

“Assessing the Trade Potential between India and China”*ShakeebaTaqdees¹**MohdJaved²**Afsah Sarfaraz³***Abstract**

India and China are emerging as the new trendsetters in the global economy as they represent Asia's largest and most dynamic societies. Both the countries together constitute one-third of the total world population and one-fourth of the world's skilled labour force. The flourishing bilateral trade between the two titans is the strongest pillar of their rapprochement. Since the two countries are geographically integrated, border trade between the nations brings an economic transformation in their remote and underdeveloped regions. Against this backdrop, the present paper tries to analyze the competitiveness of the exports and intensity of imports of India and China. In addition to this, the bilateral trade potential between India and China is also being analysed. The competitiveness of exports is analysed by the Revealed Comparative Advantage (RCA) Index and intensity of imports is analysed by Revealed Import Intensity (RID) Index. Both the indices are matched to ascertain the products in which the trade potential exists in the two countries. The finding of the study revealed that there exists a moderate amount of trade potential between the two countries. If the exports are extended in the commodities in which trade potential exists, this can lead to a substantial increase in bilateral trade.

Keywords: Trade potential, Bilateral trade, Competitiveness, Import intensity, Comparative advantage.

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I. Introduction:

Both India and China are among the fastest-growing economies in the world, as witnessed by their recent rapid economic growth momentum. Their rapid growth has caused concerns about their trade prospects, future growth, and implication for other countries. Since the early 2000s, both countries came to be recognised as the economic powerhouses of the world. The market liberalisation process and ongoing economic reforms have opened the new vistas for economic opportunities between the two countries. Sustained growth in these two titans offers a platform of lifting one-third poor of the world above the poverty line in the future. Institutional changes and trade liberalisation are the main forces behind the growth experiences of the two countries. China and India are noticeable globally, not only because they are fast-growing developing countries but also because they have an enormous population. Figure 1 (Appendix) shows the growth rate of India and China from 1995 to 2017. India and China have strong cultural and political links, and they also share a common history. Bilateral trade between them is the most substantial reason behind their rapprochement. The economic relations between the two titans and relative activities are one of the most flourishing issues of internal connections.

Evelyn S. Devadason (2016) accesses the massive untapped potential for broader economic cooperation between China and India. The study revealed that both the countries had diversified their trade structure that indicates a higher trade potential. The study also finds that there is a scope for expanding IIT (intra-industry) between India and China. Result of the study also showed that there exist contrasting differences in quality of products traded by both the countries. These differences indicate that competition in the manufacturing sector is still limited and has prospects for trade expansion.

Srivastava, Anupam (2007) discusses Indo-China security relations and highlights the key factors to strengthen economic ties. These factors also support sustainable economic growth. Authors discuss that China needs to expand its relationship with India and to other economies of South Asia. At the same time, India should seek to reap advantage from the expanded market that China offers. The article also discusses economic linkages and overlaps between the economy and security dimensions.

Mahvash Saud Qureshi and Guanghua Wan (2008) find moderate complementarity in the export-import structure of India and China. By computing RCA index, the analysis

reveals that the export structure of China is changing from labor-intensive products to skill-intensive and from medium to high technology products. The study also suggests that India specialise in low-technology products and is a strong competitor for its neighboring countries.

Veermani(2006) found that China's exports and comparative advantage had undergone a greater degree of structural change throughout the study than India. The study found that in several products, India has an RCA value greater than China, but her share in these products is much lower than that of China.

Meghnand Desai (2005) discusses the shape of political economies and the developmental path and historical legacies of India and China. The article highlighted the political relations and made a comparative study of economies of both countries. The study discusses that both countries share the same development paths. In the first phase, both considered the state as the engine of growth, while in the second phase, both countries started liberalising their economies.

Trade Reforms in India and China:

Before implementing trade reforms, both India and China were closed economies following import substitution policies. Various control mechanisms like quantitative restrictions, prohibitive tariffs, and import licensing substantially reduced external trade possibilities. The open-door policy of China in 1978 promoted liberalisation of imports and encouraged the building up of the export-oriented sector. China significantly improved its foreign trade by establishing Open Economic Zones (OEs) in 1982. India started liberalizing its economy in the mid-1980s. India had increased the number of goods to be imported under the 'open general license.' Earlier, the list was only confined to the capital goods and raw material that have no domestic substitute. Rules were such that the firm that qualified for import license was exposed to bureaucratic discretion and resulted in corruption. Reforms introduced by Indian authorities include a reduction in canalization, expansion of replenishment import licenses, and reduction of import duties on capital goods. Figure 2 (Appendix) spells out that trade liberalisation was more prominent in China than in India. As shown in Figure 2, China's measure of trade openness increased from 12.42 percent in 1980 to 64.8 percent in 2006; after that, it showed a declining trend and reached 37.80 percent in 2017. For India, openness increased from 15.55 percent in 1980 to 41.07 percent in 2017 with some fluctuations in between. OEZ was established in China in order to attract FDI and to

promote exports. These zones enabled investors to establish factories where they can enjoy preferential tax and administrative treatment (like duty-free imports to produce exports), collaboration with foreign companies, payments at market-based wage rates, and avoidance of prohibitive taxes of states. Therefore, foreign investors perceive China as more profitable than India. Figure 3 (Appendix) shows an increasing trend in FDI for both India and China from 1980 to 2017. The given figures also show that China had attracted a lot more FDI than India in these consecutive years. China and India have reduced their tariff rates under trade liberalization policy, but China started reducing its tariff rate much earlier than India. Figure 4 (Appendix) shows the mean tariff rate for India and China from 1990 to 2017. The statistics clearly stated that both countries had reduced their tariff substantially.

Reforms in the areas of openness, tariff, and FDI resulted in a sustained increase in bilateral trade between India and China. Reforms were more pronounced and better implemented in China than in India. Due to varying degrees of openness and differences in the role of the manufacturing and service sector, both countries have followed different growth paths. China had witnessed rapid growth in the manufacturing sector. India, in contrast, had seen high growth in the service sector, which accounts for a large amount of its GDP. Table 1 (Appendix) shows that India's exports to China as well its imports from China had increased from 1995 to 2017. But the growth in imports is much higher than the growth in exports. Consequently, the trade deficit of 1995 that stood at US\$ 528.55 million, increased to US\$ 59435.59 million in 2017. Given the economic structure of the two titans, the opportunities for cooperation exist in manufacturing and service sector. Besides, geographical proximity and large market size would also facilitate the exploitation of their synergies. Trade potential between the two countries is yet to be explored and exploited fully. Therefore, there is a need to discuss the opportunities India and China possess that occur from the differences and complementarities in their internal and external sector with particular reference to bilateral trade. It is in this context of their fast-changing equation; the paper tries to ascertain the competitive position of exports of both the countries by calculating the index of Revealed Comparative Advantage (RCA). The study also attempted to access the import intensity of their imports by calculating Revealed Import Dependency (RID) index. In addition to competitiveness and import intensity, the present paper also tries to analyze the bilateral trade potential between India and China by matching both the comparative advantage index and import dependency index. The present empirical work provides a picture of prospects of future trade between the two countries.

The study finds that the export competitiveness and import intensity of India and China have changed over the period. Besides, the study also finds that moderate trade potential exists between India and China, given the export-import structure of both the countries. The study highlights that out of 97 commodities, India's exports are competitive in 42 products, whereas China has a comparative advantage in 49 products at HS-2-digit level. The result of the RID index shows that in 21 products, import intensity is high for India's imports, and for China, 30 products have high import intensity. The study analysed that China can extend its exports in 10 commodities to India, while India's export potential to China lies in 12 commodities based on calculated indices.

The scheme of the study is as follows. In section II, data and methodology have been discussed. Section III deals with results and discussion. Section IV concluded the study.

II. Data and Methodology:

For the present study export and import data of India, China and World are collected from UN Commodity Trade Statistics. 97 product categories at HS-2-digit level of commodity classification are being taken for analysis purposes.

To explore the dynamics of specialisation in India and China, we have calculated the Balassa's index (1965) of RCA. The period of the study is from 1995-2017. The Index is defined as:

$$RCA_{ij} = \frac{X_{ij}/X_i}{X_{wj}/X_w}$$

Where X_{ij} and X_{wj} represent the product j export from country i and product j total export of the whole world. X_i and X_w denote country i total exports and total global exports.

The value of index lies between zero to infinity. An index greater than one indicates that the export product is highly competitive and index less than one indicate that the product is uncompetitive in the international market. The higher the value of the index the more is the competitiveness of the product.

Import intensity is analysed by calculating the RID index. The index enables us to identify the commodities for the consumption of which a country highly depends on another country. As the RCA index shows the competitiveness of exports in the same way RID index shows how intensively the country is dependent on imports. We can also say that the index

tells us about the revealed comparative disadvantage of the commodity traded by the country. The index is defined as:

$$RID = \frac{M_{ij}/M_i}{M_{wj}/M_w}$$

Where M_{ij} and M_{wj} are product j import of country i and total world imports of product j . M_i and M_w denote country i total import and total global imports. The value of the index lies between zero to infinity. The value less than one indicate that the imports are not intensive and the value greater than one indicates that imports are highly intensive. The high the value of index more intensive the imports are.

In addition to competitiveness of exports and the intensity of imports, present study also finds the trade potential between India and China. The average RCA index of a country is matched with the average RID index of another country to access trade potential. India's export potential to China exists for the products in which India has RCA greater than one, and China also has RID greater than one. Similarly, China's export potential to India lies in the commodities in which China has RCA higher than one, and India had RID greater than one.

III. Results and Discussions:

(i) China's Competitive Advantage:

RCA index greater than one of India for every five years from 1995 till 2017 is shown in Table 2(Appendix). The analysis shows that out of 97 products taken for analysis there are 46 products in which China's RCA is higher than one. This analysis indicates that China's exports are competitive in these 46 products. Some commodities show a decline in RCA value over the given years while some shows improvement in the index value. Products like umbrella, walking sticks riding crops and parts thereof (66); prepared feathers, artificial flowers, articles of human hairs (67); silk (50), manufactures of straw, basket ware, plaiting material (46); articles of leather, travel goods, handbag and similar containers (42); products of animal origin (5) have shown high RCA in the early period of analysis, but the value declined over the year. The products like articles of base metals (83); tools, implements, cutlery, spoon and forks (82); nickel and articles thereof (75); articles of stones, plaster, cement, mica and similar material (68); knitted or crocheted fabric (60); articles of iron and

steel (73); special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery (58) shows more or less similar RCA value over the period of study. On the other hand some products like furniture; bedding, mattresses, cushions and similar stuffed furnishings; lamps and lighting fittings; prefabricated buildings (94); electrical machinery and equipment and parts thereof; sound recorders and reproducers, parts and accessories of such articles (85), glass and glassware (70), sewing thread of man-made filaments, whether or not put up for retail sale (54) have shown a rise in the value of RCA index. The value of the RCA index witness change for most of the products that mean the competitiveness of exports of China has changed during the period of study. Changing export structure of China reveals that export share of skill-intensive and medium to high technology product is increasing and those of labour intensive product is decreasing. The traditional export products like silk, products of animal skin, leather good and travel goods, footwear, and apparel have shown a decline in the value of the index. This decline can enable less developed countries to expand their export in the world market as the threat of China is reduced in these products.

(ii) India's Competitive Advantage:

Table 3 (Appendix) shows the RCA index greater than one for India. Out of 97 products, 40 products have shown RCA value higher than one. The RCA index of India also shows that the competitiveness of exports had changed from 1995 to 2017. Out of these 40 products, some products show the decline in the value of RCA while some show rise. The commodities like oil seeds and oleaginous fruits, miscellaneous grains, seeds and fruit, industrial or medicinal plants, straw and fodder (13); lac gums, resins and other vegetable saps and extracts (14); vegetable plaiting materials; vegetable products not elsewhere specified or included (15); residues and waste from the food industries, prepared animal fodder (23); silk (50); cotton (52); articles of apparel and clothing accessories, not knitted or crocheted (62); other made up textile articles, sets, worn clothing and worn textile articles, rags (63); natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof, imitation jewelry, coin (71); miscellaneous manufactured articles (96) have shown a decline in RCA index value. These products mainly consist of resource-based and low technology products. This indicates that the competitiveness of Indian exports in these products has declined over time. Some commodities like footwear, gaiters and the like; parts of such articles (64); articles of stone, plaster, cement, asbestos, mica or similar materials (68); pharmaceutical products (30);

tanning or dyeing extracts, tannins and their derivatives, dyes, pigments and other colouring matter, paints and varnishes, putty and other mastics, inks (32); explosives, pyrotechnic products, matches, pyrophoric alloys, certain combustible preparations (36), salt; sulphur; earths and stone; plastering materials, lime and cement (25); sugars and sugar confectionery (17) do not show a significant change in RCA index value. The products that do not show a significant change in RCA value mainly consist of medium to high technology. Some products show a rise in the value of the RCA. The products that show improvement in competitiveness of export include meat and edible meat offal (2); organic chemicals (29); tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter, paints and varnishes, putty and other mastics, inks (32); explosives; pyrotechnic products, matches, pyrophoric alloys, certain combustible preparations (36); miscellaneous chemical products (38); other vegetable textile fibres; paper yarn and woven fabrics of paper yarn (53); sewing thread of man-made filaments, whether or not put up for retail sale (54); man-made staple fibres (55); copper and articles thereof (74); aluminium and articles thereof (76); lead and articles thereof (78); zinc and articles thereof (79); ships, boats and floating structures (89). The products that show an improvement in the export competitiveness have mainly consisted of medium to high technology category. We can say that the export competitiveness of India declined in resource-based and traditional products while it improved in medium to high technology products throughout the study period.

The present analysis identified that the export competitiveness of India and China had changed during the period of the study. In accordance with relative factor endowments of India and China, the comparative advantage of both the countries lies primarily in unskilled labour-intensive goods. The comparative advantage of India and China is least in technology-intensive products, as expected. In spite of this, a gradual increase in comparative advantage in technology-intensive goods and human capital can be seen for both the countries. China holds a comparative advantage in a larger number of technology-intensive and unskilled labour products as compared to India

(iii) China's Import Intensity:

The RID index greater than one for China is shown in Table 4(Appendix). As can be seen from Table 4(Appendix), the value of RID index for China had also undergone a change during the period of the study. Out of 97 commodities analysed, it is found that 33 products have high import intensity as they show the value of index greater than one. Out of these 33

commodities, some products show change in index value while for some of the commodities index value more or less remain the same. Commodities that show an increase in import intensity include oil seeds and oleaginous fruits, miscellaneous grains, seeds and fruit, industrial or medicinal plants, straw and fodder (12); ores, slag and ash (26); organic chemicals (29); albuminoidal substances, modified starches, glues, enzymes (35); plastics and articles thereof (39); wood and articles of wood, wood charcoal(44); pulp of wood or of other fibrous cellulosic material, waste and scrap of paper or paperboard (47); copper and articles thereof (74). These articles are mainly resource-based, in which China has witnessed an increase in RID. The commodities like cereals (10), vegetable plaiting materials, vegetable products not elsewhere specified or included (14); animal or vegetable fats and oils and their cleavage products, prepared edible fats, animal or vegetable waxes (15); fertilisers (31); raw hides and skins (other than furskins) and leather (41); silk (50); cotton (52); sewing thread of man-made filaments, whether or not put up for retail sale (54); man-made staple fibres (55); wadding, felt and nonwovens, special yarns, twine, cordage, ropes and cables and articles thereof(56); Impregnated, coated, covered or laminated textile fabrics, textile articles of a kind suitable for industrial use(59); knitted or crocheted fabrics (60); umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof (66); articles of iron or steel (73) shown a decline in the value of RID index. This decline indicates that there is a decrease in the import intensity of these products. The items that showed a reduction in import intensity mainly consist of a resource-based and medium to high technology products. Some commodities do not display any significant change in the intensity of imports. Some of them are furskins and artificial fur, manufactures thereof (43); wool, fine or coarse animal hair, horsehair yarn and woven fabric (51); Other vegetable textile fibers; paper yarn and woven fabrics of paper yarn (53); wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof (56); nuclear reactors, boilers, machinery and mechanical appliances, parts thereof (84); electrical machinery and equipment and parts thereof; sound recorders and reproducers, and parts and accessories of such articles (85); clocks and watches and parts thereof (91). The items that do not show a major change in RID value are mainly from high technology products group. The above analysis indicates that there are fewer commodities in which no significant changes occur, but most of the commodities show a considerable change. Therefore, we can interpret that the import intensity of China had also undergone a change.

(iv) India's Import Intensity:

Table 5(Appendix) shows the product for which RID index has a value higher than one for India. Out of 97 products, 23 products have high import intensity. Some products show a change in the value of the index, while for most of the products, the value of the index does not show fluctuation. Products like animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes (15); silk (50); other vegetable textile fibers; paper yarn and woven fabrics of paper yarn (53); lead and articles thereof (78) have shown an increase in the value of index. The products for which the value of index does not show any significant changes are edible fruit and nuts; peel of citrus fruit or melons (8); sugars and sugar confectionery (17); salt, sulphur, earths and stone, plastering materials, lime and cement (25); mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes (27); inorganic chemicals, organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes (28); photographic or cinematographic goods (37); pulp of wood or of other fibrous cellulosic material, waste and scrap of paper or paperboard (47); impregnated, coated, covered or laminated textile fabrics, textile articles of a kind suitable for industrial use (59); nickel and articles thereof (75); zinc and articles thereof (79); tin and articles thereof (80). The commodities for which the value of RID had declined are edible vegetables and certain roots and tubers (7); organic chemicals (29); aircraft, spacecraft, and parts thereof (88); works of art, collectors' pieces, and antiques (97). From the above discussion, we can analyse that the maximum number of commodities do not show any significant change in the index value. Thus, the trends in imports structure of India did not undergo any noticeable change.

The above analysis shows that China has high import intensity in 33 products while India has high import intensity in 23 products during the period of the study. The value of import intensity indices revealed that China's import structure had undergone greater change as compared to India's import structure. In the case of China there are a small number of commodities that do not show a change in import dependency index.

(v) Analysing the trade Potential between India and China:

The bilateral trade potential is analysed for India and China in this section. RCA and RID values of both the countries are calculated from 1995 to 2017 and then their average value is taken for analysis purpose. When the calculated average RCA indices of India are matched with average RID indices of China and when China's average RCA indices are matched with

India's average RID indices, it is found that in total, there are 22 commodities that possess potential for future trade between India and China.

(vi) China's export potential to India:

For identifying the commodities in which China's export possess the prospects of trade to India, we look at the products in which China has average RCA greater than one and India too has average RID greater than one in the same product. Table 6(Appendix) shows the products that have prospects of trade between India and China. Out of 97 products taken for analysis, there are 10 products identified in which China can easily and efficiently expand its export to the Indian market. The products that show high trade potential are from different categories, ranging from traditional and resource-based products to high and medium technology products. Traditional export item of both the countries, silk (50) have shown the highest trade potential followed by other vegetable textile fibers; paper yarn and woven fabrics of paper yarn (53). Other traditional items in which China can extend its exports includes impregnated, coated, covered or laminated textile fabrics, textile articles of a kind suitable for industrial use (59); lead and articles thereof (78); zinc and articles thereof (79); tin and articles thereof (80). Ships, boats and floating structures (89) from high technology product also hold high trade potential. If China wants to increase its exports to India it can do so by increasing its exports in these products as these products show high trade potential between the two countries.

(vii) India's export potential to China:

India's export potential to China lies in the commodities in which India has RCA greater than one and China, too, have RID greater than one in the same product. 12 products out of 97 products have shown high export potential for India to China. These 12 products are shown in Table 7(Appendix). The average RCA of India meets with average RID of India in these products. The products that show highest trade potential are silk (50) and cotton (52), vegetable plaiting materials; vegetable products not elsewhere specified or included (14) and ores, slag and ash (26). The low trade potential is shown by organic chemicals (29) and least by iron and steel (72) out of 12 products showing export potential. The products that exhibit high trade potential for India are mainly from traditional and resource-based category with

some exceptions. This potential in traditional items may exist due to the reason that India had an underdeveloped manufacturing sector. Policy reforms are called for the development of the industrial sector to meet this end labor market reforms, facilitation of investment in infrastructure, and reduction of trade barriers are crucial. These policy changes will induce the multinationals to conduct FDI and hence, to augment the process of integrating the Indian industry with of global production activities.

IV Conclusion:

The analysis reveals that the export-import structure of China and India is changing from traditional to a sophisticated one. For many of the products, the value of indices changed substantially. In the case of China, the export structure is changing with the export shares of skill-intensive and medium to high-technology products increasing and those of labour-intensive products decreasing. These corroborate with the well-known notion of China's decreasing comparative advantages in its traditional export sectors such as silk, products of animal skin, leather goods and travel goods, footwear, and apparel. This reduction in comparative advantage can reduce the threat posed by China in labor-intensive products in the long run. It is thereby benefiting less developed countries that find it hard to compete with China. On the other hand, India specializes in resource base and low technology products like cotton, oilseeds, fibers, paper yarn, pearls, precious stone, and metals.

China highly relies on imports of resource-based products as products like raw hides and skin, fertilizers, wool, and woven fabrics have shown the highest value of the RID index. India also relies on imports for resource-based products like animal and vegetable fat, mineral fuels, mineral oil, organic chemicals, and inorganic chemicals. Though both countries rely on imports for resource-based products, the products that show high RID in both countries differ. Absence of highly disaggregated trade data prevents us from further exploring this issue.

As far as trade potential between the two countries is concerned, the analysis reveals that out of 97 commodities, 22 commodities hold future potential for bilateral trade. Out of these 22 commodities, 12 commodities for India and 10 commodities from China has the potential for future trade as the RCA of India lies in the same commodities as RID of China

and vice versa. China can increase its exports to India in almost all categories as the trade potential is identified in resource-based, traditional, as well as medium to high technology products. Products like edible vegetables, salt, sulphur and stone, plastering materials, lime and cement, inorganic chemicals, organic or inorganic compounds of precious metals, of rare-earth metals, silk, other vegetable textile fibres, paper yarn, lead and articles thereof, zinc and articles thereof, tin and articles thereof, ships, boats and floating structures shows high trade potential in case of China. While our analyses showed, India can increase its exports to China only in resource-based and traditional products. Resource-based products like oil seeds and miscellaneous grains, vegetable plaiting materials, ores, slag and ash, organic chemicals, raw hides and skins, silk, cotton, other vegetable textile fibres, paper yarn, sewing thread of man-made filaments, man-made staple fibres, iron and steel Copper and articles thereof shows high value of RID in case of India. This enormous potential in traditional can be attributed due to the underdeveloped industrial sector in the India.

Given the differences in the area of specialization of both the countries, we find moderate complementarity in their export-import structures. This complementarity indicates a potential for trade expansion between the two countries. Both countries are expected to benefit if the complementarity in the trade structures is explored and if they are able to diversify their export basket further. The above conclusions do not represent any causation and are suggestive only. Our findings do not take into account many important aspects like the effect of growing trade of China and India on the global economy. Therefore, they should be interpreted with caution.

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Appendix:

Table 1-India's Trade Balance with China(in US million \$)

Year	India's Exports to China (1)	India's Imports from China (2)	Trade Balance (1-2)
1995	282.92	811.47	-528.55
1996	542.48	702.08	-159.60
1997	692.20	1,028.70	-336.50
1998	499.90	1,102.35	-602.45
1999	511.05	1,240.03	-728.98
2000	758.22	1,448.60	-690.38
2001	915.57	1,809.15	-893.58
2002	1,719.60	2,603.13	-883.53
2003	2,710.18	3,737.92	-1,027.74
2004	4,178.48	6,073.29	-1,894.81
2005	6,473.30	9,925.53	-3,452.24
2006	7,910.25	15,812.51	-7,902.26
2007	10,195.07	24,691.96	-14,496.88
2008	10,536.51	33,606.08	-23,069.57
2009	10,154.95	28,839.64	-18,684.69
2010	17,518.98	41,332.61	-23,813.63
2011	19,113.15	55,299.34	-36,186.19
2012	14,904.00	52,407.20	-37,503.20
2013	14,516.98	51,456.48	-36,939.50
2014	13,251.99	58,279.59	-45,027.60
2015	9,689.94	61,592.82	-51,902.88
2016	8,946.78	60,539.51	-51,592.73
2017	12,520.12	71,955.71	-59,435.59

Source: DOTS, IMF (IMF.ORG)

Table 2- China's RCA

HS code	Product descriptions	1995	2000	2005	2010	2015	2016	2017
5	Products of animal origin, not elsewhere specified or included	6.75	5.6	2.65	1.84	1.44	1.57	1.65
7	Edible vegetables and certain roots and tubers	2.62	1.99	1.24	1.28	0.98	1.14	1.14
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included	4.45	2.55	1.36	0.7	1.01	1.06	0.99
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	2.51	3.18	2.29	1.51	1.3	1.35	1.56
26	Ores, slag and ash	0.02	1.15	0.59	0.55	1.33	1.43	1.00
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals	2.09	1.66	1.43	1.1	0.96	1.01	1.07
29	Organic chemicals	0.85	0.72	0.61	0.85	0.87	0.94	1.02
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	4.55	4.75	2.56	1.73	1.62	1.59	1.38
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut	7.41	6.84	4.3	3.85	2.96	2.86	2.8
43	Furskins and artificial fur; manufactures thereof	2.84	2.63	4.46	2.26	2.14	3.11	2.99
46	Manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork	18.44	12.43	8.16	6.66	4.88	4.99	5.16
50	Silk	11.19	9.46	5.56	4.81	3.82	4.04	4.01
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	1.63	2.53	1.87	1.8	1.24	1.28	1.07
52	Cotton	3.73	2.88	2.19	2.23	2.08	2.21	2.06
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	4.9	4.28	2.27	2.18	2.41	2.29	2.17
54	Sewing thread of man-made filaments, whether or not put up for retail sale	0.69	1.03	2.15	2.35	2.54	2.79	3.07

55	Man-made staple fibres	3.14	2.88	2.17	2.36	2.52	2.6	2.55
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	0.72	0.82	0.8	1.28	1.45	1.57	1.51
57	Carpets and other textile floor coverings	2.1	1.42	1.09	1.34	1.29	1.26	1.23
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	2.84	2.26	3.13	3.13	2.71	2.8	2.93
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	0.97	0.77	1.44	2.45	2.15	2.2	2.22
60	Knitted or crocheted fabrics	3	2.07	2.45	3.15	3.12	3.33	3.71
61	Articles of apparel and clothing accessories, knitted or crocheted	3.96	4.21	3.35	3.58	2.72	2.83	2.76
62	Articles of apparel and clothing accessories, not knitted or crocheted	5.41	4.59	3.23	3.09	2.56	2.73	2.7
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags	6.04	5.03	4.09	3.91	3.14	3.24	3.12
64	Footwear, gaiters and the like; parts of such articles	4.77	5.36	3.83	3.53	2.85	2.74	2.84
65	Headgear and parts thereof	5.63	5.23	4.45	4.4	3.85	3.8	3.63
66	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof	10.34	10.74	7.83	7.26	5.72	5.81	5.53
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair	8.78	9.12	6.13	6.24	5.51	5.39	5.27
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	1.47	1.44	1.32	1.49	1.86	1.66	1.56
69	Ceramic products	1.94	2.37	2.23	2.72	3.28	2.77	2.68
70	Glass and glassware	0.85	0.96	1.29	1.59	1.67	1.66	1.64
73	Articles of iron or steel	1.12	1.58	1.48	1.55	1.55	1.52	1.5
75	Nickel and articles thereof	1.74	0.63	0.34	0.69	0.76	1.15	1.04
81	Other base metals; cermets; articles thereof	3.47	2.57	2.56	2.03	1.45	1.41	1.36
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal	1.9	2.05	1.82	1.67	1.72	1.71	1.76
83	Miscellaneous articles of base metal	1.61	1.61	1.73	1.82	2.06	1.89	1.91

84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.39	0.73	1.47	1.68	1.36	1.38	1.4
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, parts and accessories of such articles	0.95	1.18	1.7	1.88	1.84	1.82	1.87
86	Railway or tramway locomotives, and parts thereof; traffic signalling equipment of all kinds	4.05	5.48	3.61	2.54	2.3	1.58	2.09
89	Ships, boats and floating structures	0.79	1.04	0.91	2.25	1.56	1.41	1.27
92	Musical instruments; parts and accessories of such articles	1.66	2.58	2.53	2.44	1.95	1.94	1.82
94	Furniture; bedding, mattresses, cushions and similar stuffed furnishings; lamps and lighting fittings; prefabricated buildings	1.67	2.28	2.41	2.92	2.95	2.84	2.72
95	Toys, games and sports requisites; parts and accessories thereof	4.73	5.08	4.13	3.34	3.26	3.49	3.56
96	Miscellaneous manufactured articles	2.87	2.73	2.68	3.1	2.86	2.97	2.91

Source: Calculated from UN Commodity Trade Statistics.

Table 3- India RCA

HS Code	Product Description	1995	2000	2005	2010	2015	2016	2017
2	Meat and edible meat offal	0.68	1.03	0.92	1.26	2.34	2.12	1.89
3	Fish and crustaceans, molluscs and other aquatic invertebrates	4.3	5.01	2.63	1.85	2.87	2.96	3.57
7	Edible vegetables and certain roots and tubers	1.18	1.92	1.66	1.18	1.09	1.01	0.9
8	Edible vegetables and certain roots and tubers	2.66	3.26	1.8	0.99	0.91	0.89	0.93
9	Edible fruit and nuts; peel of citrus fruit or melons	8.68	8.16	4.85	3.77	3.87	3.9	4.09
10	Coffee, tea, mate and spices	5.71	2.92	4.37	2.38	4.03	3.48	4.17
11	Cereals	2.51	0.54	0.41	0.38	1.04	0.8	0.78
12	Products of the milling industry; malt; starches; inulin; wheat gluten	2.02	2.32	1.37	1.09	1.21	1.15	0.99
13	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants ; straw and fodder	12.48	18.68	11.9	8.79	10.61	8.11	7.8
14	Lac; gums, resins and other vegetable saps and extracts	5.55	5.73	5.31	5.24	4.22	5.18	3.53
15	Vegetable plaiting materials; vegetable products not elsewhere specified or included	1.45	1.79	1.05	0.7	0.75	0.64	0.73
17	Sugars and sugar confectionery	1.39	0.85	0.34	1.66	2.22	2.35	1.49
23	Residues and waste from the food industries; prepared animal fodder	5.38	3.71	2.83	2.54	0.92	0.69	1.16
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	2.84	3.79	3.61	2.1	2.69	2.96	2.86
26	Ores, slag and ash	4.13	2.65	7.07	2.54	0.27	0.52	0.55
29	Organic chemicals	1.03	1.63	1.69	1.65	1.97	2.02	2.15
30	Pharmaceutical products	1.56	1.43	0.95	0.98	1.6	1.6	1.33
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks	1.79	2.12	1.62	1.61	2.11	2.08	1.98
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	1.25	1.04	1.3	1.43	1.25	1.46	1.41

38	Miscellaneous chemical products	0.68	1.15	1.08	0.9	1.07	1.1	1.08
50	Silk	5.63	15.5 3	12.7 5	7.03	2.87	2.55	2.12
52	Cotton	9.05	10.4 1	5.84	8.43	8.44	7.44	7.26
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	6	4.08	4.88	6.26	4.74	7.26	6.76
54	Sewing thread of man-made filaments, whether or not put up for retail sale	2.09	2.24	2.65	3.64	2.91	2.6	2.78
55	Man-made staple fibres	1.72	2.81	3.09	3.44	3.57	3.53	3.49
60	Knitted or crocheted fabrics	1.07	0.29	0.23	0.37	0.44	0.49	0.55
61	Articles of apparel and clothing accessories, knitted or crocheted	2.6	3.18	2.57	1.75	2.17	2.42	2.47
62	Articles of apparel and clothing accessories, not knitted or crocheted	4.77	5.35	3.55	2.46	2.62	2.76	2.54
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags	7.16	9.33	7.16	4.11	4.63	4.66	4.51
64	Footwear, gaiters and the like; parts of such articles	1.99	2	1.59	1.17	1.27	1.29	1.26
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	1.91	2.79	2.18	1.82	1.64	1.67	1.5
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	9.23	10.0 9	8.34	5.22	3.82	3.99	3.89
72	Iron and steel	1.01	1.41	1.56	1.26	1.19	1.3	1.79
73	Articles of iron or steel	0.86	1.55	1.63	1.8	1.43	1.37	1.35
74	Copper and articles thereof	0.26	0.57	1.74	2.38	1.35	1.29	1.4
76	Aluminium and articles thereof	0.44	0.67	0.64	0.64	1.03	1.07	1.26
78	Lead and articles thereof	0.33	0.07	0.53	1.31	1.67	1.44	2.4
79	Zinc and articles thereof	0.03	0.15	0.42	3.4	3.06	1.92	2.68
89	Ships, boats and floating structures	0	0.17	0.96	1.69	1.89	1.62	1.97
96	Miscellaneous manufactured articles	1.03	1.13	0.9	0.82	0.99	0.96	0.84

Source: Calculated from UN Commodity Trade Statistics.

Table 4- China's RID

HS Code	Product Description	1995	2000	2005	2010	2015	2016	2017
10	Cereals	3.66	2.13	0.88	0.72	0.48	0.47	0.44
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants ; straw and fodder	0.36	0.7	1.59	2.37	2.74	4.11	3.81
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included	5.14	2.56	2.34	3.4	3.26	4.53	3.14
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	3.85	2.55	2.51	2.09	1.97	1.63	1.14
23	Residues and waste from the food industries; prepared animal fodder	0.78	2.01	2.82	2.47	1.09	1.25	0.72
26	Ores, slag and ash	2.49	2.79	3.06	3.1	2.79	2.9	3.46
29	Organic chemicals	0.93	0.9	0.84	0.96	1.27	1.45	1.36
31	Fertilisers	7.14	6.75	6.3	5.49	4.61	2.89	2.33
35	Albuminoidal substances; modified starches; glues; enzymes	0.97	1.07	1.32	1.67	1.27	1.26	1.07
39	Plastics and articles thereof	1.84	2.05	2.29	2.35	2.24	2.14	2.05
41	Raw hides and skins (other than furskins) and leather	4.04	4.24	4.52	4.63	4.62	4.16	3.66
43	Furskins and artificial fur; manufactures thereof	1.72	1.34	1.62	1.81	1.9	1.64	1.44
44	Wood and articles of wood; wood charcoal	0.81	0.83	1.02	1.13	1.37	1.45	1.28
47	Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard	1.07	1.79	1.79	2.25	2.87	2.83	3.24
50	Silk	2.05	1.97	2.37	2.38	2.13	1.77	1.47
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	4.27	4.18	4.22	3.81	4.04	4.49	4.29
52	Cotton	3.43	3.54	3.76	2.79	2.51	2.33	2.2
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	2.5	2.45	3.7	3.63	2.58	2.73	2.68
54	Sewing thread of man-made filaments, whether or not put up for retail sale	4.12	4.78	4.8	4.26	3.71	3.44	3.03
55	Man-made staple fibres	4.23	4.59	4.86	4.32	3.78	3.47	3.07
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	1.91	1.92	1.89	1.63	1.46	1.31	1.17
59	Impregnated, coated, covered or laminated textile	3.71	3.79	3.69	3.55	3.47	3.14	2.81

	fabrics; textile articles of a kind suitable for industrial use							
60	Knitted or crocheted fabrics	3.99	4.24	4.31	3.99	3.48	2.99	2.79
66	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof	1.5	1.39	1.2	0.92	0.49	0.33	0.26
72	Iron and steel	1.6	2.02	1.78	1.74	2.14	2.08	2.32
73	Articles of iron or steel	1.05	0.76	0.89	0.79	0.63	0.55	0.59
74	Copper and articles thereof	1.74	2.11	2.07	2.44	3.13	3.23	3.41
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	1.45	1.46	1.17	1.13	1.1	1.06	1.16
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	1.14	1.07	1.16	1.38	1.48	1.44	1.58
89	Ships, boats and floating structures	2.85	0.98	0.64	0.43	0.49	0.53	0.98
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	0.9	0.91	0.88	0.97	1.01	1.08	1.3
91	Clocks and watches and parts thereof	1.99	1.85	1.8	1.72	1.41	1.2	1.07

Source: Calculated from UN Commodity Trade Statistics.

Table 5- India's RID

HS Code	Product Description	1995	2000	2005	2010	2015	2016	2017
7	Edible vegetables and certain roots and tubers	1.26	0.51	1.55	2.12	1.08	0.5	0.51
8	Edible fruit and nuts; peel of citrus fruit or melons	1.37	1.66	1.24	1.39	1.46	1.36	1.66
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	4.05	8.59	5.01	4.54	9.1	9.27	8.59
17	Sugars and sugar confectionery	0.59	0.48	0.05	1.02	2.09	1.93	0.48
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	2.94	2.63	2.19	2.28	2.41	2.56	2.63
26	Ores, slag and ash	0.86	1.27	0.75	0.6	0.93	1.21	1.27
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	3.23	3.57	3.41	2.85	2.95	4.01	3.57
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	3	3.1	2.89	3.7	3.83	3.7	3.1
29	Organic chemicals	2.03	1.19	2.03	1.88	1.48	1.34	1.19
37	Photographic or cinematographic goods	1.133	1.27	1.07	1.18	1.22	1.05	1.27
47	Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard	1.26	1.26	1.52	1.89	1.61	1.47	1.26
50	Silk	4.634	6.83	3.73	3.52	4.46	6.32	6.83
53	Other vegetable textile fibers; paper yarn and woven fabrics of paper yarn	0.98	1.68	1.51	1.18	1.84	1.96	1.68
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	1.13	1.5	1.41	1.5	1.45	1.24	1.5
72	Iron and steel	1.6	0.92	1.59	1.43	1.04	1.1	0.92
75	Nickel and articles thereof	1.82	1.4	1.48	1.68	1.33	1.3	1.43
78	Lead and articles thereof	2.08	3.03	2.17	2.55	3.46	2.82	3.03
79	Zinc and articles thereof	1.8	1.77	2.87	2.49	2.09	1.96	1.77
80	Tin and articles thereof	1.56	1.37	2.75	2.11	1.45	1.34	1.37
81	Other base metals; cermets; articles thereof	1.24	0.8	1.23	1.05	0.87	0.74	0.8
87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	0.143	0.085	0.17	0.11	0.07	0.09	0.09

88	Aircraft, spacecraft, and parts thereof	1.163	0.182	1.07	0.65	0.27	0.12	0.18
97	Works of art, collectors' pieces, and antiques	3.15	0.393	2.32	1.77	2.87	0.83	0.39

Source: Calculated from UN Commodity Trade Statistics

Table 6- China's RCA and India's RID

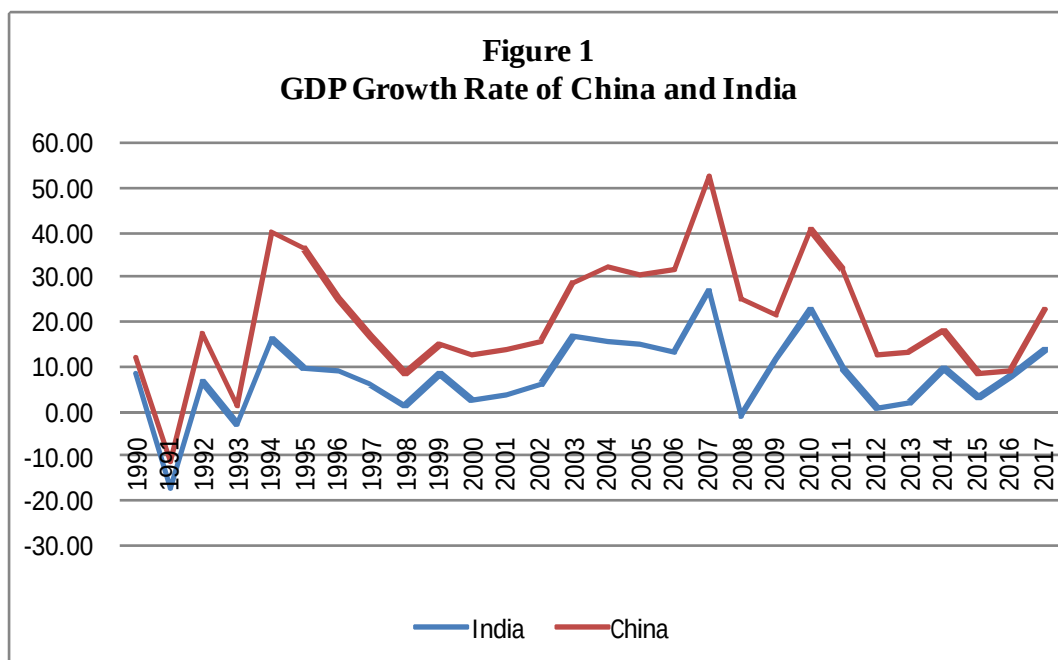
HS Code	Product Description	China RCA	India RID
7	Edible vegetables and certain roots and tubers	1.48	1.66
25	Salt; sulphur; earths and stone; plastering materials, lime and cement	1.27	2.08
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	1.38	2.33
50	Silk	6.4	6.85
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	3.01	2.32
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	1.57	1.47
78	Lead and articles thereof	1.64	3.36
79	Zinc and articles thereof	1.13	1.7
80	Tin and articles thereof	1.92	1.3
89	Ships, boats and floating structures	1.35	3.08

Source: Calculated from UN Commodity Trade Statistics

Table 7 - India's RCA & China's RCA

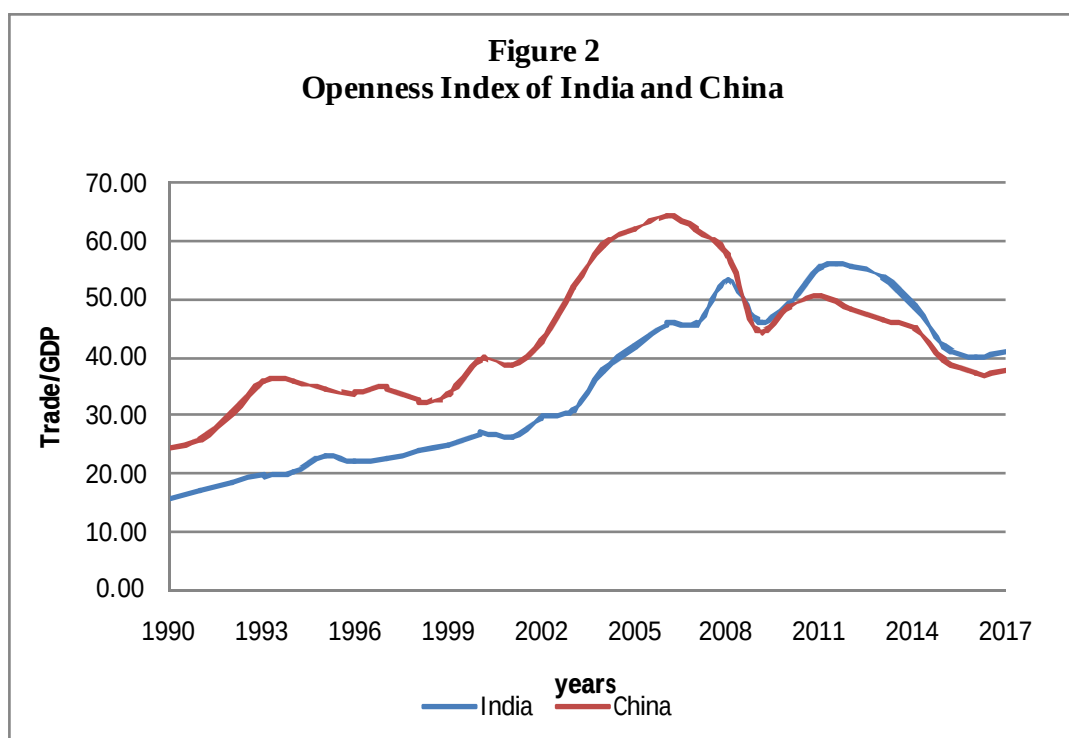
HS Code	Product Description	India RCA	China RID
12	Oilseeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	1.53	3.37
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included	4.97	2.43
26	Ores, slag and ash	3.02	4.3
29	Organic chemicals	1.67	1.29
41	Raw hides and skins (other than furskins) and leather	2.3	3.14
50	Silk	8.98	1.02
52	Cotton	8.4	2.54
53	Other vegetable textile fibers; paper yarn and woven fabrics of paper yarn	5.5	2.36
54	Sewing thread of man-made filaments, whether or not put up for retail sale	2.7	2.18
55	Man-made staple fibres	3.1	2.11
72	Iron and steel	1.3	1.27
74	Copper and articles thereof	1.14	2.77

Source: Calculated from UN Commodity Trade Statistics.

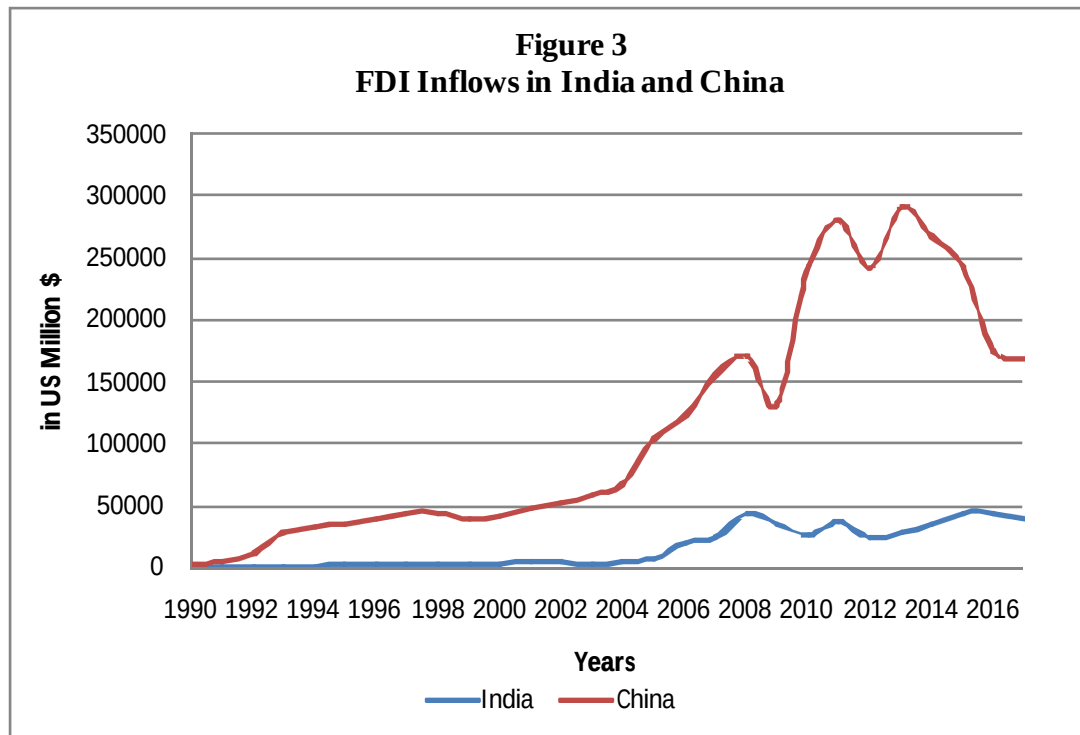


Source: World Development Indicators, World Bank

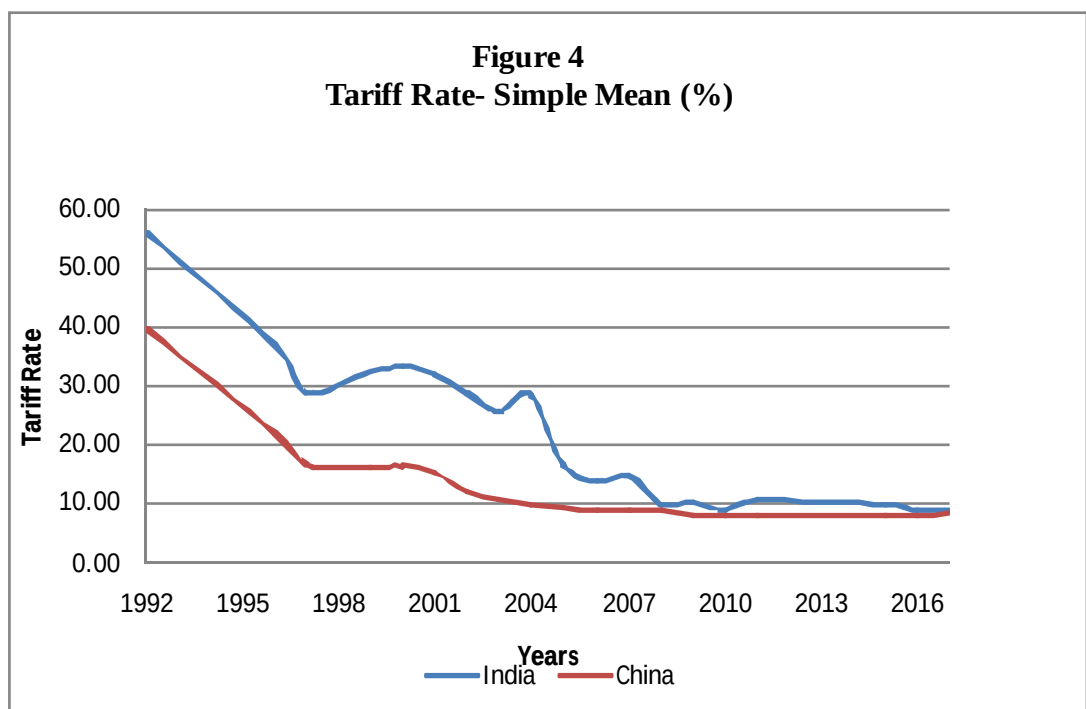
(Growth has been calculated by the log transformation of the level data)



Source: World Development Indicators, World Bank



Source: World Development Indicators, World Bank



Source: World Development Indicators, World Bank