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Working Paper

Sustaining India – China Bilateral Trade: An Analysis of India's Rising Trade deficit with China

Sunitha Raju

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Sunitha Raju*

Abstract

This paper evaluates India's export opportunities to China as well as market access constraints faced by Indian firms in China at the disaggregated product level. Our main conclusions include: By 2015, it is expected that average wages in China would rise by 80% thereby loosing competitiveness in labour intensive industries particularly when compared to other South East Asian countries. These developments provide new opportunities to India to diversify and increase value-added exports to China. 30 products at HS 4 digit have been identified with potential export opportunities for India. Of these, 7 products are globally export competitive. Most of these identified products are value added intermediaries. In addition to these, there are a number of products where India's share in China's imports is less than 1%. Most of these products fall under Electrical Machinery (85), Machinery (84), Optical equipment (90), Plastics (39) and Organic Chemicals (29). As far as market access is concerned, Tariff does not seem to emerge as a major constraint for most products except for agricultural products. In addition to tariff, each product is subjected to a number of NTBs that cover Import licensing and Inspection, Registration of environmental management, labeling requirements etc. In addition to these, agricultural products are subjected to Food safety law, Quarantine measures, Food additive standards, MRL standards etc.

Key Words: India, China, Export potential, Market access.

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Sustaining India – China Bilateral Trade: An Analysis of India's Rising Trade deficit with China

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1. Introduction

India and China are fast growing emerging economies with an annual average growth of about 7%. The trade orientation of both countries has been increasing over the years. During 1990 and 2010, the trade to GDP ratio increased from 29% to 56% for China while for India, the same has increased from 16% to 47%. This increased trade orientation is a result of economic reform programme initiated by both countries- China in 1980s and India in 1990s- which stimulated growth by encouraging market driven competition, increasing labour and capital productivity, development of infrastructure, setting up of appropriate institutions (support and regulatory) and attracting foreign investments.

The growth trajectory of China has been much higher than that of India. In the 1990s, the per capita GDP of India was higher than that of China. By 2010, India's per capita GDP was one-third the level of China- it was US$ 1475 for India while the same for China was US$ 4428 (Table 1). Similarly, the global exports of China was 7.1 times as that of India in 2010. For China, the growth in exports has been higher relative to imports, thereby resulting in trade surplus. In contrast, India's growth in imports has been higher relative to exports thereby leading to trade deficit.

The higher growth in exports for China is largely on account of the developments in the manufacturing sector. In 2010, China emerged as a largest industrial manufacturing country in the world with a share of 19.8% of the global total. During 1980 and 2009, China's manufacturing exports to the global total increased from 0.8% to 13.5%, surpassing US and Japan[1]. This growth is particularly significant during 2000 and 2009 wherein China has emerged as a global production centre or a market centre.

These trade developments in China also influenced the bilateral trade flows between India and China. With bilateral trade flows between India and China increased from US$ 2.2 billion in 2000 to US$

[1] Delloite, "China Manufacturing Competitiveness Study", 2011

72.2 billion in 2011, China has emerged as a major trading partner for India. China's share in India's total trade increased from 2.3% in 2000 to 9.5% in 2011. Given that China's share in India's total imports has increased at a much faster rate than that of exports, India's trade deficit with China increased particularly since 2006. Between 2006 and 2011, India's trade deficit with China increased from US$ -7.8 billion to US$ -38.8 billion (See Table 2). This trade imbalance needs to be addressed for India and China to engage in sustainable trade relations. This gains credence particularly in the context of the increased economic and trade cooperation between the two countries with a trade target of US$ 100 billion by 2015.

In view of the above, the focus of this paper is to critically examine the structure of trade between India and China and explore the possibilities for reducing these trade imbalances. Section 2 analyses the broad structure of trade between India and China and the shifts therein. A detail analysis of India's structure of exports to China is carried out in Section 3. Besides analysing the export competitiveness of India's exports to China, this section also examines the market access issues and identifies the potential export opportunities for India. The possibilities of further increase in exports to China through investment cooperation is briefly analysed in Section 4. On the basis of the above, the last section summarises the emerging trends and issues for enhancing India's export opportunities to China.

2. Overview of Trade Flows

The bilateral trade flows between India and China, over the last decade, has increased by over three times. While the relative position of China in India's trade has increased from 2.3% in 2000 to 9.5% in 2010, the same is not true with India. India's share in China's total trade was 0.5% in 2000 which increased to 2.1% by 2011. This seems to be on account of better terms of trade which China enjoyed compared to that of India. As shown in Table 3, China's terms of trade increased significantly from 2006 onwards with a resultant decline in terms of trade for India.

The improved terms of trade for China is primarily due to the exports of high value manufactured products.

The broad product composition of India's exports and imports to China are detailed in Table 4. India's imports from China are dominated by Electrical Machinery(85), Electronics (84) and Organic Chemicals (29). Together, these product groups account for about 60% of the total imports from China. Further, the relative significance of each of these products is high as indicated by the share of these products in total imports of India. For example, the share of Electrical Machinery (85) which was 22% in 2005, increased to 37% in 2010. Similarly, the share of Electronics (84) increased from 14% to 22% and that of Organic Chemicals (29) increased from 23% to 30% during the same period. As compared to this, the structure of India's exports to China are dominated by Primary products. Ores & Slags(26), Cotton (52) and Iron and Steel (72) account for about 62% of total exports to China. For Cotton and Ores, China is a major market for India.

Thus, while India's exports to China are largely primary products, technology intensive manufacturing imports from China have increased which explains the differences in the observed terms of trade. This structural shift is China's exports needs to be seen in the light of China's planned strategy towards technology intensive manufacturing and efforts to move up the global value chain[2]. China's trade composition and structure has changed rapidly in the later years of 2000 due to privatisation of export sector and large inflows of foreign investment, trade liberalisation and rising domestic content of exports. In 1995, more than one–third of total exports was produced by State owned Enterprises (SoEs) and by 2006 this share declined to one-fifth. In terms of trade composition, the share of primary products export declined from 15% in 1995 to 3% in 2006. Against this, the exports of machinery (including electronics) rose from 20% to 60% during the same time[3].

Another important development in China's trade composition is the rising share of processing trade with high domestic content, which is particularly significant for Machinery and Textiles. Further,

[2] China aims to emerge as an innovative nation by 2020 and a global scientific power by 2050. This is reflected in China's patent applications which have grown rapidly since 2000 at a CAGR of 30%. In 2010, patent applications from China were 7.5% of the world total and stands at 4th global position following US, Japan and Germany. Over 50% of the planned investments by manufacturing enterprises in the next 3-5 years is to be in the area of productivity improvement. Also, the new phase in China's industrial policy focuses on the development of "Strategic Emerging Industries" wherein seven new industries are being promoted to facilitate China move up the value chain (Delloitte, "China Manufacturing Comeptitiveness Study", 2011).

[3] Jahangir Aziz and Xiangming Li, "China's Changing Trade Elasticities", *China and World Economy*, Volume 16, No.3, 2008

imported equipment was also replaced by domestic products indicating a higher domestic value contribution in the production chain[4] .

From India's point of view, these shifts in Chinese exports can result in further increase in high value imports from China and can also restrict India's export opportunities. Therefore, to understand the sustainability of India-China trade engagement, the following sections critically examine the structure of trade between India and China at a disaggregated product level and explore the possibilities of reducing the trade imbalance.

3. Analysis of Export Opportunities

To assess India's export opportunities at a disaggregated product level, the following methodology has been adopted:

- The export trends for all 4 digit HS code products that constituted 80% of India's exports to China have been analysed for the years 2005 to 2011 and the corresponding growth rates computed. On the basis of the growth rates, high and low growth exports have been identified.
- From among these products, the products with global export competitiveness have been identified based on the RCA index. A product has been considered as export competitive if the RCA values are greater than 1 for at least 3 years. The products with high RCA values and low growth have been identified as those having export opportunities for India. For these products, the existing tariff and non-tariff barriers have been looked into for identifying the constraints for export growth.
- To identify the potential export opportunities for India, major world imports of China have been mapped with the major world export of India. The common products so identified have been mapped with India's major exports to China. From this, the products which India is currently not exporting to China have been identified and RCA values for these products have been calculated to assess their export competitiveness.

Table 5 summarizes the trends of China's major imports from India at 4 digit HS product level. There are 17 products that account for 80% of the total imports from India. Of this, 9 products have

[4] Ibid, 2008

registered a *High growth*[5] while 8 products have registered a *Low growth*. As evident from the table, most of these products have low share[6] implying that China's imports from India are highly concentrated. Four products (5201, 7403, 7102 and 2601), which are largely primary products, account for 66% of the total imports from India.

Given the above structure of China's imports from India, the possibilities for increasing India's exports will depend on the domestic demand conditions in China. If the growth in China's world imports of a product is increasing then it would mean that domestic demand is rising and therefore, potential export oppurtunities for India would also rise, provided India has the supply capability.

Table 6 details the trend in major world imports [7] of China and compares the same with the imports from India. High growth in world imports is evident in six products products, namely, Iron ores(2601), Cotton (5201), Cotton Yarn(5205), Diamonds(7102), Ferro alloys(7202) and Refined Copper(7403). It may be underlined that except for Cotton Yarn (5205) and Ferro Alloys (7202), these products are also China's major imports from India with high growth. Thus, it would seem that India's major exports to China are those with rising domestic demand. During 2000 and 2010, imports from India as a share of total imports increased for these high growth products except for Iron ore (2601) and Ferro alloys (7202). Even for these products, the constraints for export growth seem to be more on India's supply side rather than the demand factors in China[8]. Given these supply constraints, the possibilities of further increasing the exports of these products to China are low especially as they are subjected to wide range of Non-tariff barriers (Table 7).

[5] Average CAGR for all the 17 products have been calculated as also for each product. If the growth trend of a product is higher than the average CAGR, then these products have been categorized as *High Growth exports*. However, if the growth trend is lower than the average CGR, then the products have been categorized as *Low growth exports*.

[6] *High Share* products are those which account for over 5% of total imports of China from India. Similarly, products with a share lower than 5% have been categorized as *Low share* products.

[7] There are 123 products that have been identified as China's major imports from world at HS 4 digit level. These products account for 80% of total imports of China in 2010. As identified earlier, there are 17 products which are China's major imports from India. From these 17 products, 12 products fall under the major imports from world for China. The other 5 products largely are specific to India. These are: 1515 (Other vegetable fats), 2906(Cyclic alcohol),6703(Human hair), 2516 (granite) and 2610(Chromium ores).

[8] For example, China's total imports from world of Ferro Alloys(7202) increased from US$ 634.8 million in 2005 to US$ 3171.6 million in 2009. During the same period, India's exports to world increased from US$ 303.4 million in 2005 and US$ 775.5 million in 2009. Thus, India's supply capability accounts for less than 20% of total demand in China. Similarly, China's total demand for Iron ore (2601), as reflected in total imports from world was US$ 18380 million in 2005 which increased to US$ 79722 million in 2010. However, India's total exports to world, which reflects India's supply capability was US$ 4193 million in 2005 and US$ 6147 million in 2010.

However, for addressing the observed trade imbalances, India's exports to China have to increase significantly which in the existing structure of exports is not possible. Therefore, to assess the potential export opportunities for India an analysis of India's world exports and China's world imports has been carried out at disaggregated product level (HS 4 digit) for the years 2005 to 2011. The premise here is that if domestic demand in China expands and India has supply capabilities for these products then the opportunities for export expansion will also rise for India.

As such, the trend in the major world imports of China has been mapped against the major world exports of India and the common products have been identified. There are 41 products for which China's demand is expanding and for which India has supply capability. Of these identified 41 products, there are 30 products which India exports to world but does not export to China. These products reflect the potential export opportunities for India and are detailed in Table 8. Broadly, these identified products fall under the following industry groups: Fish (03), Mineral fuels (27) Pharmaceutical products (30), Plastics (39), Man-made filaments (54), Iron and Steel (72 and 73), Electrical machinery (85), Machinery (84), Vehicles (87) and Optical machinery (90).

India would be able to realize the potential export opportunities if the global competitiveness for these identified products is high. On the basis of the RCA values, 7 products have been identified as export competitive for India which are currently not being able to export to China. These priority products are highlighted in Table 9. These are Fish (03), Iron and Steel (72) and Pharmaceutical (30). Table 10 details the tariffs structure and the NTBs for the identified export potential products. As can be noted, the market access barriers for these products are primarily the NTBs as the tariff are low.

While a detail sector-wise analysis of the above products is necessary to identify the potential export opportunities and the constraints therein (both domestic and external), a brief analysis of the *Pharmaceutical sector* is given below to highlight the market access constraints in China.

3.1 Pharmaceutical Exports to China

China is a fast growing market for pharmaceutical products with potential for rapid development and growth. By 2015, the market size for pharmaceutical products is expected to be more than US$ 50 billion. With changing age profile and increased expenditure on medical care, the growth in pharmaceutical products is expected to be much higher. With China's target of bringing the entire

population under health care by 2020, opportunities for exports of pharmaceutical products from India are likely to open up.

While India's total exports of pharmaceutical products reached US$ 12 billion in 2010, exports to China continued to remain small. One of the reasons is that China's exports of pharmaceutical products are similar to that of India. Formulations account for 56% and bulk drugs account for 42% of India's total exports. China is also a major exporter of formulations and India is one of the important export destinations for China. China's exports of formulations to India are over US$ 91 million with a year to year increase of 73%. India also exports Active Pharmaceutical an ingredient (API) of which China is also a major exporter. China exports about US$ 2.9 billion of APIs to India, while India exports only US$ 400 million of APIs to China. While the similarity in export trends exist, a closer dialogue in the following areas is necessary[9]:

- Cooperation agreement between Chinese and Indian manufacturers of formulations and API products for identifying products that is of mutual interest. (Several APIs that are unique to India are available. These are: Montelukast, Loratidine, Cetrizine, Anti-fungals and Statins like Rosuva and Atorva)
- Joint ventures in setting up production facilities in China by Indian Manufacturers. (Chinese pharmaceutical industry has attracted 3497 foreign investment projects with an investment of US$ 5.594 billion. There are 1500 joint ventures with foreign enterprises in China.)
- Investment agreements in undertaking manufacturing of API, formulation development and Research.

Besides generic drugs, the potential to export to China exist in vaccines against Hepatitus B, Polio, Measles, Whooping cough, diphtheria and Tetanus. However, exports have remained stagnant mainly due to regulatory barriers. Given this, the areas that need an immediate action are:

- Reduction in the time for registration of APIs/ Formulations : In China, registering of APIs and Formulations require 3 to 5 years while Chinese companies in India can be registered in 9 months.
- Harmonisation of registration requirements for generic and other pharma products. The Chinese FDA authorities require raw data maintained by companies for analysis of products. Such regulatory compliances are not necessary in developed country markets like USA, Europe, Australia.

[9] Based on inputs from Pharmaceutical Industry Association.

In this regard, a joint cell with representatives of SFDA, DGCI to discuss the regulatory requirements, registration fees and scrutiny process.

- Indian products are given fast track registrations in Singapore, UAE and most Middle East countries if the products are already approved by FDA of regulated markets like USA, EU, Australia. China can also accord time bound registrations for such products.
- Preference to PEPFAR products: WHO certifies pharma companies by according prequalification and thereby enabling countries to import bio pharmaceuticals without further registration. Several Indian companies are already pre-qualified and China should consider according preference to such products and companies for import of vaccines from India.

Another potential area for enhancing India's export opportunities to China is sourcing of drugs by SOEs from approved vendors at negotiated prices. About 60% of pharmaceutical products in China are sold through hospitals and sourcing from India will not only reduce the cost of health care in China but will also provide a sustainable opportunity for Indian companies.

The export of medical instruments is another area where India can explore the opportunity in China. China's imports of medical instruments is close to US$ 2 billion in 2010 and India's share is about 0.8 %. Indian exports of these products to other markets is over US$ 250 million. If India is able to capture even 10% of the Chinese market then the spill over effects in terms of specialization and economies of scale can infuse faster growth and development of this segment.

4. Investment interests of India and China

China has emerged as the fifth largest overseas investor with an Outward Direct Investment (ODI) of US$68 billion in 2010 and a cumulative ODI of US$ 310 billion. The main objective of investments abroad is to strengthen their existing production capability and improve their international competitiveness. Thus, the strategy for Chinese investments abroad is not to focus in areas where they already have comparative advantage; instead focus in areas which enhance their technological capability. In this regard, the priority areas for Chinese investments abroad are: *first*, advance technology, management or brand names in the same industry as that of the investing companies; *second*, commodities which are used more intensively in Chinese production chain; and *third*, service companies that could facilitate exports from China based companies.

In aligning with these broad objectives of Chinese ODI, India's interest in the inward FDI from China can be based on the following objectives. *First,* to identify sectors where Chinese expertise and India's investment requirements coincide and from which both countries gain in terms of making exports more competitive. *Second,* to identify sectors where China and India can partner for developing new products. And *third,* identify sectors which are of importance to Chinese production facilities and can also increase India's exports to China and the world.

On the basis of the above, the possible sectors of interest for Chinese investment flows to India are: development of transport infrastructure particularly in linking road and waterways infrastructure for reducing logistics costs, emerging businesses in sugar industry by-products like ethanol and power generation, productivity improvement focus in Paper and Iron and Steel industry.

India's outward investment to China can focus mainly to gain access into Chinese market, position to enter into Chinese global value chain links and enhance India's export opportunities to global markets. In this regard, investment opportunities exist in China's Chemical industry particularly in development of specialty chemicals and Pharmaceuticals.

5. Summary and Conclusions

India's trade imbalance with China has been increasing particularly from 2006 onwards. As India's major exports to China are Primary products, the above trade imbalance can be addressed if India is able to export finished goods and/or value added intermediates and enter into China's value chain of manufactured goods.

China's current emphasis on development of "Knowledge intensive industries" is a fall out of the rising wages and appreciation of RMB against dollar. By 2015, it is expected that average wages in China would rise by 80% thereby loosing competitiveness in labour intensive industries particularly when compared to other South East Asian countries. These developments provide new oppurtunities to India to diversify and increase value-added exports to China.

The focus of this paper is to identify potential export opportunities for India by identifying the products of immediate interest. The basic premise here is that if China's domestic demand is expanding and India has supply capability then export opportunities would arise for India. Further, these export opportunities can be realized if the identified products are globally competitive.

Following this, a detail analysis of major world imports of China has been carried out and mapped with India's major world exports. 30 products at HS 4 digit have been identified with potential export opportunities for India. Of these, 7 products are globally export competitive. Most of these identified products are value added intermediaries.

In addition to these, there are a number of products where India's share in China's imports is less than 1%. These are detailed in Annexure 1. Most of these products fall under Electrical Machinery (85), Machinery (84), Optical equipment (90), Plastics (39) and Organic Chemicals (29).

Thus, while potential export opportunities exist, there are market access barriers that emerge as major constraints for expanding India's exports to China. A brief analysis of the tariffs and Non-tariff barriers for the identified products has been carried out. Tariff does not seem to emerge as a major constraint for most products except for agricultural products. In addition to tariff, each product is subjected to a number of NTBs that cover Import licensing and Inspection, Registration of environmental management, labeling requirements etc. In addition to these, agricultural products are subjected to Food safety law, Quarantine measures, Food additive standards, MRL standards etc.

These above restrictions vary from sector to sector. As a case in point, the constraints for expanding Pharmaceutical exports to China has been detailed. While a detail sector wise analysis is necessary, the need to address non-tariff barriers and trade facilitation measures to increase India's market access to China is underlined. In this context, it is argued that the investment oppurtunities for Indian companies need to be enhanced to take advantage of the domestic market and also circumvent the non-tariff barriers.

Given the immense growth potential in both countries, deepening of trade and economic cooperation between the two countries in resolving the trade issues through dialogue and discussions is necessary. In this regard, a platform for discussions is provided by the India-China Joint Economic Group (JEG) on Economic Relations, Trade, Science and Technology to strengthen the bilateral trade and economic relations. In the nine JEGs concluded so far, China has committed to relaxing the NTB provisions for agricultural products. Similar efforts need to be made for the other identified sectors particularly that of Pharmaceuticals, Electrical Machinery and Machinery products. Efforts are also necessary to open up investment opportunities in China which will facilitate expansion of India's exports to China.

Table 1: China – India : Comparison of Select Trade Indicators

Year	*GDP per capita (US $)*		*World Export (US $ Million)*		*World Import (US $ Million)*	
	China	India	China	India	China	India
1990	314	374	62,091	17,969	53,345	23,580
2000	949	453	249,203	42,379	225,024	51,523
2005	1,731	762	761,953	99,620	660,206	142,842
2010	4,428	1,475	1,578,270	221,406	1,396,200	328,360

Source: World Development Indicators

Table 2: Bilateral Trade Flows between India and China

Millions USD

Year	India's total exports to China	India's total imports from China	Trade deficit/surplus	Total trade	% share of China in Total trade
2000	734.89 (1.73)	1477.58 (2.79)	-742.69	2212.47	2.32
2001	922.54 (2.10)	1827.55 (3.61)	-905.01	2750.09	2.91
2002	1531.60 (3.06)	2619.85 (4.56)	-1088.25	4151.45	3.86
2003	2567.16 (4.32)	3615.13 (4.99)	-1047.96	6182.29	4.69
2004	4098.51 (5.40)	6051.26 (6.11)	-1952.74	10149.77	5.80
2005	7183.79 (7.16)	10167.06 (7.22)	-2983.27	17350.85	7.19
2006	7829.17 (6.46)	15639.06 (8.78)	-7809.90	23468.23	7.84
2007	9491.98 (6.51)	24575.77 (11.24)	-15083.79	34067.75	9.35
2008	10093.93 (5.55)	31586.02 (10.00)	-21492.10	41679.95	8.38
2009	10370.05 (5.87)	30613.37 (11.49)	-20243.32	40983.42	9.25
2010	17439.99 (7.91)	41249.12 (11.78)	-23809.12	58689.11	10.29
2011	16717.79 (5.55)	55483.03 (12.00)	-38765.24	72200.81	9.45

Note: Figures in brackets represent percent share of China in India's total world exports / imports

Source: WITS

Table 3: India & China Trade: Terms of Trade & Relative Position

Year	China's Terms of trade (X÷M)	India's Terms of trade (X÷M)	Share of India in China's Total trade	Share of China in India's Total trade
2000	2.01	0.50	0.47	2.32
2001	1.98	0.51	0.55	2.91
2002	1.71	0.59	0.69	3.86
2003	1.41	0.71	0.75	4.69
2004	1.48	0.68	0.91	5.80
2005	1.42	0.71	1.27	7.19
2006	2.00	0.51	1.39	7.84
2007	2.59	0.39	1.63	9.35
2008	3.13	0.32	1.69	8.38
2009	2.95	0.34	1.93	9.25
2010	2.36	0.42	2.05	10.29
2011	3.32	0.30	2.05	9.45

Source: WITS

Table 4: India & China Trade: Product Structure

	2005	2008	2010	Share of China in World export / import (%) in 2010	Share in Total exports / Imports to China (%) In 2010
India's Export (US $ Million)					
(i) Fish & crustacean(3)	29.97	52.28	245.87	8.7	0.54
(ii) Food residues (23)	63.06	167.49	178.48	7.1	1.17
(iii) Cotton (52)	246.86	779.63	2106.89	21.4	8.70
(iv) Organic chemicals (29)	435.45	456.05	757.98	8.1	5.22
(v) Oresishages (26)	3956.55	6519.47	6908.76	85.1	47.39
(vi) Iron & steel (72)	731.51	205.60	739.79	8.1	4.59
(vii) Plastics (39)	338.26	165.97	370.97	10.8	2.84
(viii) Copper (74)	104.62	177.66			
India's Import (US $ Million)					
(i) Mineral fuels (27)	831.50	1498.5	637.56	1.0	3.84
(ii) Organic Chemicals (29)	1200.93	2857.48	3741.42	30.0	9.79
(iii) Plastics (39)	174.24	570.41	789.51	11.0	1.99
(iv) Iron & steel (72)	263.79	1741.57	2142.63	14.0	4.63
(v) Electrical machinery (85)	2476.62	8477.32	10958.36	37.0	29.19
(vi) Electronics (84)	1836.73	6075.82	7529.14	22.0	19.61

Source: WITS

Table 5: China's Major Imports from India

	High share	Low share
High growth	5201: Cotton not carded / Combed 7403: Refined Copper and Copper alloys* 7102: Diamonds worked / not worked*	5205: Cotton yarn* 7202: Ferro-alloys* 1515: other vegetable fats 2902: cyclic hydrocarbon* 2906: Cyclic alcohols 6703: Human hair
Low growth	2601: Iron ores*	2516 Granite 3902: Polymers* 2610: Chromium ores 2818: Aluminium oxide* 3901: Polymers of ethylene 4104: Leather of Bovine* 2933: Heterocyclic compound

Source: WITS

Note: The products marked as * are those are competitive based on RCA index.

Table 6: Comparison of China's Major Imports from India and World

Millions USD

Product Code	Product Description	China's imports from World in 2000	Share of imports from India in 2000	China's imports from World in 2005	Share of imports from India in 2005	China's imports from World in 2007	Share of imports from India in 2007	China's imports from World in 2010	Share of imports from India in 2010	China's imports from World in 2011	Share of imports from India in 2011	CAGR growth
2601	Iron ores and concentrates, includi	1857.70	16.01	18379.48	28.43	33797.70	23.18	79722.41	14.11	112408.91	8.60	High
2818	Artificial corundum; aluminium oxid	656.71	6.44	2662.75	13.63	2045.89	10.51	1582.33	5.57	868.45	1.76	Low
2902	Cyclic hydrocarbons	1262.30	0.00	5595.20	0.07	8873.18	2.80	9963.00	1.65	14904.73	1.62	Low
2933	Heterocyclic compounds with nitroge	549.15	4.05	1628.05	5.41	1921.62	5.80	2696.70	4.61	3381.96	3.87	Low
3901	Polymers of ethylene, in primary fo	2359.25	1.02	6079.39	3.92	6862.76	1.85	11049.51	0.41	12705.94	1.37	Low
3902	Polymers of propylene or of other o	1221.67	2.02	3514.68	3.51	4701.69	3.24	6825.25	4.17	7953.48	5.27	Low
4104	Leather of bovine or equine animals	1755.31	0.47	2577.74	2.89	3362.89	3.71	3167.26	4.06	3272.33	4.67	Low

5201	Cotton, not carded or combed	73.88	0.00	3191.11	4.73	3476.99	24.98	5654.56	30.70	9466.07	28.02	High
5205	Cotton yarn, with >=85% cotton, not	698.12	23.10	891.95	12.63	1077.09	12.42	2191.03	17.83	2535.68	20.39	High
7102	Diamonds worked/not worked but not	693.84	7.74	1939.65	14.31	2839.66	13.28	3971.11	20.86	6111.29	19.46	High
7202	Ferro-alloys	21.35	0.00	634.83	8.35	2496.27	7.49	3345.07	9.51	3688.26	6.96	High
7403	Refined copper and copper alloys,un	1229.57	0.73	4385.54	2.77	10634.81	4.95	22244.16	3.74	25109.65	8.32	High

Source: WITS

Table 7: Tariff and NTBs on India's Major Exports to China

HS CODES	PRODUCT DESCRIPTIONS	TARIFF RANGE AS ON 2012	DOCUMENTS TBT
2601	Iron ores and concentrates, including roasted iron pyrites	**0-0%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
5201	Cotton, not carded or combed	**0-40%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
7403	Refined copper and copper alloys, unwrought	**0-1%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
7102	Diamonds, whether or not worked, but not mounted or set	**0-8%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
5205	Cotton yarn (other than sewing thread), containing 85 % or more by weight of cotton, not put up for retail sale	**5-5%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
2516	Granite, porphyry, basalt, sandstone and other monumental or building stone, whether or not roughly trimmed or merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape	**0-3%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
3902	Polymers of propylene or of other olefins, in primary forms	**6.5-6.5%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
2610	Chromium ores and concentrates	**0-0%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
7202	Ferro-alloys	**0-9%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
2818	Artificial corundum, whether or not chemically defined; aluminium oxide; aluminium hydroxide	**0-5.5%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6,NTB-7,NTB-8,NTB-9,NTB-10,NTB-11,NTB-12
1515	Other fixed vegetable fats and oils (including jojoba oil) and their fractions, whether or not refined, but not chemically modified	**10-20%**	NTB-13,NTB-14,NTB-15,NTB-16,NTB-17,NTB-18,NTB-19,NTB-20,NTB-21,NTB-22,NTB-23,NTB-24,NTB-25,NTB-26,NTB-27
2902	Cyclic hydrocarbons	**2-2%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6,NTB-7,NTB-8,NTB-9,NTB-10,NTB-11,NTB-12
3901	Polymers of ethylene, in primary forms	**3-6.5%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6
2906	Cyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives	**3-5.5%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6,NTB-7,NTB-8,NTB-9,NTB-10,NTB-11,NTB-12
6703	Human hair, dressed, thinned, bleached or otherwise worked; wool or other animal hair or other textile materials, prepared for use in	**20-20%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-6

	making wigs or the like		
4104	Leather of bovine or equine animals	**3-8%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6,NTB-28
2933	Heterocyclic compounds with nitrogen hetero-atom(s) only	**4-9%**	NTB-1,NTB-2, NTB-3,NTB-4,NTB-5,NTB-6,NTB-7,NTB-8,NTB-9,NTB-10,NTB-11,NTB-12

Table 8: India's Export Potential Products to China

Product Code	Product Description	CHINA'S IMPORT FROM WORLD		INDIA'S EXPORT TO WORLD		CAGR OF CHINA'S IMPORTS	INDIA'S GLOBAL RCA	
		2005	2010	2005	2010		COMPETITIVE	NON COMPETITIVE
	Fish & crustacean, mollusc & other							
303	Fish, frozen, (excl. those of 03.04	2191.983656	3131.804485	239.962897	590.465355	LOW	COMPETITIVE	
	Mineral fuels, oils & product of th							
2707	Products of the distillation of coa	527.738181	2788.397841	140.944012	661.408039	HIGH	COMPETITIVE	
2710	Petroleum oils, etc, (excl. crude);	10424.91036	22427.51903	10096.58629	36641.3129	HIGH	COMPETITIVE	
	Pharmaceutical products.							
3004	Medicaments of mixed or unmixed pro	1582.459797	5485.933092	2011.306906	5153.395476	HIGH	COMPETITIVE	
	Plastics and articles thereof.							
3907	Polyethers and epoxide resins; poly	4356.211184	7646.242049	394.297479	557.826797	LOW		NON COMPETITIVE

3920	Other plates..., of plastics, not r	2360.420825	6683.084347	294.416777	560.288984	HIGH		NON COMPETITIVE
	Man-made filaments.							
5407	Woven fabrics of synthetic filament	1914.123207	1814.671034	610.560037	1402.852882	LOW	COMPETITIVE	
	Natural/cultured pearls, prec stone							
7110	Platinum,unwrought,in semi-manufact	899.285531	4716.512658			HIGH		NON COMPETITIVE
	Iron and steel.							
7208	Flat-rolled products of iron/non-al	2698.235358	1952.269412	708.509627	837.040917	LOW		NON COMPETITIVE
7209	Flat-rolled products of iron/non-al	4620.409712	3073.517523	348.819462	470.56065	LOW	COMPETITIVE	
7210	Flat-rolled products of iron/non-al	3917.325877	3896.525488	1256.652595	1423.301911	LOW	COMPETITIVE	
7219	Flat-rolled products of stainless s	5012.898502	1683.262233	356.048063	140.406844	LOW		NON COMPETITIVE
	Articles of iron or steel.							
7318	Screws,bolts,nuts,screw hooks,rivet	1086.642412	2483.068997	199.414392	347.764161	LOW		NON COMPETITIVE
	Copper and articles thereof.							

7408	Copper wire	1149.592512	1931.466822	344.187029	472.300973	LOW		NON COMPETITIVE
	Nuclear reactors, boilers, mchy & m							
8409	Accessory parts suitable for engine	1488.70786	3315.189272	370.529242	641.99622	LOW		NON COMPETITIVE
8413	Pumps for liquids,with or without m	1654.099915	4051.552961	164.163901	395.736476	HIGH		NON COMPETITIVE
8414	Air or vacuum pumps,exhausting and	2999.78036	4938.949417	159.847591	482.116416	LOW		NON COMPETITIVE
8419	Machinery,plant or lab equipment fo	1902.792681	2583.801555	127.361597	780.363969	LOW		NON COMPETITIVE
8479	Machines,mechanical appliances havi	8585.842262	20744.900 72	260.542545	316.937289	HIGH		NON COMPETITIVE
8481	Tapes,valves,for pipes pressure red	2697.117661	6060.631274	295.310465	538.897717	LOW		NON COMPETITIVE
8483	Transmission shafts,cranks,clutches	1801.580463	5238.595895	147.224083	341.419694	HIGH		NON COMPETITIVE
	Electrical mchy equip parts thereof							
8504	Electrical transformers,static	3327.721288	7630.266188	335.052528	882.691098	LOW		NON COMPETITIV

	conv							E
8525	Transmission apparatus for radio,TV	2243.593008	4515.5257	55.353017	1517.255051	LOW		NON COMPETITIVE
8536	Electrical apparatus for making con	4009.814824	7953.553815	169.008283	407.216903	LOW		NON COMPETITIVE
8538	Parts suitable for the apparatus of	2341.252105	4034.993823	45.839179	544.129053	LOW		NON COMPETITIVE
8541	Diodes,semi-conductor devices,light	9588.528021	17445.32526	126.700075	633.513877	LOW		NON COMPETITIVE
8544	Insulated wire,cable,other insulate	2086.849226	3202.585399	146.943242	383.256029	LOW		NON COMPETITIVE
	Vehicles o/t railw/tramw roll-stock							
8703	Motor cars and other motor vehicles	4690.70741	28921.18677	954.333707	4510.552918	HIGH		NON COMPETITIVE
8708	Parts and accessories of the motor	6710.498857	17963.54392	1022.013036	1923.627696	HIGH		NON COMPETITIVE
	Optical, photo, cine, meas, checkin							
9018	Medical instruments,veterinary equi	1398.114776	3093.648167	169.495841	377.087197	HIGH		NON COMPETITIVE

Table 9: India's Export Potential Products: Competitive Products

Product Code	Product Description	China's Import from World		India's Export from World		CAGR of China's Imports	RCA
		2005	2010	2005	2010		
303	Fish, frozen, (excl. those of 03.04	2191.984	3131.804485	239.9629	590.4654	LOW	COMPETITIVE
2707	Products of the distillation of coa	527.7382	2788.397841	140.944	661.408	HIGH	COMPETITIVE
2710	Petroleum oils, etc, (excl. crude);	10424.91	22427.51903	10096.59	36641.31	HIGH	COMPETITIVE
3004	Medicaments of mixed or unmixed pro	1582.46	5485.933092	2011.307	5153.395	HIGH	COMPETITIVE
5407	Woven fabrics of synthetic filament	1914.123	1814.671034	610.56	1402.853	LOW	COMPETITIVE
7209	Flat-rolled products of iron/non-al	4620.41	3073.517523	348.8195	470.5607	LOW	COMPETITIVE
7210	Flat-rolled products of iron/non-al	3917.326	3896.525488	1256.653	1423.302	LOW	COMPETITIVE

Source: WITS

Table 10: India's Export Potential Products: Tariffs and NTBs

HS CODE	PRODUCT DISCRIPTION	TARIFF AS ON 2012	DOCUMENT TBT/SPS
2710	Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70 % or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the ba	0-9%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
3004	Medicaments (excluding goods of heading 3002, 3005 or 3006) consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses (including those in the form of transdermal administration systems) or in forms or packings	3-6%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-29,NTB-30,NTB-31,NTB-32
8703	Motor cars and other motor vehicles principally designed for the transport of persons (other than those of heading 8702), including station wagons and racing cars	3-25%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-33
7210	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, cold-rolled (cold-reduced), not clad, plated or coated	4-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8708	Parts and accessories of the motor vehicles of headings 8701 to 8705		NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-33
5407	Woven fabrics of synthetic filament yarn, including woven fabrics obtained from materials of heading 5404	10-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8525	Transmission apparatus for radio-broadcasting or television, whether or not incorporating reception apparatus or sound recording or reproducing apparatus; television cameras, digital cameras and video camera recorders	0-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-34
7208	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, hot-rolled, not clad, plated or coated	5-6%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8504	Electrical transformers, static converters (for example, rectifiers) and inductors	0-14%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-34
8409	Parts suitable for use solely or principally with the engines of heading 8407 or 8408	2-8.40%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
7408	Copper wire	2-8%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8481	Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like, including	2-8%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6

	pressure-reducing valves and thermostatically controlled valves		
3907	Polyacetals, other polyethers and epoxide resins, in primary forms; polycarbonates, alkyd resins, polyallyl esters and other polyesters, in primary forms	3-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8419	Machinery, plant or laboratory equipment, whether or not electrically heated ovens and other (excluding furnaces, equipment of heading 8514), for the treatment of materials by a process involving a change of temperature such as heating, cook	0-35%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
84191910	Other instant-aneous or storage water heaters,non-electric:Solar energy water heater	35%	
3920	Other plates, sheets, film, foil and strip, of plastics, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
2707	Oils and other products of the distillation of high temperature coal tar; similar products in which the weight of the aromatic constituents exceeds that of the non-aromatic constituents	2-7%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8541	Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes; mounted piezo-electric crystals	0-0%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-34
8544	Insulated (including enamelled or anodised) wire, cable (including co-axial cable) and other insulated electric conductors, whether or not fitted with connectors; optical fibre cables, made up of individually sheathed fibres, whether or not	0-21%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-34
8414	Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters	3-12%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
7209	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, cold-rolled (cold-reduced), not clad, plated or coated	3-6%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8479	Machines and mechanical appliances having individual functions, not specified or included elsewhere in this Chapter	0-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
303	Fish, frozen, excluding fish fillets and other fish meat of heading 0304	2-12%	NTB-13, NTB-14,NTB-15,NTB-16,NTB-17,NTB-18,NTB-19,NTB-20,NTB-21,NTB-22,NTB-23,NTB-24,NTB-25,NTB-26,NTB-27,NTB-35
	Pumps for liquids, whether or not fitted with a	3-10%	NTB-1,NTB-2,NTB-

8413	measuring device; liquid elevators		3,NTB-4,NTB-5,NTB-6
8536	Electrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (for example, switches, relays, fuses, surge suppressors, plugs, sockets, lamp-holders and other connectors, junction boxes)	0-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
9018	Instruments and appliances used in medical, surgical, dental or veterinary sciences, including scintigraphic apparatus, other electro-medical apparatus and sight-testing instruments	0-8%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8483	Transmission shafts (including cam shafts and crank shafts) and cranks; bearing housings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers, including torque converters; flywheels and pulleys, including	2-8%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
8538	Parts suitable for use solely or principally with the apparatus of heading 8535, 8536 or 8537	7-8.40%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6,NTB-34
7219	Flat-rolled products of stainless steel, of a width of 600 mm or more	2-10%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6
7110	Platinum, unwrought or in semi-manufactured forms, or in powder form	0-3%	NTB-1,NTB-2,NTB-3,NTB-4,NTB-5,NTB-6

Source: WITS

Import Licensing and Inpsection.doc	NTB-1	General requirement for the Labeling of Flavourings.	NTB-21
Advertising and Sampling Rules of China.doc	NTB-2	Guidelines for Use of Flavorings.	NTB-22
Goods Prohibited from Import (No 1).	NTB-3	Notice on Issues concerning t of Feeds & Feed Additives.	NTB-23
Implementation of Commodity Inspection Law.	NTB-4	Pathogen Limits for Foods.	NTB-24
List of Articles prohibited or Resticted for Import & Export.	NTB-5	Standards for Inspection on Import Food & Food Additives.	NTB-25
Commodity Inspection Law.	NTB-4	Maximum Residue Limits for Pesticide in Food.	NTB-26
Goods Prohibited from Import (No 2).	NTB-6	Pesticide MRL Standard (2005).	NTB-27
Examination & Approval of Safety Management of Agricultural GMO's.	NTB-13	1)_Outline_of_Methods_for_the_Administration_of_Medicine_Recall_(SFDA_Order_29).doc	NTB-29
General Labellling Requirements.	NTB-14	Drug_Administration_Law.pdf	NTB-30
Health Food Registration.	NTB-15	Provisions_for_Drug_Advertisement_Examination.pdf	NTB-31
Measures for the Administration on the Inspection & Quarantine of the GMO's Products Entering & Exiting.	NTB-16	Drug Specific Regulation	NTB-32
The Food Safety Law China PR.	NTB-17	Compulsory Certification of Motor Vehicles	NTB-33
Elimination of Selenium Food Contaminant Standard.	NTB-18	Custom Regulation on Commodities involved in Processing of Mechanical and Electrical Products	NTB-34
Food Additive Hygiene Standard.	NTB-19	Rules of Inspection and Quarantineon Entry Exit Aquatic Products	NTB-35
Food Additive Hygiene Standard (1997 Supplement).	NTB-20		

Annex 1

India's Exports to China with less than 1% Share

(a) *Electrical Machinery* : Electric Motors and Generators (8501), Electrical Transformers (8504), Electrical Telephonic (8517), Transmission Operators (8525), Records, Tapes (8524), Electrical Apparatus (8536), Printed Circuits (8534), Diodes, Semi Conductor devices (8541), Insulated Wire, Cable (8544).

(b) Machinery : Compression-Ignition (8408), Accessory Parts (8409), Pumps for liquid (8413),Air or Vacuum pumps (8414), Machinery, Lab equipment (8419), Accessory parts (8431),Automatic data processing (8471), Parts (8473),Mechanical Appliances (8579), Tapes, Valves for Pipes (8481).

(c) Optical, Equipment: Optical Fibres (9001), Medical instruments (9018), X-ray Apparatus (9022)

(d) Plastics: Polymers of Ethylene (3901), Polymers of Propelene (3902), Polytheres (3907), Other Plates(3920), Plastic articles (3926)

(e) Organic Chemicals : Acylic hydrocarbons (2901), Cyclic hydrocarbons (2902), Acyclic alcholos (2905), Polycarboxylic acids (2917), Heterocyclic compounds (2933)

(f) Copper Articles: Refined Copper and Copper alloys (7403), Copper wire (7408). (The share of India's exports for these products is around 3%).

(g) Iron and Steel : Ferro Alloys (7202), Flat rolled products (7208), Flat rolled products-non alloy(7209), Flat rolled products- steel (7219).

(h) Vehicles : Motor cars (8703), Parts and Accessories (8708). For 8703, tariff is high at 25% while for 8708, tariff is between 6 to 10%.