see table - 5.6). Judging from their past trade link with China, the US will benefit mainly from liberalization of agriculture and some capital goods (mainly electric machine and components), and Japan and EU from liberalization of manufactured products

[7] For example, while China's imports of clothing and clothing accessories from first-tier NIE's constituted 1.2 per cent of total world exports in these products, China's exports to those countries was 6.1 per cent world of exports.

particularly electric and non-electric machinery and motor vehicles; more for clothing and textiles in case of Japan and travel goods for the EU.

It is likely that the accession will lead to expansion of labor-intensive assembly operation, mainly through increase in FDI. In this case, reliance on imported components will involve complementary effects of China's main sources of supply. Similarly, the expansion of production and exports of some labor-intensive products, particularly clothing may increase their imported inputs. NIE's and ASEAN have export capacity in parts and components of technology-intensive goods and South Asia in exports of necessary inputs for production of many labor-intensive products. At the same time, China may continue to expand its industrialization by increasing production of components and intermediate products. It may be useful to measure China's potential in import or expansion of production and/or exports of these products i.e. increase in domestic value added in what is referred to in China as processing trade. It will also examine whether South Asia benefits from the expansion of China's imports of intermediate products. For those purpose, two capital goods, products (office machine and automatic data processing) are selected for detailed examination. These are important export items of China where the use of imported components and materials are significant. SITC 759 includes components used in the production of office machines and automatic data processing products and textiles (SITC 26 and 65) are input to production of clothing. Moreover, Asian NIE's and ASEAN have capabilities in production and exports of SITC 751, and South Asian countries in the production of textiles. These examples provide some indication for "complementarity effects" of expansion of exports of finished goods by China in its trade with the NIE's, ASEAN, China Group and South Asia.

China has gained a market share in office machine and data processing machine through product sharing in the region. It has a potential to further increase production and exports of components over time. The increase in

imports of final products and expansion of assembly operations after the accession will involve complementarity effects mainly with Asian NIE's and the ASEAN. Since the 1990s China has become a major exporter of finished products for office machines and data processing products. At the same time, value of imports of parts and components will also increase. In spite of increased capacity in the production of parts and components, its imports of these products have expanded rapidly, and this trend may continue for some time after accession. In 1998—99, 59 per cent of China's imports of components originated from Asian countries and Hong Kong so did 29 per cent of imports of finished products, as against 45 per cent and 26.5 per cent in 1991—92 respectively. In 1998—99, over 27 per cent of China's finished product were exported to these countries, 9.7 per cent to Japan and 63 per cent to rest of the world. This clearly explains that China competes with these countries mainly in the third market for the final products. It appears that such regional links for trade components will be intensified in the future, particularly as far as China's imports for components from Asian countries is concerned. The beneficiaries will be more advanced countries of the region, particularly Taiwan, Singapore, Malaysia and Thailand. In 1998—99, the share of these countries was Hong Kong and Taiwan 18 per cent, Singapore and Republic of Korea 22 per cent, ASEAN 18.6 per cent, Japan 27 per cent and South Asia 0.04 per cent and rest of the world 14 per cent. South Asia does not gain from complementarities effects of China's expansion of exports of these products, nor is it subject to its competition effect as South Asian countries are not producers or exporters of these products. While China competes significantly with the NIE's and ASEAN in the third market for final products, at the same time it provides complementarity effect to them through imports of components and to some extent finished products. As China extends its capability in the production of components, it could become a serious competitor for assembly operation. However, such a process will take place over a long period. In the next 5 to 10 years the complementarity effects of China's expansion of exports of finished products is to dominate.

China is not only an important exporter, but also an important importer of textile products. In other words, imports are effected at intermediate level for use in production. For exports of clothing, China relies on imports of high quality textiles, particularly for sale of clothing items in the foreign markets. Does expansion of clothing exports by China involve complementary effects for South Asia, which is an exporter of textiles? Table - 6.7 shows that the ratio of imports of textiles to exports of clothing declined during 1990's, partly because of the rapid expansion of clothing exports. Nevertheless, over the same period imports of textiles also increased from $8.7 to $13.5 billion. In the early 1990's Hong Kong and Japan were the main sources of supply for China. By the end of 1990's, the main beneficiaries of expansion of China's imports were the most advanced countries of the region, namely Taiwan, Japan and Republic of Korea rather than South Asia (see Table - 5.7). The main reason for imports from more advanced countries lies in the nature of the textile industry. Traditionally, this industry had been labor-intensive. During the last two decades, there came a tendency towards robotization. This process involves capital-intensive methods in which more advanced countries of the region have comparative advantage. In addition, the relocation of clothing factories from Japan, Republic of Korea, Hong Kong and Taiwan, into China has contributed to China's imports of high quality textiles from these countries as inputs to exports of clothing. By contrast, South Asian countries that mostly use traditional labor-intensive methods in textile manufacturing and produce low quality textiles are in a disadvantageous position to benefit from "complementarity effects" of expansion of clothing by China. In short, while South Asia, in contrast to the NIE's and ASEAN, is subject to competition effects of China's accession, it gains little from its complementary effects

Table - 5.7
Some indicators of China's trade in textiles and clothing, 1990—1999

	1990 – 91 (Average)	*1998 – 99 (Average)*
Clothing	10,957	30,134
Textiles	8,727	13,848
X/M ratio of Clothing	20.1	27.8
X/M ratio of Textiles and textile fibers and yarn	1.06	1.05
Import of textiles, textile fibers and yarn/Export of clothing	0.75	0.44
Share of various groups in import of textiles:		
Share of China group* in import of textiles	61.6	34.8
Share of Hong Kong in import of textiles	50.3	9.9
Share of Taiwan in import of textiles	10.1	24.4
Share of NIE'†s in import of textiles	3.3	19.5
Share of Republic of Korea in import of textiles	3.2	19.3
Share of ASEAN in import of textiles	0.7	2.96
Share of South Asia in import of textiles	0.9	3.90
Share of Japan in import of textiles	10.5	19.2
Share of Others in import of textiles	23.0	19.7
Total	100.0	100.0
Source: UN/DESA, Commodity Trade Statistics database		

The UNCTAD study (2002)[8] analyses the possible competitive position of China vis-à-vis its competitors in the third market by applying a rank correlation for RCA (for exports) indicators of China and its competitors. These are calculated for their main export products at 3-digit levels. Subsequently, some qualitative judgments are also made using the data comparing main individual export products of China at 3-digit SITC level with those of its competitors. The export items of China and its competitors are ranked in order of their RCA indicator for 1997—98; the indicators for each product shows the ability of each country to gain market share in that product in the international market. Then 50 items are chosen for each country and index rank correlation between the related export items of China and each of the selected countries is calculated. The 50 items that were chosen for China account for nearly 75 per cent of total exports of China. The

[8] Shafaeddin, S. M., The Impact of China's Accession to WTO on the Exports of Developing Countries, UNCTAD, June 2002, No. 160

coefficient correlation equal to unity implies a maximum degree of competition between China and the country concerned. The lower the coefficient, the lower the degree of rivalry between China and the country concerned in international market for the related products. These are shown in table - 5.8.

Table - 5.8
Rank correlation coefficients between export items of China (at SITC 3 digit level) and its main competitors in developing countries.

Countries	*Correlation coefficient*	*No. of common products*	*Statistical significance*
Sri Lanka	0.75	24	1%
Hong Kong	0.59	29	1%
Macao	0.59	25	1%
Pakistan	0.56	21	1%
Vietnam	0.55	28	1%
Indonesia	0.53	25	1%
Bangladesh	0.46	25	5%
Thailand	0.42	31	5%
India	0.39	19	10%
Republic of Korea	0.08	20	-
Philippines	0.04	29	-
Malaysia	0.02	27	-
Taiwan	0.01	26	-
Singapore	-0.03	23	-
Mexico	0.40	28	5%
Brazil	0.57	12	10%
Colombia	0.20	20	-
Argentina	-0.12	8	-
Egypt	0.39	18	-
Source: UN/DESA, Commodity Trade Statistics database.			

Table - 5.8 shows that the coefficients are significant in the case of Hong Kong, Macao, Sri Lanka, Pakistan, Indonesia, Bangladesh, Thailand and India — if judged by the similarities in their pattern of RCA and export structure, they are the main competitors of China. These countries are exporters of labor-intensive products and compete with China number of products, for example, 19 in case of India and 31 from Thailand form 50 main export items of China. The high correlation coefficient between China and Hong Kong and China and Macao is partly due to similarities in their export structure and partly because a large number of exports from Hong Kong and

Macao are, re-exports originating from China. For Republic of Korea, the Philippines, Malaysia, Singapore and Taiwan, correlation coefficients are small, however; they do not have "complementarity" relations with China because capital and intermediate goods are important in their export structure. In the case of two Latin American countries, namely Brazil and Mexico, correlation coefficient is relatively high. In short, China competes mainly with Asian countries, particularly South Asian countries and Thailand on relatively large number of products. For East Asian countries, competition in the final product market is accompanied with complementarity effects since China's export is also import-intensive. China's competition with Latin American and African countries is limited, with the exception of Brazil and Mexico.

At the product level analysis, the UNCTAD study reveals that China and Republic of Korea have four main capital goods items in common (automatic data processing equipment, telecom equipment and parts, electric machinery, household type equipment, (SITC 775) and one light manufactured good (textile yarn). Automatic data processing equipment comprises final products, but other products include parts and components as well. Considering the destinations of China's exports, it can be assumed that it competes with South Korea mainly in the final products in third market. China also imports some components from South Korea; any expansion of China's exports of final products involves complementarity effects. For textile yarn, South Korea's competitive position is superior to that of China. By contrast, for finished capital goods, China has a superior position, particularly for electric machinery and household equipment. In the case of household equipment, Chinese products vis-à-vis imported products have been competitive abroad and in domestic market due to encouragement of competition among involved firms in the domestic market and to investment abroad. Malaysia is subject to competition from China mainly in three light manufactured goods (headgear, non-textile clothing, furniture and textile

yarn) and a number of capital goods (automatic data processing, electric machinery, telecom equipment and parts, radio receivers and transistors). China is in a better competitive position than Malaysia in the final market for the capital goods concerned. China's competition pressure on main Thai export is felt particularly for light manufactured goods (notably footwear, clothing and furniture), which China exports, in large volumes. In such items, as women's outwear, China's competitive pressure is not high. Thailand has shown greater competitive power in rotating electric plants and sound recorders. The structure of main exports of Indonesia is different from that of China. Only common with main export of China is furniture in which it is losing market. Vietnam has improved its competitive position vis-à-vis China in travel goods and furniture.

China and India compete in textiles and clothing, but only in limited number of items. China's main strength is in outer garments, whereas India's exports are concentrated mainly in underwear and miscellaneous textile items. In textiles and knitted undergarments, India is in a stronger position. Nevertheless, for two other items, i.e. headgear and knitted undergarment, China shows more strength. China's imports of textiles from India are over 1 per cent. Hence, there are little complementarity effects related to exports of clothing by China vis-à-vis India. Bangladesh competes with China primarily in outer garments, undergarments and textile yarns. In all these products, except for textile yarn and non-knitted men's outerwear, Bangladesh has shown significant improvement. Bangladesh enjoys lower wage costs than China. Pakistan and China have a similar export structure in toys and sport goods, outer garments, cotton fabrics and textile yarn. In most of these products, particularly cotton fabrics and non-knitted undergarments Pakistan shows strength as compared with China. Nevertheless, its competitive position is not as strong as that of Vietnam and Bangladesh. Sri Lanka and China have a similar export structure in toys, sport goods, articles of plastic, travel goods, women's outerwear, knitted and non-knitted undergarments

and headgear. Sri Lanka has improved its competitive position in most of the items.

The US is the major market for China and Latin American countries. Mexico competes with China in exports of light manufactured goods and products that involve assembly operations by TNC's. For clothing, Mexico has a stronger position than China due to, inter-alia, its preferential trade agreement with the US. With the MFA restriction, removal China may gain ascendancy after 2005. Mexico has improved its competitive position in exports of components for office machinery and data processing equipment. Overall, China's position is much stronger than Mexico. Costa Rica competes with China in few clothing items. It is in a stronger position than China in transistors and valves. Rest of the Latin American countries is not significant competitors of China. African countries also compete with China mainly in textiles and clothing, articles of plastic and footwear. However, in the near future they may not emerge as significant competitors of China.

China's mass scale production, high rate of growth and changing structure of trade involves competitive as well as complementarity effects vis-à-vis some developing countries. China's competitive advantage has evolved around the manufacture of labor-intensive products, i.e. in the assembly parts and components of some capital goods. China is also improving its production capacity in manufacture and export of components. In labor-intensive, light manufactured products, it competes mainly with South Asian countries, Latin American and African countries in third markets. However, it provides little complementarity effects with these countries. Some Latin American and African countries may benefit from expansion of China's imports of food and agricultural raw materials respectively. In the final market, for a limited number of capital goods, China competes with Asian NIE's and ASEAN. In the case of Asian NIE's and ASEAN, however, China's competition in the final market for capital goods involves some

complementarity effects through the imports of parts and components from the countries of the region. In general, China does not have much trade relations with Latin America and Africa and this provides both the regions with little complementarity effects. The more advanced countries of the region, particularly the Republic of Korea and Singapore will get most benefit from liberalization of imports by China. The intermediate goods used in the manufacture of China's exports of capital goods, are largely, imported from the NIE's and ASEAN, which have increasingly relocated the last stage assembly line of production in China. However, as China improves and increases its capacity to produce parts and components the competition effect may dominate. With its entry into WTO the situation in China with respect to market access, vis-à-vis main importing countries will not radically change for some time, particularly in textiles and clothing, which are the two main products with which China competes against South Asia, Latin America and Africa. In fact, China's growth in quota for exports to developed countries will increase far less than other developing countries. It is possible that in the future China's attempt to deepen and expand industrialization and to increase value added exports through the production of parts and components could lead to improvement in its competitiveness in technology/skill intensive products that are of interest to NIE's and ASEAN.

China's WTO accession and Impact on India

China's WTO accession and deeper integration into the world economy presents opportunities and challenges for South Asia and India. China's role in the Asian region is unrivaled. First, its economy is large in absolute terms—constituting half of the economy of Asia, according to measures of purchasing power. Second, China has rapidly expanded its trade, tripling its share of global exports and more than doubling its share of global imports over the period 1990—2003. Third, though its capital account is not convertible, China is important both as an investment destination and as a lender in global

capital markets. It is the world's largest host country for foreign direct investment (FDI)[9]and the largest capital supplier among developing countries[10]. Looking ahead, China will continue to be an important driver of change in Asia. With WTO accession, it will continue opening its markets to other countries exports and improving its business climate.

Over the next decade, China's growth and increasing integration into the world economy will have major effects on the region. Asia, including India will feel the impact of China's accession through four main channels:

- Expansion of markets in China for their exports;
- Increased imports from China into their domestic markets;
- Competition with China in third markets; and
- Rise of foreign direct investment in China and potentially, outward foreign investment from China.

Looking ahead continued growth in China's huge domestic markets will fuel further export growth for the Asian region and India. Nevertheless, the accession will cause several significant shifts. China's substantial commitments to liberalize trade in services represent the most significant part of the accession package[11], providing national treatment to foreign-funded firms and greater opportunities for exporters of services. In manufacturing industries, China's commitments to abolish non-tariff barriers and reduce its import tariffs from 13.3 per cent in 2001 to 6.8 per cent by the end of the implementation period will fuel further industrial restructuring.[12] Rationalization and industrial restructuring will affect some sectors such as motor vehicles and high-end manufacturing industries significantly. In agriculture too, China's imports are projected to grow substantially, though

---

9 It is indeed difficult to judge the accuracy of the FDI data as they reflect, "round tripping" investments undertaken from China to take advantage of concessions enjoyed only by foreign investors.

10 These outflows do not include flows through Hong Kong.

11 Matto (2001)

12 These are weightage average tariffs computed using trade weights for 2001, see Ianchovichina and Martin Wolf (2002).

the effect on agricultural output and imports from WTO related reforms are much smaller than projected by many studies. The reason is that production on many farm products is expected to remain virtually unchanged by the end of the implementation period[13]. At the outset, it appears that India may be able to make some dent in the farm products exports. India will be in a position to increase resource-based and low-tech manufacturing products. In the service sector, India will be in a better position to export computer software and IT enabled services.

China's accession to the WTO will be accompanied by cuts in its export prices, increasing its appeal as an efficient supplier of intermediate inputs. China's pre-accession reform has improved the competitiveness of Chinese exports and benefited its close trading partners. The big beneficiaries were Japan, South Korea, Taiwan and East Asian economies. A growing segment of imports from China will be inputs in the production processes and finished consumer goods. China is increasingly becoming a central player in the production networks while Japan remains an important centre of production-sharing operations in East Asia. Originating about one third of all regional exports of components of assembly, China is finding niches; its exports of parts and components increased by about $ 20 billion from 1996 to 2000. China was exporting more than $ 20 billion in part and components to other parts in emerging East Asia, representing up to 20 per cent of those countries parts and components trade. Hence, an import from China represents an opportunity for the rest of the emerging Asia to benefit from China's growing role in global production networks.[14] India is also becoming an emerging partner in this process. For instance, India's exports of electronic goods amounted to $6.10 million in 1997-98, which touched $39.13 million in 2003-04. This is due to increased access to the Chinese market. In the same period, imports of electronic goods went up from $109.02 million to $1382.43 million,

[13] Huang and Rozelle (2002)
[14] Ng and Yeats (2003)

an increase of over 12 folds. To realize full benefit of China's lower export prices, it will be important for India to resist pressures to protect the domestic producers and avoid imposing excessive safeguard measures.

For all countries, including India, competition with China will intensify because of the accession. This will present a challenge, especially for those countries with a similar comparative advantage in labor-intensive goods. India competes with China in the world markets for manufacturing goods, particularly labor-intensive goods such as textiles and clothing, light manufacturing products, footwear, granite and leather products. Looking ahead, competition set to intensify for two reasons. First, the US, Canada, and the EU have abolished their import quotas on Chinese textiles and apparel in 2005. China has become a formidable competitor, particularly in apparel sector by pushing prices down in these third markets. Second, China has lowered its own import tariffs on inputs for manufacturing. The effect of these tariff reductions on the real exchange rate will lower the costs of both traded and non-traded inputs for China's manufacturers. This will make China's imports more competitive, putting the pressure on domestic producers in the countries that import them.

WTO accession has increased FDI in China, as trade liberalization resulted in lower production cost, and led to rise in returns to capital in China[15]. Meanwhile, the liberalization rules on investment have eased the flow of FDI into previously restricted sectors such as services and automobile production. Given the substantial productivity gap that exists between local and foreign firms, the new FDI flows have raised China's productivity by 30 to 62 per cent in collective enterprises and 20 to 59 per cent in state enterprises[16]. Increased productivity and trade liberalization in China both

[15] Mc Kibbin and Tong (2000) and Ianchivichina and Martin Walmsley (2002) discuss in detail the effects of trade liberalization on rates of return to capital and foreign investment.

[16] Claro (2001)

increase her demand for imports, which will benefit trade partners. The technological advances accompanying China's will improve her competitiveness. Investment liberalization in China will make it possible for multinational firms to further rationalization of their production process within East Asia. The relief of local content requirements under Trade Related Investment Measures (TRIM's) will encourage these firms to relocate some segments of their production from China to other neighboring countries including India. As FDI creates more backward and forward linkages among the countries in the region, the competitiveness of Asian products will depend not only on the competitiveness of the country that exports the final product, but also on those neighboring countries that contribute various components at different stages of production process. This will create incentive to direct investment to different countries that are part of the production network where China is playing a central role. The determinants of FDI are evolving over time. Agglomeration effects are becoming more important relative to traditional determinants of FDI such as market size and labor costs[17].

China's comparative advantage has changed to some extent after WTO accession. Their current comparative advantages in labor-intensive products suggest that there is more scope for export specialization vis-à-vis the developing countries of Asia. Over time, China is likely to shift and extend its comparative advantage into higher-end products as the result of trade-induced productivity gains and savings in transactional costs from the reforms spurred by WTO accession. This implies that the impact of China's WTO accession on industrializing East Asia may change to include heightened competition in global markets. India's graduation to high-tech products exports may face increased competition from China in the third country markets. The spillover effect of productivity gain in services is substantial, and China is likely to expand not only its services sectors, but also its high-end manufacturing industries, which use services as intermediate

[17] UNCTAD (2002)

inputs. China's industrial structure will increasingly shift away from land and labor-intensive products and low-end manufacturing, benefiting developing countries such as India, Indonesia and Vietnam at the expense of newly industrializing economies.

India is expected to enhance its output of textiles in response to increased demand from China's expanding garment industry. Largely, Indian and Chinese garments are complementary because India's strength is in underwear garments and China's in outerwear garments. Third market competition may be limited to a few product segments of the garment industry. In electronics, China is expected to source its additional inputs from the countries that get the largest tariff reductions—the US, Hong Kong and Singapore where the tariffs on electronic products are low. The potential for specialization and complementary intra-industry trade could be significant. In automobile production, China's current plans for restructuring its industry will make it a more efficient assembler of motor vehicles and eventually an exporter. This prospect could provoke a major reorganization of the industry across the Asian region. In that event, India could emerge as an exporter of auto components to China. This may also create an increased opportunity to enhance intra-industry trade with China. Accession is likely to increase demand for all types of services including software, transport and communications. India is well positioned to provide software and IT enabled services to China.

China's trade liberalization and growth will have mixed impact on middle-income developing countries of Asia including India. China's market presents sizeable opportunities. At the same time, the impact of accession itself is concentrated in a few sectors—the apparel and textiles, where adjustments are likely. China's growing import demand creates potential for India in agro-processing, electronics, machinery and equipment. Given China's agricultural reforms, there is a scope for expansion of agricultural

exports to China such as oil seeds and sugar and basic agro-materials. Further, there is an opportunity to export professional and tourism services to China. The foreign competition will be intensive, price, quality and transactional costs will be critical in gaining the market share.

The biggest beneficiary of China's accession to the WTO is China itself, and most of the benefits are associated with China's own trade liberalization. China's accession and growing role also have important implications for the rest of Asia. Agricultural trade liberalization, particularly sugar and processed foods are poised to open further. Import demand for rice is expected to increase considerably. The potential for specialization and complementary intra-industry trade in the manufacturing sector could be significant. China is increasingly becoming a central player in the production networks, including electronics and machinery. In select sectors such as automobiles, China will become an efficient assembler, which will create demand for parts and components in which India could become a partner. Abolition of import quotas on Chinese textiles and apparel in key markets in 2005 will make China a formidable competitor, particularly in apparel sector and it will have an adverse effect on some segments of Indian apparel sector. The benefits may accrue to India in software and IT enabled services.

India and China as Competing Countries

India and China compete in the global market place in many product lines. This competition got intensified after China joined the WTO. This is because China received the MFN treatment from the WTO member countries. Both the countries posses advantages in labor-intensive product lines, particularly manufacturing products such as textiles, apparel, chemicals, leather products and host of light manufacturing products to name but a few. Sizeable exports of both the countries are directed towards the developed countries markets, namely the US and the EU. In addition, both the countries

have substantial trade with the Asian economies such as ASEAN and Japan. China's global exports was $438 billion or 6 per cent in world exports as compared to India's $55 billion or 0.76 per cent share in world exports in 2003. China's exports grew on an average 21 per cent between 2001 and 2003, during the same period when India's exports grew by 9 per cent.[18] India's share is too small as compared to China in the total imports of the US, the EU, Japan and ASEAN. This is evident from the table - 5.9 given below.

Table - 5.9
Share of India and China in 2003 in four principal markets

Main markets	*India (in %)*	*China (in %)*
US	1.05	12.51
EU	1.48	9.34
Japan	0.57	19.68
ASEAN	1.05	7.39
Source: WTO		

China is a large exporter and its product diversification is high as compared to India. Morgan Stanley Research Group has made relative comparison of the two countries for the year 2002. It reveals that China is miles ahead as compared to India. The following table - 5.10 gives a relative comparison:

Table - 5.10
China and India: Competitiveness in Exports-2002

	Share in Global Exports		*China x times of India*
	China (in %)	*India (in %)*	
All Merchandise Exports	5.0	0.8	6.6
Agricultural products	3.2	1.2	2.6
Mining products	1.9	0.9	2.2
Ores and other minerals	5.6	3.3	1.8
Non-ferrous metals	3.5	2.4	1.5
Manufactures	6.2	0.8	7.6
Iron and steel	2.3	2.7	0.9
Chemicals	2.3	0.8	3.1
Automotive products	0.4	0.1	3.8
Office machine & Telecomm Equipment	9.0	0.1	104.5
Textiles	13.5	4.1	3.3
Ready made garments	20.6	3.1	6.5
Other manufactured products	6.4	0.7	8.5
Source: Morgan and Stanley Report, 2004.			

[18] WTO (2004), world Trade Report.

A study by Sadhana Srivatsava and Ramakrishen Rajan[19] estimates the Export Revealed Comparative Advantage indices for manufacturing sector exports of India and China over a period of 1987—98 reveals that India continues to have a comparative advantage in exports in unskilled labor-intensive manufacturing goods particularly, textiles, textile yarns, clothing and accessories. However, even in this category, while China has increased its specialization and expanded its share in world exports, it has also gained a comparative advantage in technology—intensive goods and improved its capability in production and exports of components. India could benefit from exporting those necessary inputs for production of many labor-intensive products in this sector, competition is unlikely in the areas of office machines and data processing machines, as India is not a major producer or exporter of these products. The only sector in which some competition could emerge between India and China could be unskilled labor-intensive goods, namely textiles and clothing. Using further disaggregates data within textiles and clothing sector, Shafaeddin[20] finds that China's competitive strength is outer garments whereas India's exports are concentrated in textiles and non-knitted undergarments. This indicates that the possibilities of competition in the manufacturing sector appear limited, suggesting greater complementarities. However, it may be worthwhile to look into a detailed disaggregating data on exports of both the countries.

Third Market Competitiveness of India and China

The US, the EU, Japan and ASEAN countries are major destinations for both Indian as well as Chinese products (table - 5.11). The US is the main export destination for both the countries and followed by the E.U. and Japan is an important market for China. Therefore, in these markets, China is a

[19] Sadhana Srivatsava and Ramakrishen S. Rajan, (2003), What Does Economic Rise of China Imply for ASEAN and India? Focus on Trade and Investment Flows.

[20] Shafaeddin, S.M.(2002), Impact of China's Accession to WTO on the Exports of Developing Countries, Working paper 160, UNCTAD.

Table - 5.11
Major Export Partners for India and China, 2003

India's Partner	*Share*	*Rank*	*China's Partner*	*Share*	*Rank*
USA	22.73	1	USA	28.07	
China	7.03	2	China, Hong Kong SAR	17.38	2
United Kingdom	5.80	3	Japan	12.98	3
China, Hong Kong SAR	5.25	4	Germany	4.86	4
Germany	4.85	5	Rep. of Korea	3.77	5
Japan	3.60	6	France	2.58	6
Belgium-Luxembourg	3.30	7	United Kingdom	2.41	7
Italy	3.14	8	Canada	2.28	8
France	2.74	9	Netherlands	2.02	9
Rep. of Korea	2.04	11	Singapore	1.90	10
Netherlands	1.87	14	Italy	1.86	11
Indonesia	1.10	24	Australia	1.60	13

major competitor for India. As the trade block, the ASEAN is important to both the countries. To have a clearer picture we shall look into these markets individually. We have selected a list of products that have at least 0.25 per cent market share for India in these markets.

India and China in the U.S. Market

India and China compete in the U.S. markets in 50 product lines (at 6-digit level). India has an advantage over China in 24 product lines and China in 23 product lines. The share for each product for the years 1999 to 2003 were examined. India has an advantage in following group of products. They are : 1) Food items (2 product lines), 2) Fish and Fish Products (1 product line), 3) Cotton fabric (1 product line) 4) Insecticides and perfumes (2 product lines), 5) Carpets (2 product lines), 6) Granite and stones (3 product lines), 7) Diamond, jewellery and precious stones (3 product lines), 8) Cast articles (1 product line), 9) Steel (1 product line), 10) Table kitchen articles (1 product line), and 11) made up and other articles of cotton (8 product lines).

India has a clear advantage over China in cashew nuts, cotton fabrics, carpets of wool and yarn, cotton made-up products for women and girl's

dresses, granite and stones, diamond, jewellery and semi-precious stones and cast articles. Even in these product lines, China's competition is intense in carpets of wool and animal hair, women's and girls dresses of cotton bed linen of cotton, table kitchen linen of cotton, terry toweling, worked granite, worked slate articles, cast articles, table and kitchen articles, China's share in the products are on the rise.

Similarly, China has an advantage over India in the following group of products: 1) Rubber, leather and footwear products (6 product lines), 2) Clothing (10 product lines), 3) Carpet (1 product lines), 4) Articles of steel, iron and other metals, (3 product lines), and 5) Light engineering products (3 product lines)

China has a clear advantage over India in product lines such as leather products and leather apparel, women and girls man made fibre products, women and girls dresses (not of cotton), curtain drapes (not cotton), made up articles of textiles, footwear products, steel products, articles of iron and steel, base metal products, and articles of bedding and non-electrical items. China faces intense competition from India in products lines such as pullovers and cardigans of cotton, cotton women and girls garments, curtain drapes of catton and finishing articles.

In selected items, China appears to be leading in many products by a large margin. It is particularly true for garments, steel and iron products, footwear and light engineering products. It is also evident that both India and China compete in labor-intensive commodities. Competition in resource-based product lines is few.

India and China in the Japanese Market

India and China compete in the Japanese market in 76 product groups (6-digit). 5-years time series data is available only for 30 product groups. For the scrutiny, we selected only 35 products. It was found that India has an advantage over China in 16 groups of commodities. They are broadly clubbed under the following categories: 1) shrimps and prawns frozen, 2) chromium ores and concentrates, 3) titanium ores and concentrates, 4) heterocyclic compounds, 5) combed cotton, 6) combed cotton yarn, 7) curtain drapes, 8)Diamonds and Jewellery, and 9) Steel flat rolled products.

In the product groups such as castor oil, iron ore, chromium ores and concentrates, combed cotton, combed cotton yarn, and diamonds, India's position is strong. However, the competition is intense from China in product lines such as in carpets of yarn, curtain drapes and cotton table linen.

Similarly, China has an advantage over India in 19 product lines. They are grouped as follows: 1) Marine produces (2 product lines), 2) Tea (packed), (2 product lines), 3) Soybean oil cake, 4) Yarn of combed wool, 5) Women and girls dresses of cotton, 6) Men's' dress of cotton, 7) Cotton table linen, 8) Furnishing articles, 9)Worked granite, 10) Precious and semi-precious stones, 11) Ferro chromium, 12) Primary Manganese dioxide, and 13) Parts and accessories for radiation apparatus.

The competition is intense from India in product groups such as marine products, tea, cotton table linen, cotton furnishing articles, precious and semi-precious stones and parts and accessories for radiation apparatus. India has lost major proportion of soybeans oil cake market in Japan to China whose share is on the rise. Many new products such as pharmacy, perfumes and insecticides, salt, terephthalic acid, heterocyclic compounds, pig iron and machinery and x-ray tubes are entering into Japanese market from both the

countries where the competition is getting intensive. China has as distinct advantage over India in Japanese market for a large number of products. This is also evident from the volume of trade with Japan.

India and China in ASEAN Market

There are 87 products, which have at least 0.25% share of that year export basket, that India has exported to ASEAN countries in any of the years between 1999 to 2003. For 11 products, we have the data of Indian exports to ASEAN countries for all the five years. Out of these 11 products in 10 products, India has greater market share than China. These products are: 1) Bovine cuts boneless and frozen, 2) Diamonds (jewellery) worked but not mounted or set, 3) Onions and shallots, fresh or chilled, 4) Ground-nuts shelled, not roasted or cooked, 5) Penicillins, derivatives, in bulk, salts, 6) Pig iron, non-alloy, <0.5% phosphorus, 7) Soya-bean oil-cake and other solid residues, 8) Jewellery and parts of precious metal except silver, 9) Flat rld prod/coils>3mm, 10) Aluminum unwrought, not alloyed. Only in product group, parts and accessories of data processing equipment nes, China has greater market share.

If we limit ourselves for the year 2003, there are another 23 products, in which we have data. Out of these 23 products, in 19 products, India is has greater market share than China. These products are: 1) Castor oil or fractions not chemically modified, 2) Diamonds industrial, worked, 3) X-ray tubes, 4) Raw sugar, beet, 5) Precious & semi-precious stones, nes, worked, not set, 6) Shrimps and prawns, frozen, 7) Copper cathodes and sections of cathodes unwrought, 8) P-xylem, 9) Refined sugar, in solid form, nes, pure sucrose, 10) Wheat except durum wheat, and meslin, 11) Rectangular i/nas bars, <.25%C, width< twice thickness, 12) Benzene, 13) Aluminum unwrought, alloyed, 14) Insecticides, packaged for retail sale, 15) Woven fabric >85% polyester staple fibres, nes, 16) Table/kitchen articles, parts, stainless steel, 17) Kerosene, for

furnaces 18) Diesel oils- No.2 furnace, marine diesel, 19) Flat rolled products/coils>3mm. In four products, China is having greater market share than India. These products are: 1) Bovine and equine leather, nes, 2) Petroleum oils & oils obta, 3) Motorcycles with other than a spark ignition engine, and 4) Bars & rods, circular cross. Therefore, another 43 products was exported to ASEAN countries by India in previous years. Out of these 43 products, three products were exported to China by India in all the 3 years of 2000, 2001 and 2002. Out of these 3 products, India has greater market share in: 1) Menthol, 2) Cotton yarn >85% single uncombed >714 dtex, not retail. In static converters, nes China is having greater market share. In the remaining 40 products, in another four products, India has exported to China for the year 2001, 2000 and 1999. In addition, in all of them, India has greater market share than China. These products are; 1) Shrimps and prawns, frozen, 2) Castor oil or fractions not chemically modified, 3) salt (sodium chloride) including solution, salt water, and 4) Precious & semi-precious stones, nes, worked, not set.

India and China in EU Market

Following 0.25 per cent criteria, for the year 2003, we have selected a product list, consisting of 78 products that India has exported to European Union (EU). In 45 products, India has greater market share than China whereas in 33 products China is having greater market share than India. If we take a broader product classification, then India and China are competing for greater market share in leather and textile products.

In textile sector, in 19 products (at 6 digit level), India has greater market share than China. On the other hand, in 16 products (at 6 digit level), China is having greater market share than India. In readymade garments product group, China has greater market share than India in most of the products at 6-digit level. In 14 products of readymade garments group China

has greater market share, whereas, in 9 products India has greater market share.

In leather and leather products, India is has greater market share than China in four products at 6 digit level. In addition, in another four products China is has greater market share. Out of these products, in raw leather India has greater market share than China. On the other hand, in leather products China is has greater market share in most of the products. In another sector auto ancillaries though India and China is have similar per centage of market share, the market share in EU, itself is very low.

To compare with the previous years, data, we found that United Nations Commodity Trade Statistics has provided the data for the year 1999 and 2001 by treating European Union as a group. Applying 0.25 per criteria to select the products, we found only 28 products for the year 1999 and 25 products for the year 2001. It is too low in number. Therefore, it has made us skeptical about the proper reporting of these data. Therefore, we have not taken any inter-temporal analysis for India and China's competitiveness in EU market.

Chapter 6

Role of FDI in Foreign Trade

After 1997 East-Asian financial crisis, as short run capital flows are perceived to be very volatile, FDI has become most wanted source of foreign capital inflow by the policy makers in the developing countries to continue the globalization process. In the scheme of structural adjustment programme for Globalisation, foreign direct investment helps the host countries by supplementing the domestic capital resources (The under lying assumption is all the countries are suffering from supply constraint). Besides, FDI may provide modern technology, improves worker and managerial skills and helps to boost exports because of the foreign firms well-established brand names and access to global markets. Thus, a large number of developing countries are seeking FDI inflows. World FDI flows in 2004 estimated to be $ 612 billion of which China attracted $ 62 billion (10.13 percent of the total flows) as compared to $ 6 billion by India. From 2001 onwards total FDI flows have declined but the volume of inflows of China however, has increased and China become the second large recipient of FDI that is next only to the US ($ 121 billion). The UNCTAD Inward FDI Performance Index[1] places China on 37th rank and India on 114th rank. China is a small recipient of FDI relative to its GDP, even though it dominates the developing world as an FDI host. The global expansion of investment flows is driven by more than 60,000 multinational enterprises with over 80,000 affiliates abroad. China has been particularly active and successful in attracting large inflows of FDI from top MNC's. Since the beginning of its reforms in 1979 the volume FDI in China is

---

1 The UNCTAD Inward FDI Performance Index is a measure of the extent to which host countries receive inward FDI. The index ranks countries by the amount of FDI they receive relative to their economic size, calculated as the ratio of a country's share in global GDP. Value greater than one indicates that the country attracts more FDI in proportion to its economic size; a value below shows that it receives less (a negative value indicates that foreign investors disinvest in that period). Thus, a higher index implies success in competition, explicit or implicit, to attract FDI.

on the rise except at the time of Asian financial crisis. The total actual FDI stock reached US $ 545.029 billion, covering about 10 percent of China's total asset investment. The volume of FDI inflows into China and India is given in table below (Table - 6.1).

Table - 6.1
FDI Inflows into China and India

(in billion US $)

Year	*China*	*India*
1989-94 (average)	13.591	0.394
1995	35.849	2.144
1996	40.180	2.591
1997	44.237	3.613
1998	47.751	2.614
1999	40.319	2.154
2000	40.715	2.319
2001	46.878	3.403
2002	52.743	3.449
2003	53.905	4.269
Source: World Investment Report of various years, UNCTAD		

Foreign direct investment in China began in 1979. Until 1991, the amount of both contractual and actual investment was small. Most of the FDI came from small and medium-sized enterprises in Hong Kong and were highly concentrated in Guangdong province. Productions of foreign invested enterprises were overwhelmingly export-oriented and had a little link with the domestic economy[2]. The "take-off" FDI took place in 1992. In the next nine years, annual contractual investment increased from $11.98 billion in 1991 to $ 62.38 billion in 2000. The total amount of cumulative contractual and actual investment reached $ 676.10 billion and $ 348.35 billion respectively by 2000.[3]The share in total exports contributed by foreign-invested enterprises increased from 16.75 percent in 1991 to 47.93 percent in 2000. The share in total imports contributed by foreign-invested enterprises increased from 26.5 per cent in 1991 to 52.1 per cent in 2000. The share of foreign-invested enterprises in total industrial output values increased from 5.29 percent in

2 Naughton B (1996), China's Emergence and Prospects as a Trading Nation. Economic Activity,2, Brooking Institution.

3 Ministry of Foreign Trade and Economic Cooperation (2001). Statistics on FDI in China, 2001.

1991 to 22.51 percent in 2000. The share of actual FDI in total capital inflows increased from less than one half in 1991 to 80 percent in 2000.

Throughout the period of 1979-2000, Hong Kong has been the most important source of FDI in Mainland China. It contributed 48.50 percent of the total cumulative contractual investment and 48.89 percent of the total cumulative actual investment respectively. Other important sources of FDI include the US (8.96 percent), Japan (5.74 percent), Taiwan (7.07 percent), and Singapore (5.23 percent) of cumulative contractual investment. East Asian economies dominate FDI to China. Combined together they contributed over 65 percent of both total cumulative contractual and actual investment. The dominant position of Hong Kong can be attributed to several factors. They are: Hong Kong is geographically adjacent to Guangdong province where the first and most important special economic zone Shenzhan is located. In the 1980's the economy of Hong Kong developed to a level, which made the transfer of export-oriented labor-intensive manufacturing industry to the Mainland China with cheap labor, became profitable. This is consistent with the typical "flying Geese Paradigm" of international division of labor. Particularly, since 1992, much of investment from Hong Kong represented a recycling of capital from Mainland China, which sought to take the advantage of preferential treatment given to foreign investors[4]. In the recent years there has been a continuous decline of investment share of Hong Kong, which seems to indicate that the transfer of export-oriented labor-intensive manufacturing industry from Hong Kong to Mainland China entered a "saturation" stage. To some extent, Taiwan has been treading the same path that Hong Kong followed in the fashion of the Flying Geese Paradigm with a time lag. In 1992, both contractual and actual investment from Taiwan saw rapid expansion. However, the growth did not last long. The contractual investment witnessed a sharp decline in both 1994 and 1997and increase

[4] Lardy N.(1996), Role of Foreign Trade and Investment in China's Economic Transformation, in A. Walder (ed) China's Transitional Economy. Oxford: Oxford University Press.

resumed in 1998. Although the overall investment pattern of investment from Taiwan is similar to that of Hong Kong, there is an important difference between the two. In the early period, the investment from Taiwan was similarly dominated by export-oriented labor-intensive manufacturing industry, however, from mid 1990's onwards, the investment from Taiwan rapidly expanded to technology-intensive sectors, particularly to IT sectors. So, it can be expected that as the Taiwan authority relaxes the constraints on investment to the Mainland, there will appear a new wave of investment from Taiwan.

FDI from the US followed a steady pace of increase since 1992 and the EU followed a similar path. After 1997, the US remained the second largest investor in China. The relative increase in investment shares of the US and EU might be explained by the following factors. First, investment aimed at the export-oriented labor-intensive manufacturing industry from Hong Kong and Taiwan entered a stage of "saturation". Second, the South East Asian financial crisis seems to have adverse effects on the capital outflows from Hong Kong, Taiwan and Singapore. Third, the significant slow down of growth in China since 1995 caused a decrease of investment in real estate from Hong Kong. Fourth, the investment from the US and EU was basically concentrated on capital-and technology-intensive sectors, which started at relatively low level.

In the past two decades, the sectoral distribution of FDI has witnessed important changes. In the early reform period, the investment was mainly concentrated on labor-intensive manufacturing industry (light industry) and real estate. From 1990's onwards, it rapidly extended to almost every field of the economy. By 2000, industry and services accounted for 60.87 percent and 37.31 percent of total and cumulative contractual investment respectively. In 2003, manufacturing sector received 69.03 per cent of total FDI inflows, whereas, service sector has received 24.23 per cent of total FDI inflows. Throughout the 1990's, the manufacturing sector and real estate are the two

big recipients of investment Basically, the pattern of sectoral distribution was determined by the relative importance between manufacturing industry and real estate. Overall there appeared a big fluctuation between the relative share of industry and services (see table - 6.2).

Table - 6.2
Distribution of Cumulative FDI by sectors as of 2000

($ 100 million)

Sector	*No. of Projects*	*Share in %*	*Contractual Value*	*Share in %*
Farming, Forestry, Animal Husbandry and Fisheries	10355	2.85	123.1	1.82
Industry	265609	72.99	4115.34	60.87
Construction	9059	2.49	196.91	2.91
Transport, post and telecommunications	4027	1.11	163.86	2.42
Wholesale, Retail Trade, Catering Services and Storage	18410	5.06	233.96	3.46
Real Estate and Public Utilities	37252	10.24	1594.43	23.6
Health Care, Sporting and Social Welfare	1030	0.28	47.73	0.71
Art, Film, Radio and Television	1336	0.37	21.33	0.31
Scientific Research and Polytechnic Services	2510	0.69	21.24	0.31
Others	14297	3.93	242.17	0.31
Total	363885	100	6760.97	100
Source: MOFTEC, 2001.24				

In the early reform period of 1979-1986, FDI was highly concentrated on services, especially, real estate. The ratio of cumulative FDI in services during this period was nearly 70 percent. The ratio of FDI in real estate in total actual investment was 33.5 percent in 1984 and rapidly rose to 48.6 percent in 1986. After this period, the share of industry gradually increased. In the period of 1989-91, the industry share kept at the high level of 80 percent all the time. However, the acceleration of growth in 1992 attracted a huge share of investment to real estate and its share increased to 39.3 percent in 1993. By 2000 the share dropped to a low level of 8.4 percent. But by 2003 its share has increased to 9.79 per cent. In the meantime, the industry share declined to 46 percent in 1993 and begun to increase and reached a high level of 71.8 percent by 2000. The share of FDI in services is largely influenced by real estate. Initially it was thaught that the reason behind the high skew

towards real estate in the services sector is the policy constraint. In such sectors as banking, insurance, wholesaling and retailing, FDI is severely restricted in geographical locations, business scope, etc. But after 2001, there is a substantial opening up of these sectors for FDI. Even then the contribution of real estate, in per cent, has gone up for the year 2003 in compare to the year 2000 (See the table - 6.3).

Table - 6.3
Distribution of Sectoral FDI Inflows into China, 2003

($ millions)

Different Sectors	*FDI Inflows into China*	*Per Cent Share in FDI Inflows into China*
Agriculture Forestry, Animal Husbandry and Fisheries	1001	1.87
Mining	336	0.63
Manufacturing	36936	69.03
Utilities	1295	2.42
Construction	612	1.14
Transport, post and telecommunications	867	1.62
Wholesale, and Retail Trade	1116	2.09
Banking and Insurance	232	0.43
Real Estate Management	5236	9.79
Social Services	3161	5.91
Health Care, Sporting and Social Welfare	127	0.24
Education ,Culture and Arts, Radio, Film and Television	58	0.11
Scientific Research and Polytechnic Services	259	0.48
Other Sectors	2269	4.24
Total	53505	100
Source: National Bureau of Statistics, Reproduced in "2005 Investment Climate Statement – China" of USA consulate, Hongkong		

Within the manufacturing industry, the distribution of FDI also witnessed some systematic changes since 1992. In the whole of the 1980's, the FDI was mainly concentrated on traditional labor-intensive manufacturing industries, particularly textiles and garments. After 1992, the increase of FDI gradually shifted to capital-and technology-intensive sectors, especially chemicals, machinery, transport equipment, electronics and telecommunications. In the second half of 1990's, while FDI in traditional labor-intensive manufacturing industries saw stagnation, the IT industry became a new focus of investment. For example, in the period of 1997-2000,

while the amount of contractual investment in textile only witnessed a minor increase (from $ 1.14 billion to $ 1.99 billion), and the actual investment underwent an absolute decline (from $ 1.86 billion to $1.37 billion), the amount of both contractual and actual investment in electronics and telecommunications saw rapid expansion. The former increased from $ 3.94 billion to $ 11.36 billion and latter rose from $ 3.15 billion to $ 4.59 billion.

FDI in China started in the four Special economic zones in 1979-80 and gradually extended to other coastal areas and inland areas. By 2000, FDI could be seen in all parts of China apart from Tibet. The southeast coastal area dominates the inward FDI throughout the reform period. The share of the eastern region always remained at the level of over 85 percent of actual investment and only underwent some minor changes in the late 1990's. The geographical factors indicate that stable concentration of export oriented FDI in the coastal area. On the other hand, the much bigger local markets, much better industrial and human capital bases as well as the infrastructure of the East helped to attract proportionally more domestic market-oriented FDI. Now, the cities such as Shanghai and Jiangsu attract more FDI. Much investment in Shanghai was directed at speculative real estate, investment in Jiangsu was mainly concentrated in manufacturing industry.

In the course of FDI, the modes of FDI have witnessed some systemic changes. The basic pattern is that first, in the early period of reform, contractual joint venture and joint exploration investment played a dominant role; after 1986, equity joint venture and wholly foreign-owned enterprise investment replaced contractual investment to become the main forms of FDI; second, for most of the period of time, equity joint venture occupied a dominant position; however, since 1990's the share of wholly foreign invested enterprises gradually increased, and furthermore, the foreign controls in joint ventures also increased. Only after 1986, FDI became a normal commercial activity, which led to equity joint ventures and wholly foreign owned

enterprises to become the main forms of investment. By 1990, in both contractual and actual investment, the shares of contractual joint ventures and wholly foreign-owned enterprises exceeded that of contractual joint ventures and joint exploration. This was partly due to the difficulty in doing business alone in China and partly due to the encouragement of the Chinese government; the investment mainly took the form of equity joint ventures. This pattern began to change after 1990s. From 1998 onwards, the share of wholly foreign owned enterprises in contractual investment exceeded that of equity joint ventures. Altogether, contractual joint ventures and wholly foreign-owned enterprises contributed nearly 80 percent of both total contractual and actual investment[5]. There are several reasons for this new trend. First, as foreign investors become more familiar with the Chinese investment environment, they are more willing to do business independently. Second, this form is conducive to the technology monopoly of foreign investors, which becomes more and more important in the highly competitive Chinese markets. Third, after the mid-1990s, the fund-raising difficulties encountered by the Chinese firms enabled foreign partners to increase their equity shares through increasing reinvestment. A related fact is that except for a few sectors, the Chinese government gave up the restrictions on foreign control in joint ventures.

FDI may help to promote exports. In China, exports by foreign-invested enterprises (FIE's) have grown rapidly. In 1986, the share of FIE's in total export been only 1.88 percent. However, as the trade of FIE's grew faster than China's total foreign trade, the ratio of FIE's in total trade steadily increased and it expanded to 12.58 percent in 1990. By 2000, this ratio further increased to 47.93 percent.[6] By the end of 2003, it has become more than 50 percent of total exports. Prior to 1991, the production of FIE's in the manufacturing industry

5 Ministry of Foreign Trade and Economic Cooperation (MOFTEC), Statistics on FDI in China, 2001.

6. Ministry of Foreign Trade and Economic Cooperation (MOFTEC), 2001. Statistics on FDI in China, 2001

been overwhelmingly export-oriented.[7] From 1996 onwards, the export ratio of FIE's kept within the range of 40 to 45 percent (see table below). The share of imports from FIE's in China's total imports followed a similar pattern. In 1986, the import of FIE's was only 5.60 percent and by 1990 it increased to 23.06 percent and it further increased to 52.10 percent in 2000. In 2003, the FIE's constitued 56.2 per cent of imports and 54.8 per cent of exports[8]. The import ratio exceeded the export ratio during the time. FIE's exports are more import intentensive than the indigenous sector. In fact, throughout the period of 1986-1997, FIE's were net importers instead of net exporters. In 1998, FIE's recorded trade surplus for the first time (see table - 6.4). In this sense, FIE's were not net suppliers of foreign exchange prior to 1998.

Table - 6.4
Share of FIE's in China's total Exports and Imports

(in billion $)

Year	*Exports*		*Imports*	
	Values	*Share%*	*Values*	*Share%*
1981	0.33	0.15	1.1	0.5
1982	0.53	0.24	2.76	1.43
1983	3.3	1.49	2.88	1.35
1984	0.69	0.26	3.99	1.46
1985	2.97	1.08	20.64	4.89
1986	5.82	1.88	24.3	5.66
1987	12.08	3.07	31.22	7.22
1988	24.56	5.17	57.47	10.4
1989	49.13	9.35	87.96	14.87
1990	78.14	12.58	123.06	23.07
1991	120.47	16.75	169.08	26.5
1992	173.59	20.42	263.75	32.73
1993	252.37	27.5	418.33	40.24
1994	347.13	28.69	529.34	45.8
1995	468.76	31.51	629.43	47.65
1996	615.06	40.71	756.04	54.46
1997	749	40.98	777.21	54.59
1998	809.62	44	767.17	54.71
1999	886.43	45.48	858.72	51.82
2000	1194.4	47.93	1172.7	52.1
Source: Customs Statistics of China, various years				

[7] Naughton B. (1996), China's Emergence and prospects as a Trading Nation, Economic Activity, 2, Brooking Institution.

[8] K.C. Fung, Trade and Investment among China, the US and the Asia- Pacific Economies: Invited Testimony of the US Congressional Commission, Revised, April 30, 2005. 108 congress second session, U.S. govt. Printing Office, Washington D.C.

The participation of FDI in trade is closely associated with processing trade. It is a special category of trade in which firms in China import duty-free materials, components and parts for processing or assembly and subsequently re-exports. Since the early 1990's processing trade grew very fast. The ratios of processing exports and imports in total exports and imports jumped up from 27.2 percent and 30 percent in 1988 to 45.1 percent and 48 percent in 1991, further increased to 49.5 percent and 59.3 percent in 1995[9] respectively, and then kept around the half of the total exports and imports. By 2000, they were 55.3 percent 41.1 percent respectively.[10] FIE's constitute the main force driving the rapid rise of this particular category of trade. In 1995, FIE's already occupied the largest portion of processing trade. By 2000, the exports and imports of FIE's further increased to 70.63 percent and 74.05 percent respectively. On the other hand, process trade was also the main trade content of FIE's. In 1995, processing exports accounted for 90 percent of FIE's exports and in 2000, it still remained at a high level of 81.4 percent. The import share was at relatively smaller level of 58.45 percent. Apart from the special policy treatment of processing trade, the ease of utilizing cheap labor in China, organizing production and getting investment back within a short period of time also provides strong impetus for the engagement of FIE's in processing trade. An important advantage, which FIE's enjoyed compare to their Chinese competitors, is the international market access they have. This explains why FIE's able to maintain a lead position in arena of foreign trade.

China's Foreign trade was based on dualistic trading regime. Chinese trade policies affect different type of traders in different ways. The most open part of the trading regime is labeled as "export processing" regime. Under this regime, exporters are permitted to bring imported inputs into the country duty free and with a minimum of administrative interference and regulation. The adoption of this trading regime was closely associated with a welcoming policy toward FDI in export-oriented sectors. Creating an open trading

9 Naughton (1996)
10 MOFEC, 2001

regime was a necessary to attract export-oriented producers from Hong Kong, Taiwan and near by Asian countries that were seeking to relocate due to rising wages and costs. As a result, the EP regime is closely associated with FIE's. There is no necessary logical or legal reason why the EP regime is limited to FIE's, but in practice the association is fairly close. FIE's enjoy privileges under the EP regime. The growth of FIE and EP exports reflects increasing Chinese participation in the complex division of labor among Asian economies. Initially pioneered by textile and garment producers, now, EP trade has become increasingly important in electronics and telecommunications equipment. FIE exports are nearly all manufactured goods and almost half are electronic or machinery products. Multinational firms integrating China into their operations have begun with simple labor-intensive manufacturing steps, but gradually expanded their operations to include other more demanding processes. Links with domestic firms are growing in complexity and sophistication. The typical FIE exporter is small and more likely to be a subsidiary of a Hong Kong or Taiwan company. But in all these cases, manufacturing in China and exporting from China became attractive to the extent that manufacturers are also able to move components and supplies quickly and cheaply in and out of Chinese facilities. Chinese production sites are links in production chains of great complexity, dispersed across both sides of the Pacific Ocean. During most of the 1990's, the actual operation of the EP regime was even more open than the formal legal provisions indicated.

In contrast to the EP trade regime is the ordinary trade (OT) regime and is conducted primarily by trading companies, which until1999 were all state-owned. Manufacturers may also receive trading rights, but these are generally limited to exporting their own products. Importantly, importers are limited to a specific designated set of trading rights, or "scope of operation". Thus, there is always implicitly a degree of conditionality limiting the ability

of importers to import.[11]. There are strong incentives to restrict competition and allow non-economic objectives to interfere with market forces. The OT regime has not shown high growth in recent years. Though OT regime was net exporters, it has increased just 4 percent between 1995 and 1998 and OT imports did not increase at all. This quite change from the situation up until 1995. In the earlier period, OT trade was growing significantly and since 1995, OT exports have bounced up and down and display no significant growth trend. Exports dropped in 1996 due to problems with the export tax rebate program and then rebounded in 1997 and since then it on decline, with some degree or up and down till 2003.

Chinese policy makers from 1995 onwards, undertook the gradual reform of the policies by unifying the rules and regulations of both the trade regime. In part, this intention was driven by the perceived need to adopt "national treatment" in the event of WTO membership. In part, it was due to increase the tax revenues and close tax loopholes. There has been a consistent effort to reduce separateness and special privileges of the EP system, while increasing the openness of the OT system. There has been a concerted effort to unify regulations, particularly by reducing tax breaks given to the FIE's. However, these initiatives have been relatively unsuccessful. The government was not able to combine best of both the systems. Despite efforts to tighten up the EP regime and open up the OT regime differences between them persist. The shocks of Asian financial crisis had reduced the bargaining power of China with foreign investors, increased their vulnerability to import surges (due to exchange rate changes), and decreased demand for their exports. This made it much harder to implement policy changes smoothly, and in line with governmental objectives.

The government was tightening up regulations for the EP, it was moving forward with measures to liberalize the OT regime. These measures were clearly related to China's desire to join the WTO. The important

---

[11] For more on trading companies see Will Martin, "The Role of State Trading" in Federick M. Abbot(Ed) China in the World Trading System: Defining the Principles of Engagement, Kluwer Law International, Boston:1998.

measures include lower tariffs for manufactured and agricultural products and expanded grant of trading rights, including trading rights to some joint ventures and private companies. More and more private domestic Chinese firms were licensed to engage in some kind of export or import business with the passage of time. Second measure was the phasing out of some non-tariff barriers. However, despite these measures, not all movement was in the direction of liberalizing and unifying the trading regime. Largely because of external and internal economic shocks, policy changes in the trading regime were in consistent and sometimes unsuccessful.

The FDI has contributed substantially to recent export expansion of China. This export expansion is comprised of the growth of exports by MNEs and by domestic firms, which have benefited from absorbing "market access spillovers". The exchange rate is the most important factor, which influences Chinese exports. The FDI has contributed to the upgrading of China's export structure. This is evident from the increasing share of manufactured goods and of capital and technology intensive goods. Not all FDI has been found to promote China's exports. Investment from Asian emerging economies and Japan have contributed more to Chinese exports, while investment of other national origins, including the US and the EU, do not seems to be significantly linked to the export growth of China. Manufactured not primary products have dominated export expansion of China, and that there is an increasing share of capital and technology intensive goods in exports. However, China's exports of manufactured goods still consist mainly of products with low value added and a low complement of technology. Such products include textiles, garments, shoes and low value electronics and machinery. China's policy of supporting export-oriented FDI may have had some side effects for the economy. Foreign invested firms engaged in export processing generate less local value added unit of output than do domestically owned firms engaged in similar activities. This could result from a lesser use of locally sourced inputs as compared with their host country counterparts. For example, there is evidence that 40 percent of foreign invested firms in Guangdong province source nothing in China. Another consequence of this policy is that China

may have, to some extent, restricted FDI from greater integration and competition with the local economy. Foreign invested firms largely engaged in export processing are not well integrated into the mainstream of the Chinese economy. This may be the novelty of Chinese model. On the one hand they have exposed their industries to the outside world to gain knowledge about improved technology, management techniques etc. On the other hand it has given a buffer to breath and survive from the foreign competitiors and develop themselves to become competitive in world market.

As compared to China and some of the developing countries, India was one of the lowest recipients of FDI until 1970s. During this period, the cumulative inflows of FDI were about $ 454 million or 0.2 percent of gross domestic investment (GDI). The factor responsible for this low level of FDI inflows were mainly due to restrictions on foreign equity share holding which were limited to the maximum of 40 percent under FERA, lengthy approval process and restrictions on foreign participation in many areas. Although absolute value of FDI rose in 1980s over the 1970s, its share in GDI remained constant. It was only in 1990s that India experienced significant inflows of foreign capital both in FDI and portfolio capital, which amounted to 1.7 percent of GDI. However, India's shares in global FDI remain less than 1 percent compared with China's share of 12 percent. Indeed, China received a cumulative inflow of $ 480 billion since 1990 compared with $ 33.1 billion in India[12] (For the year-wise comparison see table - 6.1).

[12] It is difficult to compare FDI flows into between the two countries because of the definition of FDI. In India FDI includes only equity flows and it does not confirm to the IMF definition. The revised definition includes three categories of capital inflows. They are: a) equity flows (equity in branches, share in subsidiaries and other capital contributions); b) reinvested earnings (retained earnings of foreign subsidiaries and affiliates); and c) inter-company debt transactions between associated corporate entities. The Chinese system of reporting is much more broad based. Apart from equity capital, reinvested earnings, inter-corporate debt transactions, it includes short and long term loans, trade credits, bonds, grants, financial leasing, investment by foreign venture capital funds, earnings of indirectly held enterprises, non-cash equity acquisitions, and control premium. It also includes project imports as FDI flows, which in India are recorded as imports. The broader coverage system has resulted in upward revision of annual FDI inflows for the year 2000-01and 2001-02 by $1.7 billion and 2.2 billion respectively, representing an average, a 70 percent increase over the previous reported data. As per the RBI, FDI inflows for the full year 2003-04 have been estimated at $ 4.5 billion, which are slightly lower than that of $ 4.7 billion recorded during 2002-03.

The sectoral distribution of FDI is changing in India. In the early 1990's engineering, chemicals and allied products and electronics and electrical equipment were the main areas of FDI and they accounted for 54 percent of total FDI flows and towards the end of the decade their share declined to 40 percent and share of computers and services begun to rise. By 2003-04, their share increased to nearly 40 percent. FDI flows into engineering sector have remained stable in recent years. There is a substantial FDI flows in computer segments, this is largely in consonance with buoyancy in export growth in that sector. Empirical studies in the Indian context suggest a lagged feedback effect from export growth to FDI. On the other hand, FDI inflows into the software sector continued to exhibit a downward trend despite the robust export performance of the software sector. FDI inflows into the services sector declined to $ 431 million from the peak of $1128 million in 2001-02, in spite of high growth in services domestically and sustained exports of professional and commercial services (see table - 6.5). Ever since 1992-93, except the engineering sector all other sectors showed variance over the years.

Table - 6.5
Sectoral Distribution of FDI

($ million)

Sector	*2003-04*	*2002-03*	*2001-02*	*1992-93 to2000-01*
Chemicals and allied products	46 (3.15)	53 (3.20)	67 (2.24)	1581 (51.0)
Computers	151 (10.33)	297 (17.91)	368 (12.31)	787(25.40)
Engineering	274 (18.74)	262 (15.80)	231 (7.73)	177(5.71)
Electronics and Electrical Equip.	103(7.04)	95 (5.73)	659 (22.05)	103(3.32)
Finance	4(0.27)	54(3.25)	22(0.74)	69(2.22)
Food and Dairy products	63 (4.31)	35(2.11)	49(1.64)	63(3.03)
Pharmaceuticals	79(5.40)	44(2.65)	69(2.31)	28(0.90)
Services	431(29.48)	509(30.70)	1128(37.75)	73(2.36)
Others	311(21.27)	309(18.64)	395(13.22)	223(7.20)
Total	1462	1658	2988	3099
Source: RBI, Annual Reports				

Mauritius emerged as a main source of FDI in 1994-95 due to double taxation agreement between the two countries and resultant tax concession offered in that country. The FDI from Mauritius touched a figure of $ 900

million in 1997-98 and thereafter it touched a peak level of $ 1863 million in 2001-02. Although Mauritius continues to be the single largest source of FDI into India, its relative significance has been declining. FDI from Mauritius declined sharply during 2002-03 and 2003-04, constituting 26.1 percent of total FDI flows as against 62.3 percent in 2001-02. The bulk of FDI was channalized into services, computers (hardware and software), and engineering industries from 1992-93 to 2003-04 (liberalization period), the share of Mauritius accounts for 36.6 percent whereas the FDI from the US amounts to 17.9 percent of total FDI during the liberalization period. However, the FDI from the US has shown declining trend in recent years. Similar is the case with Japan, France and Singapore (See table - 6.6).

Table - 6.6
Foreign Direct Investment-Country-wise

(million $)

Country	*1992-93 to 2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05 (provisional)*
Mauritius	4384.8	1863	534	381	820
U.S	2574.7	364	268	297	469
U.K	373.3	45	224	157	84
Germany	765.9	74	103	69	143
Netherlands	655.8	68	94	197	196
Japan	1011.8	143	66	67	122
France	33.8	88	53	34	44
Singapore	172.9	54	39	15	64
Switzerland	84.0	6	35	5	64
South Korea	532.2	3	15	22	14
Others	2887.8	280	227	218	300
Total	13,477	2,988	1,658	1,462	320
Source: RBI Annual Reports, various years					

Export-orientation in FDI

Export-oriented FDI (which does not have crowding out effect on export oriented domestic industries) can be an important means of expanding manufactured exports for developing countries. It can help to improve the quality and competitiveness of manufacturing industries. China has been successful in attracting huge export-oriented FDI inflows in recent years. The significant role-played by the FIE's demonstrated the export-orientation of

FDI in China. For instance, the value of export goods of FIE's to total value of export goods was 44.07 percent in 1998 and it went up to 50.06 percent in 2001. China has pushed up the MNC share in exports from 17 percent in 1991 to 45 percent in 1999 to around 50 percent in 2001 as compare to mere 3 percent of exports by MNC affiliates in India. China is able to attract foreign direct investors to provide capital and expertise to achieve export competitiveness in wide range of sectors, including electronics, apparel, plastic toys, stuffed animals, ceramics and many other labor-intensive sectors. In each sector, the key was to link foreign investors capital and expertise with a large and low cost Chinese labor force. The foreign investors brought in the product design, specialized machine tools, capital goods, key intermediate products and knowledge of world marketing channels. The Chinese assured these foreign investors certain key conditions for profitability, such as low taxes, reliable infrastructure, physical security, and adequate power, decent logistics for import and export of goods. The manufactured exports as a percentage of exports have always shown a rising trend reaching around 90 percent in 2001 (see table - 6.7 below). With in the manufacturing an export about 57 percent was the chemicals, light and textile industrial products, machinery and transport equipment, minerals and rubber products. A substantial proportion of these exports, particularly in the mechanical and electrical product sector were contributed by the MNC's.

Table - 6.7
Value of Exports of Commodities in China 1991, 1995 to 2001

(in 100 million)

Year	*Primary goods*	*Munfacturing Goods*	*Total Value of Exports*	*Munf. Goods as % of total Exports*
1991	161.45	556.98	718.43	77. 53
1995	214.85	1272.95	1487.80	85. 56
1996	219.25	1291.23	1510.48	85.49
1997	239.53	1588.39	1827.92	86.90
1998	204.89	1632.20	1837.09	88.85
1999	1999.41	1749.90	1949.31	89.77
2000	254.60	2237.43	2492.03	89.78
2001	263.53	2398.02	2661.55	90.10
Source: China Statistical Year book, various years.				

Focus of FDI in India is mainly on sectors such as infrastructure, power, capital goods and food processing. Among these sectors many of them do not fall under export activities. Till the year 2000, only one fourth of the total approvals were directed towards major exporting sectors like textiles, chemicals, pharmaceuticals, leather goods, transport equipment, metallurgical and food processing industries. Over the years, China has become a dominant exporter in machinery, transport equipment and engineering products, India lags very much behind China in export of these products. A substantial proportion of FDI in case of India has gone to services, infrastructure and relatively low technology intensive consumer goods manufacturing industries. It has been largely oriented exploiting India's domestic market and very little to export-oriented production. As much as 40 percent of FDI in the late 1990's in India has also taken the route of acquisitions rather than green field ventures, which generate favorable development effects. In contrast, FDI is concentrated in export-oriented and high technology manufacturing industry in China. A large proportion of FDI has come from the green field ventures. It is due to this fact, FDI accounts for over 45 percent of China's manufactured products and as much as 80 percent of high technology exports. To some extent, the export-oriented production model is being replicated in India in the services sector where MNC's are either subcontracting software development and other business processes to Indian service providers or setting up their own subsidiaries.

Several studies have found that FDI in India have not entered the export-oriented industries and have little impact on the exports of India[13]. Further, the FDI in Indian manufacturing has been domestic market-oriented

[13] Aggarwal A(2000), Liberalization, MNE affiliates and Export Performance: Evidence from Indian Manufacturing, Working paper series No.19/2000, Institute of Economic Growth, New-Delhi and Siddharthan N S and Nollen S (2000), Export Performance and Strategic Group of Firms: The Role of Foreign Collaboration and Knowledge Transfer, Paper presented at the annual conference of the Academy of International Business, Phoenix, Arizona, U.S, November 17-20,2000.

and not efficiency seeking nature. However, it has been argued[14] that the FDI has effected to some extent export diversification in non-traditional industries. (But in this paper no distinction was made between FDI for mergers and acquisions and FDI for greenfield projects.)

Export-oriented industries can be fostered through the creation of different types of special economic zones. East and South-east Asian countries have utilized export-processing zones (EPZs) and other forms of special economic zones (SEZs) to attract foreign investment and initiate the process of manufacturing export-led growth. These zones have attempted to carve out a geographical zone in which profitable export activities can be conducted. They do enjoy exemption from many regulations, tax laws and labor standards that more generally within the country. In general, relatively successful industrial policies have had a few common characteristics. First, they have aimed to promote exports, rather than to protect the domestic market; second, subsidies to be provided on the basis of successful performance (example is the growth of exports) rather than to cover losses; and third, they have been temporary rather than permanent subsidies (for example, a five year tax holiday for new export firms).

At the center of China's strategy to attract investors and to develop China as a major platform for labor-intensive manufacturing exports were the SEZs in which favorable export conditions were assured. The urban export-oriented enterprises in China were encouraged by the designation of a growing number of SEZs, coastal[15]open cities and economic and technological

---

14 Banga Rashmi (2003), The Differential Impact of Japanese and U.S. Foreign Direct Investments on Exports of Indian Manufacturing, Indian Council for Research on International Economic Relations, New-Delhi.

15 In the early years of the reforms beginning in 1979, China began coastal development policy, resulting a marked shift in term so of producing for export. Coastal, urban-based industry can serve both the internal market and the international market, can more rapidly make logistical links with foreign suppliers and customers than interior based enterprises. New export-oriented units are therefore heavily concentrated on the coast. Manufactures in interior regions can of course service the domestic market, particularly in consumer goods such as processed foods, but the potential for rapid growth based on the internal market tends to be more limited than the growth based on exports to the world market.

development zones, all designed to encourage manufacturing exports. These SEZs, along China's coastline, were designed to give foreign investors and domestic enterprises favorable conditions for rapid export promotion. All key aspects of the export environment were secured. Exporters, for example, were allowed to import intermediate and capital goods duty-free. They were given generous tax holidays. The exporters were assured decent physical infrastructure, often through the provision of land, power, physical security and transport to the ports, within specially created industrial parks. China has demonstrated through its own experience that creation of SEZs attract substantial FDI for the export sector.

In 1980, the Chinese authorities set up Shenzhen SEZ, the first of its kind in the country. Now, China has five SEZs. Of these, four-Shenzhen, Xiamen, Shantou and Zhuhai-were established 20 years back and the fifth, Hainan, was set up in 1988. All the SEZs had unique locations. Shenzhen (near Hong Kong), Shantou (a major home of oversea Chinese) and Zhuhai (near Macao) are in Guangdong province. The other SEZ, Xiamen in the Fujian province, is near Taiwan. The last was set up in the Hainan islands in 1988. Setting up these zones close to internationally reputed commercial destination was basically provide easier access to foreign investments, modern technology and management expertise. The strategic locations of these SEZs perhaps explain the alacrity FDI by the expatriate Chinese since the 1980s. The locational advantage of these SEZs attracted foreign investors that spurted FDI in China-with Hong Kong accounting for about 60 percent of the total inflows. Initially, the majority of foreign investors were NRCs from Hong Kong who were engaged in trading. Later, MNCs started investing in technology-oriented sectors even as China liberalized its foreign investment policy further to attract modern technology. The Guangdong province, which has the largest number of SEZs, became the most attractive foreign destination. In 2001, over 25 percent of China's FDI flowed into Guangdong.

The SEZs have helped in devising the right quantum of infrastructure required to sustain a defined quantum of population. This ensures that there is no unnecessary load on the infrastructure, as the population grows unbounded. The SEZs and other special areas were akin to the EPZs that have been used in other parts of Asia as of their initial export-led growth. Most joint ventures and wholly owned foreign companies operating in China qualify for corporate tax holidays and reductions because they are engaged in production, are located in a special incentive zone or technologically advanced or export-oriented. These zones are in direct competition with each other at both the domestic and international level. Minimum bureaucracy, quality infrastructure, and generous tax holidaysfor manufacturingunits typically mark them.

India also had similar models of EPZs and Export-oriented units (EOU). EPZs are located at various places including Cochin, Falta (near Kolkata), Kandla, Chennai, Noida, Santacruz (Mumbai), Vishakhapattanam, and Surat. The units can be set up in these zones subject to availability of space. Incentives provided to attract investment in these areas were zero import duty, a special 10-year income tax rebate and other incentives. But these eight special zones failed to achieve export targets[16]. In April 2000, the government of India introduced a new SEZ scheme. The scheme allowed for converting some of the existing EPZs into SEZs to provide an internationally competitive and hassle free environment[17] for export production and also attract export-oriented FDI. The Export/Import Policy of 2000 (chapter 9 para 30) defined SEZ as a specially delineated, duty free enclave deemed to be foreign territory for the purpose of trade operations and duties and tariffs. Units may be set up in SEZ for manufacturing of goods and rendering of

[16] The eight EPZs in India have contributed a meager Rs 85.52 billion in exports (4.3 percent of total exports) in 2001. That one of the reasons for failure was the poor quality of infrastructure and other facilities is evident from the fact that the government invests only Rs 170 million annually in seven of the government owned EOUs.

[17] SEZs are areas where export production can take place free from plethora of rules and regulations governing imports and exports. The objective is to bypass the bureaucratic hurdles, high tax levels and the inherent problem of poor infrastructure.

services. All the import/export operations of the SEZ units will be on self-certification basis. The units in these zones have to be net foreign exchange earner but they shall not be subjected to any pre-determined value addition or minimum export performance requirements.

The setting up of an SEZ unit was made open to any private, public, joint sector or state government. There would be no customs and excise duties, automatic approval for all items barring select ones on the negative list. Up 75 percent of earnings of the company units in SEZs could be retained in foreign exchange. The infrastructure and management in those zones were envisaged to be provided by private promoters. The units within SEZs are planned to declare as public utility services so that sudden strikes are not permissible. All supplies going into the SEZs from the domestic markets will be duty-free, where in reverse the domestic sector will have to pay the equivalent amount of taxes as applicable in similar imports. The units operating in these zones have full flexibility of operations and can import duty free capital goods and raw material. The movement of goods to and fro between ports and SEZs are unrestricted. The government has converted EPZs located in Kandla, Surat, Cochin, Santa Cruz, Falta, Madras, Visakhapattanam and Noida into operating SEZs. SEZs are approved for establishment at Kanpur, Bhadohi (U.P), Indore (M.P), Kulpi (West Bengal), Paradeep and Gopalpur (Orissa), Dahej and Mundra (Gujarat), Dronagiri (Andhra Pradesh), Kakinara (Kerala) and Naguneri(Tamil Nadu).

India like China, is also offering a host of incentives to boost FDI at the SEZs such as duty-free imports, tax holidays, freedom from customs procedures, etc. In the Exim Policy 2002-07 as well as in the budgets of 2002 a comprehensive package was drawn up for attracting foreign investments in SEZs involving fiscal concessions, export incentives etc for both SEZ developers as well as SEZ units. Units operating in these trade zones will be provided with additional incentives and given more flexibility in their

operations, such as flexible labor laws. Not only will the government provide them the necessary infrastructure but also they would be able to import raw materials duty-free and would also be able to access those from the domestic tariff area (DTA) without payment of terminal excise duty. Within the SEZ, no permission would be required for inter-unit sales or transfer of goods. The share of SEZs in total exports in 2001 was 10.5 percent in China, whereas the corresponding figure for India in 2001-02 was 4.4 percent[18]. Hence the question that remains is whether the generous offering of incentives is by itself enough to ensure greater investment flows. In other words, merely switching from EPZs to SEZs, without undertaking the required structural changes, can success of SEZs be guranteed. EPZs and SEZs are different in size-while former is an industrial estate; the later is an industrial township. In China, each SEZ is well over 1000 hectares, the minimum recommended area. In India, EPZs converted into SEZs are not even a third of recommended size. Among the converted EPZs, the one in Noida is the largest but extend only 310 hectares. The Santa Cruz Electronic Export Processing Zone (SEEPZ), the first SEZ is only 93 hectares. Another ingredient of infrastructure is the availability of power at competitive rate. Apart from cheap power, there is no power failure in China, as in India. Moreover the concept of minimum demand (minimum amount paid whether or not power is used) for power is non-existent in China, as in India. Also bank interest is less than 4 percent in China as against about 12 percent in India.

Commensurate with their size, the scope of SEZs are much wider and their linkages with the domestic economy stronger. SEZs provide supportive infrastructure such as housing, ports, roads and telecommunication and as a result, have wider industrial base. Compared to EPZs, SEZs give more in terms of exports, industrial growth. Investments, both domestic and foreign, and employment generation. Hence, undertaking the required structural changes in terms of supportive infrastructure becomes mandatory to ensure

[18] Majumder S (2003), SEZS: Go the Chinese Way, Business Line, May 07.

success of SEZs. The conversion of EPZs into SEZs can be successful if SEZs are carved out with the recommended size and dedicated infrastructure to provide uninterrupted power supply. For instance, with such a small areas of SEZs in India, the requisite infrastructure and service required of an SEZ cannot be created nor multiple economic activities. Decentralization of decision-making authority was also a major reason for SEZ success in China. Provincial and local authorities were made partners and stakeholders, by delegating to them powers to approve foreign investment. The SEZ authorities in China can approve foreign investment proposals up to $ 30 million. In India, until recently, only State governments are allowed to set up SEZs[19]and powers for foreign investment approvals are vested with the Development Commissioners, who are the representatives of the Central Government. In China, the major responsibility for the SEZs rests with the local and provincial governments, whereas in India, the responsibility remains with the Central Government. Since the year 2000, India has begun to put in place SEZs, similar to those in China, and federal and state governments are engaged in the process. India's success with the EPZs has been limited in attracting FDI, at least till the mid 1990's. India's EPZs have not performed well as compared to China's SEZs for many reasons, including:

- Limited scale and overcrowding of units in the EPZs.
- Insufficient logistical links with ports and airports
- Poor infrastructure in areas surrounding the zones
- Government ambivalence and red-tape for FDI
- Unclear incentive package governing inward investment, and
- Lack of interest and authority of state and local governments.

China is today the largest destination of FDI. But the paradox is that its investment climate is not liberal in all directions. For example, China's FDI policy is still relatively restricted in terms of FDI forms, foreign ownership

[19] As per the 2000 EXIM Policy of India, SEZ can be set up by private sector, joint sector as well.

shares, access to certain activities and performance requirements. China's laws and regulations unambiguously stipulate that foreign investors can choose from among three different forms to invest in China-contractual joint ventures; equity joint ventures; and wholly foreign-owned enterprises. A comprehensive study by the OECD titled China in the World Economy in 2002 has said that despite China's continued priority of FDI with advanced technology, there remain restrictions on the organizational forms of FDI entry. There are 31 industries that do not allow the establishment of wholly foreign-owned enterprises, and 32 sectors in which the Chinese partners must hold majority share holding or a dominant position.[20]

In stark contrast to China, FDI in India is freely allowed in all sectors, including the service sector, subject to where the notified sectoral policy does not permit FDI beyond a ceiling. FDI for all items/activities could be brought in through the automatic route under the power vested with the Reserve Bank of India (RBI) and, for the remaining items/ activities, through government approvals. Through the policy atmosphere in China for attracting FDI is more stringent relative to that of India, what is that still makes the China favored destination of foreign investors, enabling it to gain FDI in unmatched volume year after year? Basic features that help attract FDI to China, besides a stable political structure, include lower commodity and utility prices, lower import duties on raw materials (13 percent as against 24 percent), higher labor productivity (1.6 to 5 times in different segments) and low capital requirements.[21]Efforts to improve investment climate in China have been augmented since 1998 when it stepped up its effort to encourage foreign investments in technology development and innovation and initiated a transformation from low to hi-tech industries. Several tax incentives have

[20] Industries where Chinese partners must have majority shares include coal-mining, design and manufacture of civil aero planes, construction and management of oil and gas delivery pipelines, as well as oil depots and oil wharves, printing and publishing, development and production of grain, cotton and oilseeds, domestic commerce, foreign trade, medical institutions and repairs, designing and manufacturing of special high performance ships, and ships at or above 35000tonnes.

[21] Nair G K (2003), Does the Economy Really need FDI?, Business Line, January, 12

been offered to lure foreign investors. Equipment and related technology, components and spares brought into China by the foreign invested research and development centers are exempt from import duty. Besides, China still uses fiscal and other fillips to encourage some specific types of investment-for instance, export-oriented and technologically advanced FDI-and to guide the flows into certain targeted regions and industries.

Foreign enterprises transferring advanced technology to China are exempt from both business and income taxes. Foreign invested firms that increase their technology funding by more than10 percent over the previous year are eligible to deduct 50 percent of the funds actually spent on technological development from their income tax dues. Further, the technology, equipment and components imported by foreign investors for upgrading enterprises considered high priority by the state are exempt from import duty. India lacks adequate incentives for new business promotion, which is in place in China. Also it lacks the productive human capital that China has due to its legacy of earlier planned regime. China attracts foreign investors not only by projecting its inherent strengths but also by creating congenial economic environment. In SEZs where business is regulated by independent authority, has been one of the major reasons for China's FDI successes. High priority was accorded to improve its power infrastructure, which was in shambles a decade ago, also helped. At present, China's power generating capacity is thrice of India's and its power tariff, only half as much. While the roads and railways are more extensively built in India, the number ports as well as sea freight is very small in India. Also the spread of telecommunications, which has become an indispensable part of globalization, is limited in India.

China has overtaken India in almost all measures of economic growth. CII-McKensay report said, it has completely "outdone" India in manufacturing. During the 1990s, China's manufacturing sector grew at 12.3

percent, where as India's grew at 5.1 percent. As a result, China's manufacturing sector became much larger than India's in terms of contribution to GDP per capita share ($ 1322 vs $ 381 purchasing power parity adjusted), the share of GDP (35 percent vs 16 percent) and to employment (95 million vs 45 million). China today has emerged as a major manufacturing base for the world in several products and has captured a large share of world trade in different products. It accounts for 29 percent of world trade in bicycles, 28 percent in toys, 25 percent in footwear and 20 percent in ready-made garments. In contrast, India's share of world trade is 2.2 percent in bicycles, 0.2 percent in toys, 1.7 percent in footwear and 3.8 percent in garments. China growth was fuelled not only by investment (both domestic due to high savings and FDI in directed areas and sectors by the State) but also by phenomenal growth in labor productivity, a due stress on exports, robust domestic demand fed by low prices and with quality consciousness being the byword of companies.

CII-McKensay study observes that subsidies, marginal pricing and poor accounting drive lower domestic prices in China. However, lower domestic prices are based on sustainable economic factors. The factors for lower prices include lower indirect taxes, lower import duties, higher labor productivity, lower capital costs and lower margins. In view of the inherent cost and factor advantages that China enjoys to an exceptional degree of the total FDI of $ 38 billion China received in 2000, $ 27 billion went to manufacturing sector. On the other hand, India received only $ 2.4 billion in FDI, of which manufacturing sector received little less than $ 2 billion. FDI played a key role in boosting China's exports, and foreign invested companies account almost 50 percent of China's exports in 2000. It is widely claimed that China's competitiveness is because of low wages. This is true when compared to those in Japan or the US-where it is 25 percent more. But vis-à-vis India, the wages are not that low, however, it is lower than that of India. But with much higher labor productivity, China enjoys the low wage windfall. Several factors

contributed to China's number one position in attracting FDI, including its market size, continued economic growth, stable political situation, sound investment environment and WTO membership. A survey undertaken by the CII cites some critical reasons for doing business with China. Among them important ones are: less documentation for companies setting up ventures, high level of decentralization between provinces and center in terms of attracting FDI, better infrastructure and communication facilities, most provinces do not need any central clearance when the FDI amount is not very high and companies get the approval with in six months[22]. However, there are problems such as language, lack of clarity of domestic regulations, complexity of legal machinery, lack of talents for some jobs and protection of IPR to name a few.

Indian Investment in China

The presence of Indian companies in China has increased significantly, particularly in sectors such as iron and steel, textiles, chemicals, automobile components, computer software and pharmaceuticals. Indian companies are active in services sector like restaurants, entertainment and banking. According to the Ministry of Finance, Government of India, total Indian investments approved by the Government during 1996-2004 (June) in China amounted to $ 96.5 million. According to the Chinese Ministry of Commerce, India has invested in 101 projects in China by the end of 2003 and actual investment was $ 79.1 million. In 2003, 30 new projects involving about $15.9 million were undertaken. Among the Indian companies that have set up joint ventures or subsidiaries include pharmaceuticals companies like Ranbaxy, Aurobindo pharmaceuticals, Dr. Reddy's Laboratories and IT software companies like Aptech, NIIT, Tata Consultancy Services, Infosys. In manufacturing Sundram Fasteners Ltd for high tensile fasteners and Aditya

[22] Most companies get their approvals in less than six months. Over 60 percent of companies get the work done in less than six months while the remaining get in less than one year.

Birla Group for carbon black production, and Mahindra's for tractors have also set up base in China. Other companies present in China are Essel Group, Videocon and Asian Paints. There are many advantages of investing in China as compared to India. China imposes about 15 per cent less of indirect tax resulting in profit margin becoming higher by 5 per cent and productivity advantage is estimated to be 10 per cent more. Importantly, there is a large domestic Chinese market, which is quite tempting for any enterprise.

China is emerging as an important source of FDI in Asia as both state owned and private Chinese companies are starting to invest abroad. According to the Ministry of Commerce, China, Chinese companies invested $ 2.7 billion abroad in 2002. As per the Ministry of Commerce and Industry, Government of India during the period January 1991 to March 2004, India has approved Chinese FDI of $ 231.6 million. The approved investment has been slow in materializing as actual inflow has been only to the tune of $ 0.63 million. As per the Chinese Ministry of Commerce, the total quantum of Chinese investment in India till 2003 was about $ 20.6 million covering 97 Chinese proposals for foreign collaborations, mainly in telecom, metallurgical, transportation, electrical equipment and financial sectors. Chinese sources indicate that official figures might underestimate the actual investment, as some Chinese companies tend to invest before they declare their investment to the government. There is a need for reconciling the statistics of FDI inflows in India where Indian and Chinese sources diverge substantially. A part of the reason for discrepancy is the fact that some of the Chinese investments in India are routed through Hong Kong. Even after reconciliation of the figures, the existing bilateral investment flows between the two countries hardly represent the potential and synergies the exist between the two large and dynamic economies.

Chapter 7

India and China in AFTA

India and China, the two big Asian powerhouses would become the part of Asian Free Trade Area (AFTA) within a decade. Both the economies would provide a large market to the members of the AFTA. They will be joined by Japan and Republic of Korea. The move is clearly towards creating a "common Asian market". This trade block will eventually match the economic might of European Union and North American Free Trade Area (NAFTA). The ASEAN-China accord aims to remove all tariffs by 2010 drawing ASEAN's combined economies of $1 trillion closer to China's $1.4 trillion. India adds another $570 billion to this market. This strategic choice was made by both the countries in the interest of their own development and in the common interests of the Asian region. On its part, ASEAN has come to realize that strengthening of intra-regional cooperation alone will not help them and that there is need for greater integration with the two emerging economic powers of the region — China and India.

India's engagement with the ASEAN started with its "look East policy" in the year 1991. India became a Sectoral Dialogue Partner of ASEAN in 1992 and Full Dialogue Partner in 1996. India has been upgraded to summit level since 2002. India-ASEAN trade was about $9.76 billion in 2002-03. India's exports to ASEAN were $4.61 billion while imports came to about $5.15 billion in this period. Growth in India's exports to ASEAN in recent years has been much higher in comparison to other destinations. India's trade with the world in 2003 stood at $ 114.13 billion, ASEAN accounting for 8.56 per cent of India's global trade (see table - 7.1)

Table - 7.1
Relative importance of India's trade with ASEAN

(Figures in $ billion, for the year 2002-03)

India's total global trade—114,131.56	India's total trade with ASEAN—9,768.71	% share India's trade with ASEAN—8.56
India's total global exports—52,719.43	India's total exports to ASEAN—4,618.54	% share of ASEAN in India's exports—8.76
India's total global imports—61,412.13	India's total imports to ASEAN—5,150.17	% share of ASEAN in India's imports—8.39
Source: Export-Import Data Bank.		

In 2003, India signed a Framework Agreement for Comprehensive Economic Cooperation involving a Free Trade Agreement to be implemented over a 10-year period. The key elements of the Framework Agreement cover free trade area in goods, services, and investment as well as areas of economic cooperation. It provides for an Early Harvest Program (EHP), which covers the areas of economic cooperation and a common list of items for exchange of tariff concessions as a confidence building measure. The highlights of the agreements are:

A) FTA in Goods

- Negotiations to commence from January 2004 and to be concluded by 30th June 2005.
- Tariff reductions will start from 1st January 2006 and Most Favored Nations (MFN) tariff rates to be gradually eliminated. While India will eliminate tariffs in 2011 for Brunei Darussalam, Cambodia, Laos PDR, Indonesia, Malaysia, Myanmar, Singapore, Thailand, and Vietnam; Brunei Darussalam, Indonesia, Malaysia, Singapore and Thailand will eliminate in 2011 and new ASEAN member States, namely Cambodia, Laos, and Vietnam will eliminate in 2016 for India. India and Philippines will eliminate tariffs for each other on a reciprocal basis by 2016.

B) FTA in Services

- Negotiations to commence in 2005 and concluded by 2007.
- The identification, liberalization etc. of sectors of services to be finalized for implementation subsequently.

C) FTA in Investments

- Negotiations to commence in 2005 and concluded by 2007.
- Identification, liberalization etc. of the sectors of investment to be finalized for implementation subsequently.

D) Areas of Economic Cooperation

- The areas of economic cooperation include trade facilitation measures; sectors of cooperation; and trade and investment measures.

E) Early Harvest Program (EHP)

- Based on inter-Ministerial consultations and apex chambers of commerce, the items for EHP were finalized for exchange of concessions. The EHP covers the following schedules as specified in the annexes to the agreement: -

Annex-A (105 items)	Exchange of tariff concessions and elimination of tariffs on agreed common list of items based on full reciprocity between India and ASEAN-6 within three years. While India will remove tariffs on these items within three years for Cambodia, Laos, Myanmar and Vietnam, they will do so for India in six years.
Annex-B (111 items)	India's unilateral tariff concessions to Cambodia, Laos, Myanmar and Vietnam.
Annex-c	Possible Areas of Economic Cooperation.

The ASEAN-India TNC was constituted and three meetings have been held so far. It is undertaking negotiations to establish an ASEAN-India Regional Trade and Investment Area (RTIA) that include a Free Trade Area in goods, services and investment as per time-frame prescribed in the Framework Agreement. The TNC has finalized the modalities for progressive tariff elimination for EHP items and is discussing the Rules of Origin. The tariff concessions on these items commenced from 1st January 2005 and protocol to implement the EHP was signed in November 2004.

Besides concluding a Framework Agreement on Comprehensive Economic Cooperation with ASEAN, India also concluded sub-regional agreement with Bangladesh, Sri Lanka, Thailand and Myanmar. In 2004, Nepal and Bhutan became party to the agreement. This sub-regional grouping was renamed as BIMST-EC, involving the countries around Bay of Bengal. The agreement involves five SAARC (India, Bangladesh, Sri Lanka, Nepal and Bhutan) and two ASEAN (Thailand and Myanmar) countries. BIMST-EC is visualized as a ''bridging link" between the two major regional groupings,

namely SAARC and ASEAN. BIMST-EC is an important element in India's "Look East" strategy and adds new dimension with South East Asian countries. The first meeting of BIMST-EC held in Thailand in 1998 imparted new dimension to economic cooperation between member states. It was agreed that BIMST-EC should aim and strive to develop into a Free Trade Area, and should focus on activities that facilitate trade, increase investment and promote technical cooperation among member countries. It was further reiterated that BIMST-EC activities should be designed to form a bridge linking ASEAN and SAARC. Six areas were identified for cooperation in BIMST-EC, namely trade, investment, technology, transportation and communication, energy, tourism and fisheries. The Framework Agreement on the BIMST-EC FTA was signed in February 2004 in Phuket. The agreement includes provisions for negotiations on FTA in goods, services and investment. The main features are:

FTA in Goods: The negotiations for tariff reduction/elimination for FTA in goods shall commence in July 2004 and be concluded by December 2005. The negotiations will be held to finalize the negative list items, on which non-tariff concessions will be exchanged to begin with. Following the two tracks would be used for the tariff liberalization on rest of the items.

Fast Track: Products listed in the Fast Track by a party on its own accord shall have their respective applied MFN tariff rates gradually reduced/eliminated in accordance with specified rates to be mutually agreed by parties, within the following time-frame:

Countries	*For Developing Country Parties*	*For LDC Parties*
India, Sri Lanka and Thailand	1st July 2006 to 30th June 2009	1st July 2006 to 30th June 2007
Bangladesh, Bhutan, Myanmar and Nepal	1ST July 2006 to 30th June 2011	1st July 2006 to 30th June 2009

Normal track: Products listed in the Normal Track by a Party on its own accord shall have their respective applied MFN tariff rates gradually reduced/eliminated in accordance with specified rates to be mutually agreed by the parties, within the following timeframe:

Countries	*For Developing Country Parties*	*For LDC Parties*
India, Sri Lanka and Thailand	1st July 2007 to 30th June 2012	1st July 2007 to 30th June 2010
Bangladesh, Bhutan, Myanmar and Nepal	1st July 2007 to 30th June 2017	1st July 2007 to 30th June 2015

FTA in Services and Investment:

- For trade in services and trade in investments, the negotiations on the respective agreement shall commence in 2005 and be concluded by 2007.
- The identification, liberalization, etc. of the sectors of services/ investments shall be finalized for implementation subsequently in accordance with time-frames to be mutually agreed; (a) taking into account the sensitive sectors of the Parties; and (b) with special and differential treatment and flexibility for the LDC Parties.

The first TNC meeting was held in Bangkok in September 2004 where it finalized the terms of reference and work program for the year 2004.

In April 2002, India and Singapore set up a Joint Study Group (JSG) for establishing a Comprehensive Economic Cooperation Agreement (CECA). The JSG submitted its report in 2003 and identified areas of increased economic engagement between the two countries and recommend measures to be taken. The CECA is to be structured as an integrated package of agreement that will include:

- A Free Trade Agreement, which would include, *inter-alia* trade in goods, services and investment.
- A bilateral agreement on investment promotion, protection and cooperation.
- An improved Double Taxation Avoidance Agreement.
- A more liberal Air Services Agreement and Open Skies for Charter Flights; and
- A work program of cooperation in number of areas including health care, education, media and tourism.

The negotiations on CECA are being concluded in November 2004.

In 2001, India and Thailand set up a Joint Working Group (JWG) to undertake a feasibility study on free trade agreement. The JWG observed that the trade policy regimes in both the countries are quite conducive to more intensive bilateral economic integration and a Free Trade Agreement could prove to be a building block for other sub-regional, regional and global economic integration processes of which both countries are a part. A Joint Negotiating Group was set up to draft the Framework Agreement on India-Thailand FTA. During 2003, the Framework Agreement was signed in Bangkok. The key elements cover FTA in goods, services, investment and areas of economic cooperation. It also provides for an Early Harvest Scheme (EHS) under which common items of export interest to the sides have been agreed for elimination of tariffs on a fast track basis. The EHS list has been finalized through negotiations based on full reciprocity in terms of trade value between India and Thailand. For the period 2001-02, exports to Thailand on EHS items amounted to $33.3 million while imports from Thailand were to the tune of $38.5 million. The other highlights of the Framework Agreement are:

FTA in Goods

- Negotiations to commence in January 2004 and concluded by March 2005.
- Establishment of Free Trade Area (zero duty imports) by 2010.

FTA in Services

- Negotiations to commence in January 2004 and concluded by January 2006.

Areas of Economic Cooperation

- Areas of economic cooperation to include trade facilitation measures; sectors identified for cooperation; and trade and investment promotion measures

Early Harvest Scheme (EHS)

- Both sides have agreed to have a common list of items for exchange of tariff concessions.
- Tariffs on these items will be phased out in two years time-frame starting from March 2004. Since two sides were not able to finalize the Interim Rules of Origin in time, the implementation of the EHS had to be deferred.

The tariff concessions on 82 items of EHS list began from September 2004 with signing of the protocol. India-Thailand Trade Negotiating Committee (TNC) has been constituted to carry forward the program of negotiations as per the Framework Agreement.

With these regional, sub-regional and bilateral agreements, India's "Look East" policy reached a new peak. A target has been set for raising India's trade with ASEAN from the level of $13 billion to $15 billion by 2005 and $30 billion by 2007. At the summit, India has proposed the following initiatives:

- The offer of concessional lines of credit up to $200 million for collaborative projects with in the ASEAN countries.
- An Indian high speed optical fibre link
- Development of a net portal through with ASEAN members would be able to utilize a system called " Shurti Drishti" which India has developed for visually impaired persons to use the Internet.
- Joint R & D of medicines and cross border disease control.
- Cooperation in the field of agriculture and exchange of germ plasm and harmonization of regulatory mechanisms.
- Hosting a workshop to evolve a concept paper on Asian Economic Community, which would encompass India, ASEAN, China, Japan and South Korea.

With these agreements India and ASEAN are coming together on a number of issues such as regional trade and investment cooperation, regional security, science and technology and services. To realize the objectives of the ASEAN-India partnership and for its implementation, a plan of action has been worked out for the institutional and funding arrangements. The senior officials and Foreign Ministers of both the sides will review the progress

made in the partnership periodically. The ASEAN countries have realized the need for an alternative market as they are being overwhelmed by China and the fear of risk of being economically stifled by China at any time. Thus, India's overture has been welcomed by ASEAN and was keen on expanding its relations with India.

A proposal from Chinese Premier Zhu Rongji for ASEAN-China cooperation at the ASEAN+China Summit in November 2000 led to the formation of an ASEAN+China Expert Group and its 2001 report on "Forging Closer ASEAN-China Economic Relations in the 21st Century". The Report made the following recommendations:

- Establishment of an ASEAN-China FTA within 10 years, including special and differential treatment and flexibility for CLMV countries, and an "early harvest" package of mutually agreed list of goods to be liberalized ahead of implementation of China's commitment to the WTO;
- Wide range of trade and investment facilitation measures;
- Technical assistance and capacity building to ASEAN members, particularly to CLMV;
- Expansion of cooperation in the areas such as finance, tourism, agriculture, human resource development, small and medium enterprises, industrial cooperation, intellectual property rights, environment, forestry and forestry products, energy and sub-regional development.

At the ASEAN+China summit in November 2001, ASEAN and China agreed to launch negotiations for ASEAN-China FTA (ACFTA) and to establish it within 10 years.

The Framework Agreement on ASEAN-China Comprehensive Economic Agreement (ACCEA) sets out how both the sides will cooperate in trade and investment liberalization, facilitation and cooperation. (Table summarizes the main features of the Framework Agreement and time-frame agreed upon). The tariff will be reduced or eliminated by 2010 for ASEAN-6 (original members) and China and 2015 for CLMV (in consonance with the

deadlines for AFTA). Unlike the Japan-ASEAN CEP, the ASEAN-China FTA (ACFTA) comprises developing countries and could qualify under the WTO enabling clause for developing countries (as was the case for AFTA) rather than the more stringent GATT Article XXIV. Nevertheless, for trade in goods, ACFTA is committed to cover "substantially all trade". The tariff reductions have two tracks. Track one refers to the "early harvest", which covers a large group of agricultural products under HS1-HS8 and representing over 600 tariff lines (about 10 per cent of total), so that participating countries can benefit from increased liberalized trade before the actual FTA enters into force. Early Harvest products will have tariffs eliminated over 3 years, with effect from 1st January 2004. The Early Harvest products highlight that agriculture is not a sensitive sector in China as in Japan or Korea. Track two goods will have tariffs progressively reduced according to negotiated time-frame, with end dates of 2010 for ASEAN-6 and China, and 2015 for CLMV. The Framework Agreement also covers liberalization of services, investment and economic cooperation activities.

In recognition of different stages of economic development among ASEAN countries and the need for flexibility, especially the need to facilitate increasing participation of CLMV, there are provisions for strengthening their domestic capacity, efficiency and competitiveness. China agreed to participate in the accelerated implementation of sub-regional development cooperation in the Greater Mekong sub region, co-financing of the completion of the Singapore-Kunming Railway Link and to launch an IT training program for ASEAN. For trade in goods, negotiations commenced in March 2003 and ended in June 2004, with negotiations on the rules of origin completed by December 2003. For trade in services and investments, negotiations commenced in 2003 and will be completed on mutually agreed time-frames. For other areas of economic cooperation, implementation of commitments will be decided at speeds acceptable to both ASEAN and China. Differences among the ASEAN-10 economies also make it difficult to maintain a common

position in negotiations on trade liberalization. Protocol amendments to the framework agreement in October 2003 recognized this difficulty and contained provisions for separate bilateral negotiations between China and individual ASEAN countries. Bilateral negotiations between China and Thailand are already negotiated and similar is the case with Singapore. It is reported that China-Singapore bilateral will include using Singapore as a window to the outside world and Singapore encouraging more Chinese companies to be listed on Singapore stock exchange. Both China and Singapore place emphasis on completing ASEAN-China FTA negotiations before China-Singapore negotiations.

Summary of Framework Agreement on ASEAN-China Comprehensive Economic Cooperation

Target	To achieve an ASEAN-China FTA within 10 years, by 2010 for ASEAN-6 and China and 2015 for CLMV countries, with flexibility on sensitive commodities and special and preferential tariff treatment.
Measures for comprehensive economic cooperation	1. Progressive elimination of tariffs and NTBs in substantially all trade in goods. Tariff reduction and elimination will progress on two tracks, with a fast track Early Harvest within 3 years and a normal track by 2010 for ASEAN-6 and China and by 2015 for CLMV countries. 1(a) Early Harvest comprises agricultural products in tariff categories HS1-HS8, comprising live animals, meat and edible meat offal, fish, dairy produce, other animal products, live trees, edible vegetables, edible fruits and nuts. Tariff will be eliminated over 3 years, beginning January 2004. Tariff reduction schedule—tariffs greater than 15% in 2003 will fall to 10% in 2004, 5% in 2005 and 0% in 2006; tariff between 5-15 % in 2003 will fall to 5% in 2004 and 0% in 2005; tariffs under 5% will fall to 0% in 2004 1(b) For the normal track, tariffs will be eliminated and reduced in stages during 2005-2010 for ASEAN-6 and China, and 2005-2015 for CLMV. Exceptions or slower tariff reduction schedules will be allowed for sensitive products, but the number of products classified as sensitive will be limited. 2. Progressive liberalization of trade in services, with substantial sectoral coverage. 3. Establishment of open and competitive investment regime that facilitates and promotes investment within ACFTA. 4. Provision of special and differential treatment and flexibility to CLMV countries. 5. Provision of flexibility in ACFTA negotiations to address sensitive areas in the goods, services and

	investment sectors, with such flexibility to be negotiated and mutually agreed based on the principle of reciprocity and mutual benefits. 6. Establishment of effective trade and investment facilitation measures not limited to simplification of customs procedures and development of mutual recognition agreements. 7. Expansion of economic cooperation in areas that will complement the deepening of trade and investment links, and formulation of action plans and programs to implement the agreed sectors and areas of cooperation. Priority will be given to them. 8. Establishment of appropriate mechanisms for effective implementation of the framework agreement.
Rules of origin Time-frames and entry into force	Not less than 40% local content. Full cumulation on the final product not less than 40%. Product specific criteria and rules to be negotiated from January 2004. For trade in goods, negotiations on tariff reduction or elimination and other matters to commence in early 2003 and concluded by end June 2004. Negotiations on rules of origin for trade in goods to be completed by December 2003. For trade in services and investments, negotiations to commence in 2003 and concluded expeditiously on timeframes to be mutually agreed, taking into account sensitive sectors of ASEAN and China, and with special and differential treatment and flexibility for CLMV. For other areas of economic cooperation, ASEAN and China continue to build on existing and agreed programs, develop new economic cooperation programs and conclude agreement on various areas of economic cooperation. Early implementation in manner and pace acceptable to both ASEAN and China. Agreement to include time-frames for implementation of commitments. Entry into force of the Framework Agreement on 1st July 2003. Entry into force of the Protocol amending the Framework Agreement on 6th October 2003.
Source: Compiled from Framework Agreement on Comprehensive Economic Cooperation between the Association of Southeast Asian Nations and People's Republic of China.	

China's motivation in offering ACFTA is both political and economic. Politically, China wishes to remain on friendly terms with its neighbours on its southern front. ACFTA is part of confidence building that includes China's participation in the ASEAN Regional Forum and China's accession to the ASEAN Treaty of Amity. ACFTA is to alley ASEAN concerns that China poses a threat with its economic ascendancy by providing preferential access to its rapidly growing domestic market. China is also eyeing the ASEAN region for its various natural resources, particularly oil and its market of 560 million consumers. Closer economic relations with ASEAN will enable China

to build its geo-political clout in Southeast Asia and counterbalance the influences of Japan and the US. The swift progress of ACFTA has hastened Japan, the US, South Korea and India to propose economic cooperation arrangements with ASEAN as well. ASEAN governments welcomed China's initiative for a number of reasons. First, China is a huge and dynamic economy and its growing demand for ASEAN goods and services could serve as a new engine of growth. Chinese tourists are already a key factor in the growth of tourism in the region. ASEAN also looks to more Chinese investments as well. China's WTO entry will also mean a trading partnership based on international rules and discipline. Closer ASEAN-China economic ties will also enable ASEAN to reduce dependence on US, EU, and Japan. Second, China's offer of special treatment and development assistance for the CLMV group as well as extension of WTO most-favored-nation benefits to the non-WTO members of ASEAN has helped them to accept the China initiative more readily. Third, China and ASEAN will be able to go further than the WTO in liberalizing agricultural trade as Chinese temperate agriculture and ASEAN's tropical agriculture is complementary in many product areas. Thailand, in particular looks to accelerating agricultural exports to China. Nonetheless there are continuing concerns over the impact of preferential opening of ASEAN markets, as many ASEAN labor-intensive manufactures will not be able to compete with China on price.

ACFTA will create an economic region with 1.7 billion consumers, combined GDP of about $2 trillion, and combined trade of about $1.23 trillion. It will be the world's biggest FTA in population size. ACFTA is marketed as a "win-win" initiative. It aims at forging closer economic relation between China and ASEAN through lowering of trade and investment barriers and through joint technical and economic cooperation projects. The lowering of trade and investment barriers will result in an enlarged integrated market, promote specialization and trade according to the comparative advantage, and enable exploitation of scale economies, contributing to lower costs and

economic efficiency. Trade creation occurs when domestic production is replaced by lower cost imports from an FTA member, boosting regional income and welfare. However, there is also the cost of trade diversion, as some imports now are sourced from higher cost regional partners. In addition, there may also be welfare gains or losses due to terms of trade changes. ACFTA will also attract more investments both from regional investors as well as investors from rest of the world. Simulation study by the ASEAN Secretariat using the Global Trade Analysis Project (GTAP) model estimates the impact of tariff elimination under ACFTA on GDP and trade given in following tables - 7.2 & 7.3

Table - 7.2
Impact on Real GDP of ASEAN & China FTA

(in million $)

Country	*Real GDP*	*Increase*	*% Increase*
Indonesia	204,031.4	2,267.8	1.12
Malaysia	98,032.3	1,133.5	1.17
Philippines	71,167.1	229.1	0.32
Singapore	72,734.9	753.3	1.05
Thailand	165,516.0	673.6	0.41
Vietnam	16,110.9	339.1	2.15
China	815,163.0	2,214.9	0.27
US	7,120,465.5	-2,594.5	-0.04
Japan	5,078,704.5	-4,452.0	-0.09
ROW	14,657,026.0	-6,272.0	-0.04
Total	28,298,952.1	-5,706.9	-0.02
Source: ASEAN-China Expert Group, 2001.			

ASEAN exports to China will increase by $13 billion or 48 per cent, while China's exports to ASEAN will increase by $10.6 billion. Among ASEAN countries biggest gainers in exports are Indonesia, Malaysia, Singapore and Thailand. China's exports make inroads in the Philippines and Thailand ($3.1 billion each). However, both ASEAN and China see a reduction in their trade with the US, Japan and rest of the world. Hence the overall effect is a modest rise in exports, with ASEAN exports increasing only by $5.6 billion or 1.5 per cent from the baseline, and the biggest gainers in absolute terms being Thailand, Indonesia and Malaysia. China's exports rise by $6.8 billion or 2.4 per cent from the baseline. Sectorally, ASEAN's

Table - 7.3
Sectoral Composition of increase in ASEAN-China Export

(million $)

	Indonesia	*Malaysia*	*Philippines*	*Singapore*	*Thailand*	*Vietnam*	*Total*
Increase in ASEAN Exports to China							
Food	5.57	4.48	42.05	-1.27	129.56	-6.02	153.90
Vegetable oil	42.97	505.54	4.21	38.47	2.83	20.88	614.91
Other agri. Products	139.26	145.65	12.27	72.91	290.77	30.08	690.95
Extractive	55.91	25.72	52.18	18.86	9.89	12.28	174.83
Textiles and Apparel	735.35	465.62	68.54	101.93	1,698.77	9.39	3,079.59
Chemicals	94.75	186.37	14.54	369.29	164.89	9.05	838.90
Motor Vehicles	287.91	218.62	5.03	755.72	60.11	150.29	1,877.67
Electric Machinery	28.02	495.07	58.82	1,344.15	230.28	0.30	2,156.63
Other manufactures	1,281.84	773.63	77.34	948.33	323.73	44.50	3,449.36
Services	-4.34	-4.07	-4.17	-9.21	-3.06	-3.72	-28.58
Total	2656.09	3207.28	330.80	3639.18	2907.76	267.04	13,008.15
Increase in China Exports to ASEAN							
Food	8.75	163.54	82.93	117.12	115.82	31.96	570.12
Vegetable oil	2.39	1.64	0.67	6.09	10.67	0.10	61.56
Other agri. Products	31.08	11.47	14.47	80.36	40.32	5.00	182.70
Extractive	8.03	1.90	0.00	-0.68	13.54	0.23	33.03
Textiles and Apparel	02.76	307.61	622.66	58.62	669.89	240.71	2502.25
Chemicals	7.98	105.69	179.24	13.94	196.81	31.32	624.97
Motor Vehicles	4.44	45.67	173.97	54.82	357.69	50.78	757.37
Electric Machinery	14.31	361.36	813.43	12.15	794.09	80.26	2151.31
Other Manufactures	27.94	453.95	1169.78	329.84	742.79	499.15	3723.45
Services	.92	3.50	0.01	-4.02	-1.46	5.31	7.26
Total	371.60	1456.34	3057.17	643.94	3140.16	944.81	10614.02
Source: ASEAN-China Expert Group, 2001							

biggest gains are textiles and apparel, electrical appliances and machinery and other manufactures. Indonesia's exports of other manufactures to China rise by $1.3 billion. Singapore's exports of electrical appliances and machinery to China rise by $1.3 billion. Thailand's exports of textiles and apparel to China

rise by $1.7 billion. Sectorally, biggest gains for China are textiles and apparel, electrical appliances and machinery and other manufactures. Chinese exports of other manufactures to the Philippines rise by $1.2 billion. Its exports of electrical appliances and machinery to Philippines and Thailand rise by $0.8 billion and $0.7 billion respectively. China's exports of textiles and apparel make significant headway in the Philippines and Thailand. The simulation result suggests significant scope for intra-industry trade between ASEAN and China, especially textiles and apparel, electrical appliances and machinery and other manufactures. There are significant trade diversion effects on non-ACFTA trading partners. Impact on real GDP is positive on both the parties. ASEAN's GDP will increase by 0.9 per cent or $5.4 billion, while China's GDP will increase by 0.3 per cent or $2.2 billion, representing a total GDP increase of $7.8 billion. Among ASEAN countries, the biggest percentage increase will be enjoyed by Vietnam, while Indonesia will enjoy the biggest absolute increase. There are negative repercussions on other countries and regions.

To make the success of FTA with ASEAN in the lead, the ASEAN economies have to hasten the pace of their domestic economic reforms and restructure industries to maintain international competitiveness. Skills and technological upgrading have proceeded fast in Singapore, Malaysia and Thailand and others are lacking. The laggards will be vulnerable to competition from China and India in the domestic markets and export markets. The vision of ASEAN Economic Community by 2020 has been articulated and the roadmap being worked out. ASEAN is being wooed into FTA by China, India, Japan, Korea and the US, giving it a de facto hub status. However, only a unified ASEAN can negotiate from a position of strength and enjoy the hub status. Currently, such a unity is lacking. Participation in multiple and overlapping FTAs pose other issues for ASEAN. It has also to resolve the problems in proliferation of rules of origin, product standards and conformance requirements that splinter production and increase business transaction costs.

Areas of Further Cooperation

Over the years, concerted efforts have been made by the Indian and Chinese governments to improve their investment climate and this made them the preferred FDI destinations in the world. The leading global consulting firm A.T.Kearney Inc, in its survey for the year 2003 ranks China No. 2 and India No. 6 as most attractive destinations of FDI. Services sector investors ranked as the fourth most attractive destination. Huge domestic market, complementary characteristics of the two countries and improving political climate between the two countries will provide increased opportunities for bilateral investments.

Chinese enterprises may find opportunities for investment in India in sectors such as consumer electronics (TCL is investing $150 million to make televisions, DVD players and air conditioners), home appliances (Haier Group is planning to set up a factory), television assembling, power generation, electronic hardware, food processing and crop planting, coal, iron ore, office equipment, electric power machines as high press and low press switch, dynamotor, mechanical manufacturing of refrigeration equipment, plastic products, pharmacy, software, construction and infrastructure generation.

Indian enterprises may also find attractive investment opportunities in China in the areas of pharmaceuticals, auto components, light engineering goods, automotives, financial services, besides IT software and training. Energy cooperation between India and China is already under way. In 2002, India's Oil and Natural Gas Company brought a 25 per cent stake in Sudan's Greater Nile Oil field operated by China National Petroleum Corporation. Indian main gas distributor, GAIL India Ltd brought 9 per cent stake in China Gas Holdings and will set up a joint venture company in China to operate and manage Chinese city pipelines. This reflects an attempt by both the countries

to build a strategic partnership in energy supply. Tata Group is actively pursuing investment opportunities in the Chinese market. Tata Iron and Steel Company are interested in setting up a joint venture in China to ship intermediate steel products from India to China. Tata Motor is planning to import auto components and develop a joint venture to make auto products for Indian and Chinese markets. Tata Group is looking for properties in Shanghai for potential investment. The Chinese government has encouraged the four Indian software companies- TCS, Infosys, WIPRO and Satyam- to expand operations in China. A Sino-India cooperative office has been created to liaise with Indian software companies to help them to set up bases in China. In January 2004, the government of the Shenzhen Special Economic Zone signed an agreement with an Indian software company, Zensar technologies Ltd, to train 1000 Chinese software managers in India. Besides, a large software training company MIIT has set up 106 learning centres in China, training more than 25,000 Chinese software students.

Current indications are that economic ties between India and China are likely to grow rapidly. India with comparative advantage of high quality software design, the ability to communicate in English and skilled pool of labor, can gain by exporting and investing in technical services in China. In turn with modern infrastructure, more liberal labor relations, and its strong manufacturing sector, China can gain by exporting manufactured goods investing in India. The logic of the market will continue to draw the two emerging economies closer.

Chapter 8

Conclusion

Liberalization of foreign trade sector has been the cornerstone of economic reforms of the Indian and the Chinese economies. The big bang of Indian economic reforms began in 1991. The policies of opening up to the outside world started in China in 1978. India and China are often compared with each other because of the large size of their domestic economies. Both countries embarked on planned development almost at the same time with an emphasis on import substitution policies. In the beginning, the basic thrust of both the countries was on self-reliance, but later both turned towards market-oriented and outward-looking policies. Although India and China are natural benchmarks for each other, there are large differences between the two.

Over the years, China has been able to retain a positive balance in its external trade account with the exception of early 1950s and mid ─1980s. The share of China in world exports is higher than that of India; this is particularly true after the "open door policy" took effect. The overseas Chinese Diaspora had a profound and tangible effect on its economy. It brought skills and knowledge along with huge inward flow of investment. But, it was the existence of Hong Kong and Taiwan as a sort of surrogate that marks the main difference between India and China. Investments from Hong Kong and Taiwan have made major contribution to China's rapid growth of foreign trade after the open door policy. The advantage that China has in the existence of Hong Kong and Taiwan is unique and cannot be replicated. These factors helped China to a large extent surge ahead in foreign trade sector as compared with India.

In the contemporary world, both India and China are fast growing economies. They are expected to be the engines of global economic growth in the current century. In recent years, both the economies are developing closer economic relations with each other and concluding regional economic cooperation arrangements with other Asian countries. Now, the bilateral trade and investments are growing between the two countries indicating the presence of vast potential for growth. China is emerging as a critical link in the manufacturing chain while India's potential for knowledge based services and manufacturing is recognized. This complementarities strength of the two economies can be exploited for mutual gains. The large size of their economies and geographical proximity will facilitate exploitation of these synergies. In labor-intensive products, both countries are competitive. This would make them competitors in the global market.

China joined the WTO in December 2001. Its commitments to the WTO are massive. It has made commitments to open and liberalize its economic regime. It would offer predictable environment for trade and foreign investment. China has agreed to provide non-discriminatory treatment to all WTO members, elimination of duel pricing between domestic and export products, price controls, elimination of export subsidies on farm products, reduction in tariff duties and removal of non-tariff barriers to name but a few. The largest gainers are the advanced countries and newly industrializing countries of East Asia. Developing countries are the minor gainers. China herself is major gainer because of improved market access worldwide.

China's joining of the WTO has coincided with rapid rise of Indo-China bilateral trade. The two-way trade grew over 25 per cent per annum. Indian exports to China increased by 26 per cent and imports from China increased by 24 per cent during 2000─2004 periods. However, on the one hand, the share of India in China's global imports is around 1 per cent. On the other hand, import from China in Indian global imports is over 5 per cent. For

India, China is an important export destination but it cannot be said for China. Primary and resourced based products dominate the Indian export basket but now there are some signs of diversification. Chinese exports to India are more diversified and include resource based manufactures and low and medium technology based products. Major change in product composition of China's exports to India occurred in 2003 with the entry of large number of electric and electronic products. However, the product concentration remained stable during 1996–2003. This is evident from Hirschman Index. The Chinese exports to India are more diversified than India's exports to China. More of medium and high technology products dominate Chinese exports to India. Therefore, it appears that Chinese exports are more sustainable than India's exports to China.

The analysis reveals that an increase in Chinese import demand, product diversification and influence of competitiveness has contributed to rise in Indian exports to China. However, the influence of competitiveness has declined in recent years. In case of Chinese exports into India, the product diversification has played a major role. Other two factors are increase in Indian demand and competitiveness of Chinese products. This analysis is confined to those products whose share is more than 0.25 per cent of exports and imports. When all the products exported from India are taken, the competitive factor emerges as most important with 50 per cent changes in India's exports. Demand and diversification factors become relatively less important. Similarly, for China, increase in competitiveness is a major factor and it is followed by the demand factors.

The statistical methods employed, namely complementarity index, trade overlap index and Grubel-Lloyd index show that in Indo-China bilateral trade intra-industry trade plays minor role. The revealed comparative advantage (RCA) index value shows that India has an advantage over its competitors in primary products, natural resourced based or low technology

manufacturing products. India showed a comparative advantage over its competitors in the Chinese market in certain items of textiles, leather products, chemicals, engineering and granite. Advance and medium technology products dominate Chinese export basket to India. To enhance trade complementarities with China, India needs to diversify in these product lines. Given the current state of Indian industry, this appears to be a distant dream. The scope for intra-industry trade is limited and the option is to enhance inter-industry trade.

In the year 2003, in 22 products, India has more than 10 per cent of Chinese market share but none of these products enjoy substantial share in India's global exports. The most important product in India's exports to China is iron ore and steel products. It constitutes around 47 per cent of India's exports. This indicates high concentration of a few products. India enjoys a large market in China in 10 products. The RCA value is higher for these products indicating greater competitive advantage. In other 35 products, India does not have a large market share in spite of higher RCA value and lower unit prices compared to main competitors in the Chinese market. This is due to lower quality of the products, which is evident from the survey report. Except a few primary and resource based low technology manufacturing products, India's competitiveness is limited. Among the 45 listed products (more than 0.25 percent share in total Indian exports), in 44 products India has an export potential and in 31 products it has shown export dynamism. This clearly indicates there is a scope for enhancing exports in these products.

The survey of Indian export companies show that India largely exports non-branded products to China but branded products are increasing rapidly. Large companies export their own branded products, small, and medium sized companies, mostly, export non-branded products. Trade margin is sufficiently high for the products such as fish and fish products, marbles and

granites, iron ore, chemical products, natural rubber, leather and leather products, human hair for wig making, diamond, jewellery, silver products, coils, sheets, rolled products and stainless steel. In agricultural products, aluminum and zinc ores, paper and paper products, cotton yarn and fabrics, textiles, pipes and HR coils, engineering items, copper cathodes and rods, transmission shafts and auto components the trade margins are small and these products are subject to intensive competition in the Chinese market. India faces competition from Southeast Asian countries in the Chinese market. Mostly, Indian steel products are competitive in the Chinese market. It is difficult to make price and quality comparisons due to various grades of the product and subtle differentiation in product quality. Hardly any company has spoken about the presence of non-tariff barriers to trade. With the exception of one or two products, most of them expressed that their trade is sustainable and they are ready for increasing the volume of trade in the years ahead.

There are substantial complementarities with Indian imports and Chinese exports to India through inter-industry trade. Further, Chinese products are competitive in the Indian market. This is also confirmed by the survey of Indian manufacturing companies and trading houses. Trade margins are relatively high for large number of products imported from China, particularly electrical and electronic products. China has diversified its exports to India. An increasing number of companies are sourcing input supplies from China. This is due to lower prices, acceptable quality and prompt delivery. Over one-third of the companies surveyed opined that the Chinese products are as good as the domestic products or even superior.

With its entry into the WTO, China has emerged as a leading trading power in the global market. To meet its commitments to the WTO, it has reduced tariffs and removed most of non-tariff barriers. This would be highly beneficial to the Chinese economy. Other gainers are developed countries,

newly industrializing economies of Asia and least developed countries. South and Southeast Asian countries may be small gainers. This is due to similar kind of resource endowments and export trade structure. They would face severe competition in labor intensive and low priced products. Low wages are the main source of China's comparative advantage along with high labor productivity. China has developed a strong comparative advantage in assembly stage of technology/capital intensive products and processing trade for number of products. The supply of skilled labor is high in China, which increases its potential to produce skill intensive products. The competitive power of China indicates that the developing countries, which export labor-intensive products and assembly operations, will be subjected to "competition effects" of China than "complementarities effects". This may adversely affect developing countries of South Asia, Africa and South America.

China will intensify competition in developing countries domestic market. However, the safeguard measures and restrictions that are included in the protocol of accession of WTO may limit its ability to some extent. For all developing countries, including India, competition with China has intensified in the third markets for labor-intensive goods such as textiles, clothing, light manufacturing products, leather products and marbles and granites. The competition has intensified due to the abolition of textile quota in developed countries in 2005. China has made big impact in textile and garment exports.

Both for India and China, the major destination of exports are the U.S, the E.U., Japan and ASEAN. In these countries, China is the main competitor for India. In select product groups India showed competitive edge over China. In overall product groups, China is leading over India by a large margin, particularly in labor-intensive product lines in the U.S, the E.U, Japan and the ASEAN. India is relatively better positioned in the E.U. market. The export diversification of China is relatively high as compared to India in all

markets. This is particularly true for labor-intensive product lines, mainly textiles and garments.

China is a large recipient of FDI and it is successful in attracting huge export-oriented FDI. Foreign Invested enterprises played a significant role in export expansion of China. Share of MNC's is over 50 per cent in case of China as compared to mere 3 per cent for India. The Chinese government assured certain key conditions for profitability such as low taxes, reliable infrastructure, adequate power, and decent logistics for imports and exports, besides reducing tariffs and removal of non-tariff barriers. In contrast, India focused on infrastructure, power, capital goods and food processing. Among these sectors, many of them do not fall under export activities. In late 1990s over 40 per cent of FDI has taken the route of acquisitions rather than green field ventures. As opposed to this, FDI is concentrated in export-oriented and high technology manufacturing industry in China. Further, import duties are also high in India as compared to China. To some extent, the export-oriented production model is replicated in India in service sector, particularly in software development and business processes. The FDI in India has hardly entered export-oriented industries and has been domestic market-oriented and not efficiency seeking. The Special Economic Zones have contributed in a large measure to China's exports; however, it has not been the case with India. India and China have begun to invest in each other's economies. The current investment hardly represents the potential that exists between the two large economies.

India and China would become the part of Asian Free Trade Area (AFTA) within a decade. They will be joined by Japan and South Korea. The size of the market will be huge around $3 trillion. Both India and China have signed the Framework of Economic Agreement with the ASEAN. Besides tariff reductions, it contains economic cooperation and confidence building measures. Besides, India has concluded sub-regional agreements with

Bangladesh, Sri Lanka, Thailand, Myanmar, Nepal and Bhutan under BIMST-EC. India has also concluded bilateral agreement with Sri Lanka, and Thailand. Similarly, China has concluded a Comprehensive Economic Agreement with the ASEAN and implementation has already begun. India and China both are active in establishing regional blocks inside and outside Asia. These activities would Change the face of external trade and production in both the economies.

Since the joining of the WTO, China's exports and imports have increased at a faster rate. Trade with the rest of the world has deepened; composition and geographical pattern are shifting. China is becoming the focus of attention in Asia and the world. Vertical specialization of production within Asia has led to an increasing share of China's imports coming from within the region; China has become an important export destination for Asian countries. A continued implementation of China's commitments to the WTO would open up its markets further to the rest of the world. Its increasing competitive power would pose challenges in the third market.

India and China are the economic powerhouses of the Asian region. Both countries are growing at a faster rate. The bilateral trade between the two economies is increasing at rapid rate and Indo-China two-way trade has crossed $13.6 billion in 2004. India's exports to China touching $7.7 billion and imports from China reaching $5.9 billion are the pointers. The leaders of both the countries have set a target of $20 billion for 2008 and $30 billion for 2010. This target appears very much achievable in the context of present growth scenario. Both the countries are considering the conclusion of bilateral free trade agreement to enhance trade. China has poised to become India's large trade partner in the next two-three years. There is a need to give special attention on investment and trade in services, particularly knowledge based sectors, besides traditional manufacturing in view of dynamic comparative advantage of India. India has developed its capability to trade in areas like

biotechnology, IT and ITES, health, education, tourism and financial sectors. China has made dent in value added items exports, specifically electrical machinery and electronics. These complementarities could be blended for mutual benefit.

To sum up, rapidly increasing bilateral trade between India and China suggest that the trade target set up by the two governments is achievable. China has become an important trade partner for India but same can not be said for India. The product diversification is high in case of Chinese export to India but it is not so in case of India. Of late, Indian exports also diversified, however, it needs more. In Chinese export basket to India, medium and high-tech products dominate but Indian export basket to China is dominated by primary and resource based products dominate. From this angle, Chinese exports to India are more sustainable than India's exports to China. Increase in Indian export to China is due to competitive factors. Similar is the case for rise in Chinese exports to India. In Indo-China bilateral trade inter-industry trade plays a significant role. The intra-industry trade is not major factor. To enhance trade complementarities India needs to diversify into medium and high-tech products. The Chinese products are more competitive in Indian market due to lower prices and acceptable quality. China has an edge over India in third country markets due to its competitive power, this is more so in the case of labor-intensive products. The FDI has played significant role in enhancing Chinese exports but this not the case with India. Both India and China joining the ASEAN led Free Trade Area would help to expand inter-se trade between the two countries.

References

ASEAN China Expert Group on Economic Cooperation: "Forging Closer ASEAN China Economic Relations in the Twenty First Century," Jakarta: ASEAN Secretariat, October 2001.

ASEAN Secretariat website: Framework Agreement on Comprehensive Economic Cooperation between the Association of South East Asian Nations and the People's Republic of China, Jakarta, 4 November 2002.

Abbott, Frederick M.: "Reflection Paper on China in the World Trading System: Defining the Principles of Engagement", in Abbott, Frederick M. (Ed.), China in the World Trading System, The Hague London, 1999.

Adhikari Ramesh and Yang Yongzheng: "What will WTO Membership Mean for China and it's Trading Partners?" *Finance and Development*, Vol. 39, No. 3, September 2002.

Aggarwal, A.: *Liberalization, MNE affiliates and Export Performance-Evidence from Indian Manufacturing,* Working Paper Series No.19/2000, Institute of Economic Growth, New Delhi, 2000.

American Electronic Association: Tech Trade Update 2003, Washington D.C., p. 5, 2003.

Asian Development Bank: Foreign Direct Investment Spurs Asia's Development, News Release, No. 024, April 1999.

Bajpai N. and Sachs J. D.: *Foreign Direct Investment in India: How can $ 10 Billion of Annual Flows be Realized*?", Centre for International Development, Harvard University and Boston Consulting Group, 2002.

Bajpai, N. and Dasgupta, N.: *Multinational Companies and Foreign Direct Investment in China and India*, CGSD Working Paper No. 2, January 2004.

Bajpai, N. and Dasgupta, N.: *What Constitutes Foreign Direct Investment: Comparison of India and China*, Columbia Earth Institute, Columbia University Working Paper, April 2003.

Bajpai, N. and Jian, T.: *Reform Strategies of China and India: Suggestions for Future Actions*, Centre for International Development, Havard University, Working Paper, April 1996.

Bajpai, N. and Sachs, J.D.: Introduction in Sach, J.D., Bajpai, N., Blaxill, M.F. and Maira, A. (Eds.), Foreign Direct Investment in India: How Can $10 Billion of Annual Inflows Be Realized? Centre for International Development, Havard University and Boston Consulting Group, January 2000.

Bajpai, N., Jian, T. and Sachs, J.D.: *Economic Reforms in China and India: Selected Issues in Industrial Policy*, Centre for International Development, Havard University, Working Paper, April 1997.

Banga, Rashmi: *The Differential Impact of Japanese and US Foreign Direct Investments on Exports of Indian Manufacturing*, Indian Council for Research on International Economic Relations, New Delhi, 2003

Banik Arindam, Bhaumik Pradip K, Iyare O Sundae: "Explaining FDI Inflows to India, China and the Caribbean – An Extended Neighbourhood Approach", *Economic and Political Weekly*, July 24, 2004

Barshefsky, Charlene: "U.S. Trade Policy in China", Hearing before the Senate Finance Committee on the Status of China's Application to join the WTO, April 13, 1999. (Available at *www.fnsg.com*)

Bennett, D., X., Liu, D Parker, F. Steward, and K. Vaidya: "Technology Transfer to China: A Study of Strategy in 20 EU Industrial Companies", *International Journal of Technology Management*, 21(1/2), 151-182. 2001

Bhagwati J. N.: *India in Transition: Freeing the Economy*, Oxford: Clarendom Press ; New York : Oxford University Press, 1993.

Bhagwati, J. N. and T. N. Srinivasan: *Foreign Trade Regime and Economic Development-India*, National Bureau of Economic Research, New York, 1975.

Bhagwati, J. N. and Desai Padma, *India – Planning for Industrialization*, Oxford University Press, 1970.

Bhalla, A. S.: *Uneven Development in the Third World-A Study of China and India*, London, St Martin's Press, 1995.

Bhalla, A.S. and Qui Shufang: *The Employment Impact of China's WTO Accession*, RoutledgeCurzon, New York, 2004.

Bhaskaran, B.: *China as Potential Superpower: Regional Responses*, Berlin-Deutsche Bank Research Report, 15 January 2003.

Bhatia, S.: *Indian Garments Industry in the Post MFA Period*, Occasional Paper No. 7, Indian Institute of Foreign Trade, New Delhi, 1997.

Bhattacharya Dhires: *A Concise History of the Indian Economy: 1750-1950*, Prentice Hall, New Delhi, 1979.

Bin Ziang, "A Comprehensive China –ASEAN Cooperation, *China through a Lens*, 2003. (Available at www.china.org.cn/english/2003/Jan/53388.htm)

Bottelier, Pieter: *China's Economic Transition an the Significance of WTO Membership*, Centre for Research on Economic Development and Policy Reform, Stanford University, 1999.

Breslin, Shauan: "The Politics of Chinese Trade and the Asian Financial Crisis: Questioning the Wisdom of Export Led Growth," *Third World Quarterly*, Vol. 20, No. 6, pp. 1179-1199, 1999.

Breslin, Shaun: "Foreign Direct Investment in China: What the Figures Don't Tell US", Paper presented at Regional Governance: Greater China in the 21st Century, Asia Link Conference, University of Durham, 24-25 October 2003.

Broadman, H. G. and Sun Xialoun: "The Distribution of Foreign Direct Investment in China", *The World Economy*, Vol. 20 No. 3, pp. 339-361, May 1997.

Broadman, H. G. and X. Sun: "The Distribution of Foreign Investment in China", *World Economy*, 20, pp. 339-61, 1997.

Bucknall Kevin: *China and the Open Door Policy*, Allen and Unwin, Sydney, 1989.

Charles Harvie and Lee Hyun Hoon: "New Regionalism in East Asia : How does it relate to the East Asian Development Model?" (Paper presented to the First Annual Conference of the Association of Korean Economic Studies, Yonsei University, Seoul, July 21-22, 2002.

Charles, Harvie: "China's Recent Macroeconomic Development and Policy Implications for Trade", in Tran Van Hoa (Ed.), *China's Trade and Investment after the Asia Crisis*, Cheltenaham, 2000.

Chen, Chunlai: *The Evolution and Main Features of China's Foreign Direct Investment Policies*, Working Paper, No. 97/15, Chinese Economic Research Centre, University of Adelaide, December, 1997.

Chen, C., Chang, L. and Zhang, Y.: "The Role of Foreign Direct Investment in China's Post-1978 Economic Development", *World Development*, 23(4), pp. 691-773, 1995.

Chen, Chien-Husn: "Regional Determinants of Foreign Direct Investment in Mainland China", *Journal of Economic Studies*, Vol. 23, No. 2, pp. 18-7, 1996.

Chen, Chunlai "The Impact of FDI and Trade", in Wu, Y. (eds.), *Foreign Direct Investment and Economic Growth in China*, Edward Elgar, 1999.

Cheng, L. K. and Y.K. Kwan: "What are the Determinants of the Location of Foreign Direct Investment?" The Chinese Experience", *Journal of International Economics*, 51, pp. 379-400, 2000.

Chia Siow Yue: "East Asian Regionalism and the ASEAN Japan Economic Partnership", in Narongchai Akrasanee, Chia Siow Yue *et. al.*, *ASEAN Japan Cooperation: A Foundation for East Asian Community*, Tokyo- Japan Centre for International Exchange, 2003.

Chia Siow Yue: "The Rise of China and the Emergent East Asian Regionalism", in Kokubun Ryosei and Wang Jisi (Eds), *The Rise of China and Changing East Asian Order Tokyo*, Japan Centre for International Exchange, 2004.

China Statistics Yearbook, China Statistical Publishing House, Bejing China. (Various Issues).

General Administration of the Customs of the People's Republic of China: China's Customs Statistics Monthly Exports and Imports, Beijing, (various years).

Christiansen, Flemming: "Will WTO Accession Threaten China's Social Stability?", in Holbig, Heike and Ash, Robert (Eds.) *China's Accession to the World Trade Organization: National and International Perspectives*, RoutledgeCurzon, London, 2002.

Cooper, Caroline G.: "China and the WTO: Implications for South Korea and Japan", in China Online, 2000.

CUTS: "The Coming Death of the ATC and China's WTO Accession: Will Push Come to Shove for Indian T&C Exports?", CUTS Centre for International Trade, Economics and Environment, EINTAD Briefing Paper, No. 5, 2003.

Dees, S. "Foreign Direct Investment in China: Determinants and Effects", *Economics of Planning*, 31(2/3), 175-194. (1998),

Demurger, S.: *Economic Opening and Growth in China, OECD Development Centre Studies*, Paris, March, 2000.

Development Research Centre (DRC): The Global and the Domestic Impact of China Joining the World Trade Organization, 1998.

Du, Ying: "China's Agricultural Restructuring and System Reform under its Accession to the WTO", ACIAR Chain Grain Market Policy Project Paper No. 12, Cabera, Australia.

East Asia Vision Group: Towards an East Asian Community: Region of Peace, Prosperity and Progress, Jakarta, ASEAN Secretariat, October 2001

Eglin, Richard: "Challenges and Implications of China Joining the WTO: What WTO Accession Means", Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong (Eds.) China's Economic Globalization through the WTO, ASHGATE, England, 2003.

Eglin, Richard: "Challenges and Implications of China Joining the WTO Accession Means" Collected in Wei, Shang-Jin, Wen, Guanzhong James and Zhou, Huizhong, (Eds.) *The Globalization of the Chinese Economy*, Edward Elgar, 2002.

Eng, Chuang Ong: "Anchor East Asian Free Trade in ASEAN" in *Washington Quarterly,* Spring 2003.

Eric, Tao Chu Cheow: "Bigger Steps towards Asian Integration", 2005. (Available at www.chinadaily.com.cn/english/doc/2004-12-21/content_401932.htm)

Eugen, V. Keller, Nicole Monter and Hubertus, Drinkuth: China's Access to the WTO: Strategic Implications for Foreign Investors, Ronald Berger Study, January 2000.

EXIM Bank: *Indian Garments Exports: Implications of the MFA Phase-out*, Occasional Paper No. 34, 1995.

Fan, Xiaoqin and Peter G. Warr: *Foreign Investment, Spillover Effects and the Technology Gap: Evidence from China*, Working Paper in Trade and Development, No. 00/03, The Australian National University, 2000.

Fung, K. C.: "Accounting for Chinese Trade : Some National and Regional Considerations," in R Baldwin, R Lipsey and J David Richardson (Eds) *Geography and Ownership as Bases for Economic Accounting*, NBER Conference Volume, Chicago, Oxford University Press., 1998.

Fung, K. C. and Lawrence J. Lau: "New Estimates of the United States –China Bilateral Trade Balances", *Journal of Japanese and International Economies*, December, 2001.

Fung, K. C., Iizaka Hitomi and Tong Sarah: " Foreign Trade of China", Paper presented for an International Conference on China' s Economy in the 21st Century ,June 24-25, 2002

Government of India: Tax Reform Committee: Final Report, Part II, Ministry of Finance, New Delhi, 1993.

----------, Economic Survey, Ministry of Finance, New Delhi, (Various years).

----------, Exim Policy of India, Ministry of Commerce and Industry, New Delhi, (Various years).

Greg, Mastel: *The Rise of the Chinese Economy: The Middle Kingdom Emerges*, Armonk, NY : M.E. Sharpe, p. 81, 1997.

Harold, P. and R. Lall: "China Reform and Development in 1992-93", *World BANK Discussion Paper*, No. 215, The World Bank, Washington D. C., 1993.

Hayter, R. and S. S. Han: "Reflections on China's Open Policy towards Foreign Direct Investment", *Regional Studies*, 32(1), 1-16, 1998.

Holbig, Heike and Ash, Robert (Eds.): *China's Accession to the World Trade Organization*: National and International Perspectives, RoutledgeCurzon, London, 2002.

Holz, Carsten and Zhu, Tian: "China's WTO Accession and State Sector Reforms", in Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong (Eds.) *China's Economic Globalization through the WTO*, ASHGATE, England, 2003.

Huang, Fanzhang: "China's Utilisation of Foreign Capital and the Related Policies", *Journal of Asian Economics*, 6(2), pp. 217-232, 1995.

Huang, Jikun and Rozelle, Scott: *Chaina's Grain Economy to the Twenty-First Century*, China Agriculture Press, Bejing, 1998.

Huang, Yasheng: *Selling China: Foreign Direct Investment during the Reform Era*, Cambridge University Press, New York, (*Forthcoming*), 2001.

Huang, Yasheng: "Internal and External Reforms: Experiences and Lessons from China", *Cato Journal*, 21(1), 43-64, 2001.

Huang, Yasheng: *Foreign Direct Investment in China: An Asian Perspective*, Institute of Southeast Asian Studies, Singapore, 1998.

Hutching, Graham: *Modern China: A Comparison to a Rising Power*, Penguin Books, London, 2000.

Institute for International Economics: "New East Asian Blocs Could Alter Global Trading System," Washington D.C. (press release), May 25, 2002.

Johnson, D. Gale: "China's Agriculture and WTO Accession" Paper No. 00-02, Office of Agricultural Economic Research, the University of Chicago, 2000.

Karby, Leggett: "China Promises Foreign Investors to Open Markets", *Wall Street Journal*, May 22, 2000.

Klinworth Gary: China's "opening" to the outside World, Boulder, Westview, 1990.

Kokubun Ryosei and Wang Jisi (Eds): *The Rise of China and Changing East Asian Order Tokyo*: Japan Centre for International Exchange, 2004.

Kuppuswamy, C. S.: "ASEAN Economy – Dominated by China ?" *South Asia Analysis Group* Paper No. 1184, 2005.

Kwan, C. H.: The Rise of China and Asia's Flying Geese Pattern of Economic Development: An Empirical Analysis Based on US Import Statistics, Tokyo-REITI Discussion paper Series 02-E-009, July 2002.

Lall Sanjaya and Albaladejo, Manuel: "The Competitive Impact of China on Manufactured Exports by Emerging Economies in Asia", in Magarinos, Carlos A., Yongtu, Long and Sercovich, Francisco C., (Eds.) *China in the WTO: The Birth of a New Catching-up Strategy*, UNIDO, Palgrave, 2002.

Lall, Sanjaya: *Competitiveness, Technology and Skills*, Edward Elgar, USA, 2001.

Lam, Newman M.K.: "The Implications of China's WTO Accession for the Economies of Taiwan, Hong Kong and Macau", in Holbig, Heike and Ash, Robert (Eds.) *China's Accession to the World Trade Organization: National and International Perspectives*, RoutledgeCurzon, London, 2002.

Lardy, N.: *China's Unfinished Economic Revolution*, Brookings Institution Press, 1998.

Lardy, Nicholas R.: "Role of Foreign Trade and Investment in China's Economic Transformation", in A. Walder (Ed.) *China's Transitional Economy*, Oxford University Press, 1996.

Lardy, Nicholas R.: "Chinese Foreign Trade", *The China Quarterly*, No. 131, pp.695-700, September, 1992.

Lardy, Nicholas R.: "The Role of Foreign Trade and Investment in China's Economic Transformation", *The China Quarterly*, (144), p. 1067, 1995.

Lardy, Nicholas R.: China in the World Economy, Institute of International Economics, Washington, D.C., 1994.

Lardy, Nicholas R.: *Integrating China into the Global Economy*, Brookings Institution Press, Washington, D.C., 2002.

Lardy, Nicholas R.: "In Joining the WTO, China will Help Shape New Global Trade Agenda" *International Herald Tribune*, November 10, 2001.

Lee, Chyungly: "Foreign Direct Investment in China: Do State Policies Matter?" *Issues and Studies*, Vol. 33, No. 7, pp. 40-61, 1997.

Lemoine, F.: *FDI and the Opening Up of China's Economy*, CEPII Working Paper No. 11, June 2000.

Lemoine, Francoise and Unal-Kesenci, Deniz: "The Impact of China's WTO Accession on EU Trade", in Holbig, Heike and Ash, Robert (Eds.) *China's Accession to the World Trade Organization: National and International Perspectives,* RoutledgeCurzon, London, 2002.

Li S. and Zhai F.: "China's WTO Accession and Implications for National and Provincial Economies," Paper presented at the International Conference on China in the 21st century : Challenges of Global and National Economic Integration, October 12-13, Kunming, China,1999.

Liang, Yanfen: "Transformation of Thinking and Adaptation to New Environment- A Discussion of the Influences on China from its Participation in the WTO" in Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong (Eds.) *China's Economic Globalization through the WTO*, ASHGATE, England, 2003.

Linda, Low: "Whither Multilateralism? Whither Asian Regionalism?" (Paper presented at the Third Asia Development Forum on Regional Economic Cooperation in Asia and the Pacific, organized by the Asian Development Bank, Bangkok, June,12 2001.

Liu X. and H. Song: "China and the Multinationals: A Winning Combination", *Long Range Planning*, Vol. 30, No. 1, pp. 74-83, 1997.

Liu, X. H. Song, Y. Wei, and P. Romilly: "Country Characteristics and Foreign Direct Investment in China: A Panel Data Analysis", *Weltirtschaftliches Archiv*e Vol. 133, No. 2, pp. 313-329, 1997.

Liu, Xiaming, Chengang Wang and Yingqi Wei: "Causal Links between Foreign Direct Investment and Trade in China", *China Economic Review*, Vol. 12, No. 2, pp. 190-202, 1997.

Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong: (Eds.) *China's Economic Globalization through the WTO*, ASHGATE, England, 2003.

Luo, Yadong: *Multinational Corporations in China: Benefiting from Structural Transformation*, Copenhagen, 2000.

Lyall Breckon: "Former Tigers under the Dragon 's Spell", Comparative Connections, Pacific Forum, CSIS, Washington D C, 2002.

Ma, Y.: "Foreign Investment in China : Opportunity and Challenge," paper presented at OECD / MOFTEC Roundtable on the Environment and Opportunity for FDI in China, Xiamen, China, 10 September 1999.

Magarinos, Carlos A., Yongtu, Long and Sercovich, Francisco C.: (Eds.) *China in the WTO: The Birth of a New Catching-up Strategy*, UNIDO, Palgrave, 2002.

Majumdar, S.: "SEZs: Go the Chinese Way", *The Business Line*, May 07, 2003.

Mastel, Greg: "China and the World Trade Organisation: Moving Forward without Sliding Backward – Paper prepared for symposium: "The First Five Years of the WTO."(n.d.)

Mastel, G.: Taiwan in the WTO: An Economic and Policy Analysis, October 6, 1999. (Available at www.taipei.org/un/wto0223.htm)

Ministry of Foreign Trade and Economic Cooperation: Statistics on FDI in China, 2001.

Moday, Ashoka and Fang-Yi Wang: "Explaining Industrial Growth in Coastal China: Economic Reforms and What Else?" *World Bank Economic Review*, 11, pp. 293-325, 1997.

Morrison Wayne M, Foreign Affairs, Defense and Trade Division ," China's Economic Conditions ", CRS Issue Brief for Congress, May 21, 2003.

Nagraj, B.: "Foreign Direct Investment in India in the 1990s: Trends and Issues", E*conomic and Political Weekly*, pp. 1701-12, April26 2003.

Nair, G. K.: "Does the Economy Really need FDI?", *The Business Line*, January, 12 2003.

National Bureau of Statistics: *China Statistical Yearbook 2002*, p. 613, Beijing : Statistics Press, 2002.

Naughton, B.: "China's Emergence and Prospects as a Trading Nation," Brookings Papers on Economic Activity, No. 2, 1996.

Ng, Francis and Yeats, Alexander: Major Trade Trends in East Asia: What Are Their Implications for Regional Cooperation and Growth, Policy Research Working Paper No. 3084, June 200.

Ng, Linda F. Y. and Chyau Tuan: "FDI Promotion Policy in China: Governance and Effectiveness", *World Economy*, pp. 1051-1074, 2001.

Nolan, Peter: "China and the WTO: The Challenge for China's Large-scale Industry", in Holbig, Heike and Ash, Robert (Eds.) *China's Accession to the World Trade*

Organization: National and International Perspectives, RoutledgeCurzon, London, 2002.

Oksenberg, Michel and Elizabeth E. (Eds.): *China Joins the World: Progress and Prospects*, Council on Foreign Relations Press, New York, 1999.

Pangestu, Mari." China's Economic Rise and Responses of ASEAN ", in Kokubun Ryosei and Wang Jisi (eds) ,*The Rise of China and Changing.East Asian Order* ,Tokyo: Japan Centre for International Exchange ., 2004

Pingyao, Lai: "Foreign Direct Investment in China: Recent Trends and Patterns", *China and World Economy*, November 2, 2002.

Protocol to Amend the Framework Agreement on Comprehensive Economic Cooperation between the Association of South East Asian Nations and the People's Republic of China, 6th October, 2003(ASEAN Secretariat Website)

Prusell, Garry: "Trade Policy in India", in Dominick Salvatore (Ed.) *National Trade Policies*, New York: Greenwood Press, pp.423-458, 1992.

Ray, Alok: "FTAs, India and Asian Trade bloc ", *Business Line*, Oct 29, 2003.

Reserve Bank of India: Annual Report, Various years.

Richard, Stubbs: "Signing on to Liberalisation : AFTA and the Politics of Regional Economic Cooperation ," *Pacific Review*, Vol. 13, No 2., pp. 297-318, 2000.

Rosen, D. H.: "Behind the Open Door, Foreign Enterprises in the Chinese Market Place," Institute of International Economics, Washington D C,1999.

Rosen, Daniel H.: "China and the World Trade Organization: An Economic Balance Sheet ," Policy Brief 99-6, Institute for International Economics, June 1999.

Roul, Animesh: "ASEAN: Towards Asian Arc of Prosperity? In Ased Themes – Eu – Asia Relations, Globalisation, Global Security and Nuclerisation, 2005

Sachs, Jeffrey D. and Woo, Wing Thye: "Understanding China's Economic Performance", *Journal of Policy Reform*, Vol. 4, No. 1, pp. 1-50, 2000.

Sahoo, S.: "Can India Catch Up with China? From A Diaspora Perspective", University of Hyderabad, India, 2002. (Available at *http://www.geocities.com/husociology/china.htm)*

Schiller, Margot: "The Impact of China's WTO Accession on International Trade and Capital Flows", in Holbig, Heike and Ash, Robert (Eds.) *China's Accession to the World Trade Organization: National and International Perspectives*, RoutledgeCurzon, London, 2002.

Sharma, K.: *Export Growth in India: Has FDI Played A Role*?, Discussion Paper No. 816, Economic Growth Centre, Yale University, July 2000.

Siddharthan, N. S. and Nollen, S.: "Export Performance and Strategic Group of Firms : The Role of Foreign Collaboration and Knowledge Transfer", Paper presented at the Annual Conference of the Academy of International Business m Phoenix, Arizona, US, Nov 17-20, 2000.

Summary of U.S.- China Bilateral WTO Agreement, White House, November 15 1999.

Sun, Haishun: *Foreign Investment and Economic Development in China, 1979-1996,* Aldershot, Ashgate Publishing Company, 1998.

Sun, Haishun: "Macroeconomic Impact of Direct Foreign Investment in China", *The World Economy*, 21(5), 675-694, 1998b.

Sun, Haisun and Ashok Parikh: "Exports, Inward Foreign Direct Investment (FDI) and Regional Economic Growth in China", *Regional Studies*, Vol. 35, No. 3, pp. 187-196, 2001.

Sung, Yun Wing: *The China Hong Kong Connection*, Cambridge: Cambridge University Press,1991.

Technology Gap: *Evidence from China*, Working Paper in Trade and Development No. 00/03, The Australian National University. (2000)

The American Embassy of China: 2002 National Trade Estimate Report on Foreign Trade Barriers-China, 2002. (Available at http://www.usembassy-china.org.cn/econ/nte-china.html)

The American Embassy of China: Testimony of Ambassador Charlene Barshefsky before the House Committee on Ways and Means on China's WTO Accession and PNTR, May 3 2000. (Available at http:// *www.usembassy-china.org.cn/press/release/2000/barshefsky53.* html)

The Economist, "Will China be Next?", 24 October 1998.

The Economist: A Survey of India and China, March 5, 2005.

Tseng, Wanda S. and Harm H. Zebregs: "Foreign Direct Investment in China: Some Lessons for Other Countries", IMF Policy Discussion Paper No. 3, 2002. (http://www.imf.org/external/pubs/ft/pdp/2002/pdp03.pdf)

U.S. International Trade Commission: Assessment of the Economic Effects on the United States of China's Accession to the WTO, Washington, August 1999.

UNCTAD: World Investment Report. UNCTAD, Geneva, (Various years).

UNCTAD. Trade and Development Report:2002- 2003.

United States Representative, Summary of US China Bilateral WTO Agreement, pp. 1-2, Washington D C : USTR, November 16, 1999.

Urata, Shujiro: "Towards an East Asia Free Trade Area", *Policy Insights*, OECD Development Centre, 10th September 2003.

Verma, Samar: Export Competitiveness of Indian Textile and Garment Industry, (*mimeo*), May 2002.

Wattanpruthipaisan, Thitapha.: ASEAN –China Economic Relationships and Cooperation in Trade and Investment : Patterns and Potential, Paper presented a the Symposium on China –ASEAN Entrepreneur Exchanges, Chengdu, China ,22-23 October 2001.

Wei, Shang-Jin: "Attracting Foreign Direct Investment: Has China Reached Its Potential?" *China Economic Review*, Vol. 6, No. 2, pp. 187-99, 1995.

Wei, Shang-Jin: Sizing up Foreign Direct Investment in China and India, Centre for Research on Economic Development and Policy Reform, Working Paper No. 85, Stanford University, 2000.

Wei, Yingqi: *Foreign Direct Investment in China*, Lancaster University Management School, Working Paper No. 002, 2003.

Wen Fude: To Explore Potentials and Expand Sino-Indian Economic and Trade Cooperation, *South Asia Studies*, 3, 1996.

Wen, Guanzhong James: "Challenges and Opportunities for China's Agriculture after its WTO Accession", in Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong (Eds.) *China's Economic Globalization through the WTO*, ASHGATE, England, 2003.

Will, Martin: ''The Role of State Trading" in Federick M Abbot(Ed) China in the World Trading System: Defining the PRINCIPLES OF Engagement, Kluwer Law International, Boston 1998.

Wong, Richard, Y. C.: "China's Economic Reform – The Next Step," *Contemporary Economic Policy*, 13, pp. 18-27, 1995.

Woo, Wing Thye: "Chinese Economic Growth: Sources and Prospects", in Michel Fouquin and Lemoine, Francoise (Eds.), *The Chinese Economy*, Economica, London, 1998.

Woo, Wing Thye: "Recent Claims of China's Economic Exceptionalism: Reflections Inspired by WTO Accession", in Lu, Ding, Wen, Guanzhong, James

Wen and Zhou, Huizhong (Eds.): *China's Economic Globalization through the WTO*, ASHGATE, England, 2003.

World Bank: "China Engaged, Integration with the Global Economy", Washington D C, 1997.

WTO: "China's Accession to the World Trade Organisation," (mimeo), 2002.

WTO: Accession,"*China Economic Review*, Vol. 12, No.2/3

WTO: Trade Policy Review: India, Geneva: WTO Secretariat, 1998.

Wu, Y: "Measuring the Performance of Foreign Direct Investment: a Case Study of China," *Economic Letters*, Vol. 66, No. 2, pp. 143-150, 2000.

Wu, Yanrui: *Foreign Direct Investment and Economic Growth in China*, Edward-Elgar, 1999.

Xinpeng, Xu and Song, Ligang: "Export Similarity and the Pattern of East Asian Development", in Llyod, P.J. and Xiao-Guang Zhang, (Eds.), China in the Global Economy, Cheltenaham, 2000.

Xio-ming, Feng: "China and ASEAN Can share the Prosperity Together", *China and the World Economy*, No .1, 2002.

Yahuda, Michael: "China's Future Role in the WTO: Developing Country, Regional Economic Power, New Economic Superpower?", in Holbig, Heike and Ash, Robert (Eds.) *China's Accession to the World Trade Organization: National and International Perspectives*, RoutledgeCurzon, London, 2002.

Yang, J.Z., Farley, J. and Hoenig, S.: "When MNCs Come to China, Who Changes Whom?", *China Business Review*, March/April, 26(2), 1999.

Yang, Wenyan: "Domestic Banking under Financial Liberalization: Lessons from China as a Member of the WTO", in Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong (Eds.) *China's Economic Globalization through the WTO*, ASHGATE, England, 2003.

Yifang, N., Wen, G. and Xiaobo, W.: *The Opportunities, Threats and Counter-measures of China's Manufacturing Industry Under the Globalization*, School of Management, Zhejiang University, Hangzhou, China, 2002.

Yong, Wang: "China's Stakes in WTO Accession: The Internal Decision-making Process", in Holbig, Heike and Ash, Robert (Eds.) *China's Accession to the World Trade Organization: National and International Perspectives*, RoutledgeCurzon, London, 2002.

Young, Stephen and Ping Lan: "Technology Transfer to China through Foreign Direct Investment", *Regional Studies*, 31(7), pp. 669-679, 1997.

Yue, Siow Chia: "ASEAN China Free Trade Area", Singapore Institute of International Affairs, Paper presented at the AEP Conference, Hong Kong, 12-13 April 2004.

Zhang Z .: "International Trade and Foreign Direct Investment : Further Evidence from China ," *Asian Economic Journal*, Vol. 9, No. 21, July, pp. 153-167, 1995.

Zhang, K.H.: "What Affects Foreign Multinational Corporations to China?", *Contemporary Economic Policy*, Huntington Beach, July 2001.

Zhang, Kevin H. and Song, Shunfeng: "How does Inward FDI Interact with Regional Economic Growth in Chain", in Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong (Eds.) China's Economic Globalization through the WTO, ASHGATE, England, 2003.

Zhang, Kevin Hongli: "Why is U.S. Direct Investment in China so Small?" *Contemporary Economic Policy*, 18(1), pp. 82-94, 2000.

Zhang, Kevin Hongli: "What Attracts Foreign Multinational Corporations to China?" *Contemporary Economic Policy*, 19(3), pp. 336-346, 2001a.

Zhang, Kevin Hongli: "How does Foreign Direct Investment Affect Economic Growth in China?" *Economics of Transition*, 9(3), pp. 679-693, 2001b.

Zhang, Kevin Honglin, Shunfeng Song: "Promoting exports: The role of inward FDI in China", *China Economic Review*, 2000, 11(4), pp. 385-396, 2000.

Zheng, Zhihai: "Economic Globalization and Development of China's Foreign Economic Cooperation and Trade", in Lu, Ding, Wen, Guanzhong, James Wen and Zhou, Huizhong (Eds.) *China's Economic Globalization through the WTO,* ASHGATE, England, 2003.