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## **Role of India and China in Global Context: A Comparative Study of Trade Indicators**

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### **Abstract**

*India and China are the fastest growing and the largest developing countries of the world. They have positively made their presence felt in the rapidly growing world economy. The accelerated economic growth of India and China has been associated with much more hasty growth in their trade. This has created vast opportunities for their trading partners. The main objective of this study is to find out the openness of trade between India and China during 2001 to 2016 by using trade outcome indicators. To fulfill the above said objective secondary data has been used from WITS data base. The results of the study revealed that India is far behind China in case of total trade as well as imports were more than exports and India is a trade deficit while China is a trade surplus country. The trade-to-GDP ratio of china was more than that of India since 2008 after that India's trade GDP ratio is continuously more than that of India. The trade % of GDP of both countries has shown a decreasing trend. China's index of export market penetration is around two times to that of India which shows that less trade barriers in comparison to India as higher the value of Index means lower will be the trade barriers.*

## INTRODUCTION

The Indian economy has achieved significant momentum over the last one decade, by achieving and sustaining an annual GDP growth rate of over 7 percent. This high growth rate can be in part attributed to the growing contribution of the export sector to the economy (**Mukherjee and Mukherjee, 2012**). Trade is an important stimulator of economic growth. It enlarges a country's consumption capacities, increases world output, and provides access to scarce resources and worldwide markets for products without which poor countries would be unable to grow. The whole economic basis for international trade rests on the fact that countries do differ in their resource endowments, their preferences and technologies, their scale economies, their economic and social institutions and their capacities for growth and development (**Todaro and Smith, 2003; Kumari and Malhotra, 2014**).

China and India the fastest growing and the largest developing countries, have positively made their presence felt in the rapidly growing world economy. Both the countries are among the major countries in the global population as both the countries are having 37% of the world's population and 6.4% of the value of world output and income at current prices and exchange rates (**IMC-Economic Research & Training Foundation**). In demographic terms, China and India are the two most important countries in the world and they are also rapidly becoming the leading powers in economic terms. In a long-run perspective both countries have benefited from opening up to international trade and foreign relations, although they initiated liberalization policies only when their domestic economies were sufficiently strong to face foreign competition (**Marelli and Signorelli, 2011**).

Being the largest developing countries of the world, both China and India has adopted export-oriented economic policies, which can help them to grasp speedy economic growth. The trade between these two countries always influenced by factors such as geopolitical conflicts, border disputes and security strategy. That's why the trade between them remains relatively low and develops relatively slow during a long period. The political relationship between these two countries has been improved and developed continuously since 1990s, especially after 2000, and the bilateral economy and the trade cooperation especially the trade in goods area have entered a rapid development period and the inter-industry trades in vertical division of labor forms develop rapidly, which laid a foundation for the establishment of the economic cooperation mechanism between the two countries at the same time, and the status of economic and trade exchanges has become more significant in the China-India relationship (**Xiao et al., 2015**).

The accelerated economic growth of India and China has been associated with much more hasty growth in their trade. In some cases, this has created vast opportunities for their trading partners. In others, it has created strong competition either in home markets, or in third markets (**Dimaranan et al., 2007**). Hence, an attempt has been made in this research work to find out the openness of trade between India and China during 2001 to 2016 by using trade outcome indicators.

## DATA COLLECTION AND TOOL OF ANALYSIS

To fulfill the purpose of this research work secondary data for the period 2001 to 2016 has been used and collected from **World Integrated Trade Solution (WITS)** data base. For examining the openness of trade between India and China open indicators such as export and import between the countries, GDP per capita (constant 2010 US\$), Trade-to-GDP ratio, Index of Export Market Penetration, Herfindahl-Hirschman Market Concentration Index and Net barter terms of trade has been used in the research work.

**RESULT AND DISCUSSION**

India and China are the emerging economies of the world. Here firstly, foreign trade of both the nations has been examined. In particular results of various trade outcome indicators such as GDP per capita (constant 2010 US\$), Trade-to-GDP ratio, Index of Export Market Penetration, Herfindahl-Hirschman Market Concentration Index and Net barter terms of trade has been discussed.

**Table-1**

**India's foreign trade with china and the world  
(In US Million Dollars)**

Year	Export to China (percent share in total Export)	Total Export to the World	Import from China (percent share in total Import)	Total Import from the World	Trade Deficit
2001	2.10	43878.49	3.61	50671.11	-6792.62
2002	3.06	50097.96	4.56	57453.47	-7355.51
2003	4.32	59360.66	4.99	72430.52	-13069.86
2004	5.40	75904.20	6.11	98981.13	-23076.93
2005	7.16	100352.64	7.22	140861.67	-40509.03
2006	6.46	121200.61	8.78	178212.44	-57011.83
2007	6.51	145898.05	11.24	218645.29	-72747.24
2008	5.55	181860.90	10.00	315712.11	-133851.21
2009	5.87	176765.04	11.49	266401.55	-89636.51
2010	7.91	220408.50	11.78	350029.39	-129620.89
2011	5.55	301483.25	12.00	462402.79	-160919.54
2012	5.09	289564.77	11.07	488976.38	-199411.61
2013	4.88	336611.39	11.08	466045.57	-129434.18
2014	4.23	317544.64	12.68	459369.46	-141824.82
2015	3.62	264381.00	15.77	390744.73	-126363.73
2016	3.42	260326.91	16.96	356704.79	-96377.88

Source: WITS database, also available at <https://wits.worldbank.org/>

Table-1 depicts the trade of India with China and the world; and the deficit situation of the country during the year 2001-2016. It is evident from the table that the per cent share of export to China has decreasing since last few years especially after 2010 as it was highest in 2010 i.e. 7.91 per cent of total export from India is shared with India. The total export from India is also showing decreasing trend. The percentage share of import from china is rapidly increasing in the imports of India as the percentage share was only 3.61 per cent of total import in 2001 and it was increased up to 16.96 per cent in 2016 which was quite high. The continuously increase in imports from china is showing that the dependency of India on China has increased over the years. Because despite the decrease in the total imports of India after 2012 as it is clear in the table that the imports were highest in 2012 i.e. 488976.38 million US dollar the per cent share of China in total imports has increased. India is facing the situation of trade deficit as imports are more than exports of the country. Trade deficit was -6792.62 million US dollars for the year 2001.

Trade deficit has continuously increased till 2012 after that it has shown the decreasing trend as trade deficit was highest in 2012.

**Table-2****China's foreign trade with India and the world****(In US Million Dollars)**

Year	Export to India (percent share in total Export)	Total Export to the World	Import from India (percent share in total Import)	Total Import from the World	Trade Surplus
2001	0.71	266098.21	0.70	243552.88	22545.33
2002	0.82	325595.97	0.77	295170.10	30425.87
2003	0.76	438227.77	1.03	412759.80	25467.97
2004	1.00	593325.58	1.37	561228.75	32096.83
2005	1.17	761953.41	1.48	659952.76	102000.65
2006	1.50	968935.60	1.30	791460.87	177474.73
2007	1.97	1220059.67	1.53	956115.45	263944.22
2008	2.21	1430693.07	1.79	1132562.16	298130.91
2009	2.47	1201646.76	1.36	1005555.23	196091.53
2010	2.59	1577763.75	1.49	1396001.57	181762.18
2011	2.66	1898388.44	1.34	1743394.87	154993.57
2012	2.33	2048782.23	1.03	1818199.23	230583
2013	2.19	2209007.28	0.87	1949992.32	259014.96
2014	2.31	2342292.70	0.83	1959234.63	383058.07
2015	2.56	2273468.22	0.80	1679564.33	593903.89
2016	2.78	2097637.17	0.74	1587920.69	509716.48

Source: WITS database, also available at <https://wits.worldbank.org/>

Table-2 shows the China's trade with India and the world. It is evident from the table that the share of export to India as a percentage of total export of China has increased over the years. The total exports were also increasing and the highest exports of China was in 2014 i.e. 2342292.70 million US dollars. The imports of China from India have shown an increasing and decreasing trend as the per cent share of total imports. The per cent share imports have increased till 2008 after that the share of imports in total imports of China has decreased.

When the result of table-1 compared with the results of table-2 it has been found that India is facing the trade deficit while China is having the trade surpluses. Total trade of China is around more than ten times of India. Despite being a trade deficit country; India is an emerging economy of the world which shows that the deficit of India has shown the decreasing trend after 2012.

**Table-3**  
**GDP per capita (constant 2010 US\$)**

Year	India	China
2001	785.34	1905.61
2002	801.51	2065.72
2003	850.29	2258.91
2004	902.91	2472.59
2005	971.23	2738.21
2006	1044.89	3069.30
2007	1130.09	3487.85
2008	1156.93	3805.03
2009	1237.34	4142.04
2010	1345.77	4560.51
2011	1416.40	4971.54
2012	1474.97	5336.06
2013	1550.14	5721.69
2014	1646.78	6108.24
2015	1758.04	6496.62
2016	1861.49	6894.46

Source: WITS database, also available at <https://wits.worldbank.org/>

Table-3 has highlighted the results of GDP per capita of both countries at constant prices 2010 in US dollars. The table shows that the GDP of both the countries is continuously increasing and it was estimated to be highest in 2016 for both the countries i.e. 1861.49 and 6894.46 US dollars for India and China respectively. The GDP of China is more than three times to that of India in 2016. India is far behind China in case of GDP per capita as the GDP of India is 1861.49 US dollars in 2016 which is lower than that of China in 2001 i.e. 1905.61 US dollars.

**Table-4**  
**Comparison of India and China's Trade as percent of their GDP**

Year	India's trade (% of GDP)	China's trade (% of GDP)
2001	26.27	39.05
2002	29.83	43.09
2003	30.92	52.60
2004	37.91	60.22
2005	42.49	62.89
2006	46.59	65.62
2007	46.16	62.66
2008	53.76	56.96
2009	46.78	44.51
2010	49.69	48.89
2011	55.62	50.60
2012	55.79	48.11
2013	53.84	46.57
2014	49.01	45.65
2015	42.20	40.46
2016	39.81	37.06

Source: WITS database, also available at <https://wits.worldbank.org/>

Table-4 has presented the India and China's Trade as percent of their GDP from 2001 to 2016. The trade-to-GDP ratio shows the relative importance of international trade in the economy of a country. It is usually expressed in percentage form. It is also considered as an indicator of the degree of globalization of a country which measures the openness of an economy. The table also highlighted that the trade-to-GDP ratio of china was more than that of India since 2008 after that India's trade GDP ratio is continuously more than that of India. The trade % of GDP of both countries has shown a decreasing trend.

**Table-5**  
**Index of Export Market Penetration**

Year	India	China
2001	16.94	32.87
2002	18.03	34.88
2003	19.42	38.49
2004	20.65	41.77
2005	22.95	45.14
2006	23.80	48.44
2007	24.92	50.71
2008	25.69	50.90
2009	25.75	51.50
2010	26.98	53.39
2011	26.83	53.17
2012	27.49	53.31
2013	28.14	53.07
2014	27.90	52.53
2015	27.65	51.16
2016	23.32	42.57

Source: WITS database, also available at <https://wits.worldbank.org/>

Index of Export Market Penetration of both the countries from 2001 to 2016 has been examined in table-5. The index value of China is higher than that of India throughout. This indicator measures the extent to which a country's exports reach already proven markets. It is calculated as the number of countries to which the reporter exports a particular product divided by the number of countries that report importing the product that year. A low export penetration may signal the presence of barriers to trade that are preventing firms from expanding the number of markets to which they export. Range of Values is 0 to 100. A value of 100 indicates that the reporter exports to every country that imports a particular product. China's index of export market penetration is around two times to that of India which shows that less trade barriers in comparison to India.

**Table-6**  
**Herfindahl-Hirschman Market Concentration Index**

Year	India	China
2001	0.06	0.13
2002	0.07	0.12
2003	0.06	0.11
2004	0.06	0.10
2005	0.06	0.09
2006	0.05	0.09
2007	0.05	0.07
2008	0.04	0.07
2009	0.04	0.07
2010	0.04	0.06
2011	0.04	0.06
2012	0.04	0.06
2013	0.04	0.06
2014	0.05	0.06
2015	0.05	0.07
2016	0.06	0.08

Source: WITS database, also available at <https://wits.worldbank.org/>

Table-6 depicts the value of Herfindahl-Hirschman Market Concentration Index of China and India. This indicator is a measure of the dispersion of trade value across an exporter's partners. A country with a preponderance of trade value concentrated in a very few markets will have an index value close to 1. Thus, it is an indicator of the exporter's dependency on its trading partners and the danger it could face should its partners increase trade barriers. Measured over time, a fall in the index may be an indication of diversification in the exporter's trading partnerships. The user has the option of selecting product clusters, which will return the index calculated only for that specified subset of countries. Note that if a country exports to only a single market, then the indicator returns no value.

**Table-7**  
**Net barter terms of trade**

Year	India	China
2001	97.82	97.40
2002	88.63	92.07
2003	96.20	92.89
2004	91.68	90.73
2005	87.82	88.40
2006	85.70	89.43
2007	81.61	88.51
2008	81.61	83.78
2009	95.01	91.06
2010	93.47	82.01
2011	89.99	79.01
2012	90.08	79.72
2013	92.45	81.76
2014	94.94	83.96
2015	104.39	93.74
2016	97.82	97.40

Source: WITS database, also available at <https://wits.worldbank.org/>



Table-7 shows the result of net barter terms of trade of India and China. If the net barter terms of trade are to be applied to more than one export and import commodities and the changes in terms of trade over a given period are to be computed, the index numbers of export and import prices rather than prices of individual commodities are taken into account. In such situations, the net barter terms of trade can be measured as  $(P_{X_1}/P_{X_0}) / (P_{M_1}/P_{M_0}) * 100$ . Here  $P_{X_1}$  and  $P_{X_0}$  are the export Price indices of current year and base year same as in case of  $P_{M_1}$  and  $P_{M_0}$ . If the value of net barter terms of trade index is greater than 100 than there will be improvement in terms of trade as compare to base year and if it is less than 100 there is deterioration in terms of trade as compare to base year **(Rana and Verma, 2012)**. Year 2000 is considered as base year and index value for 2000 is 100. The results as presented in above table have shown that there is continuous deterioration in terms of trade till 2016 for both the countries except 2015 for India which shows improvement in terms of trade by 4.39 per cent.

### CONCLUSION

Being the largest developing countries of the world, both China and India has adopted export-oriented economic policies, which can help them to grasp speedy economic growth. The accelerated economic growth of India and China has been associated with much more hasty growth in their trade. The results of various open indicators of trade as presented in above said tables conclude that India is far behind China in case of total trade as imports were more than exports as a result India is faces the situation of trade deficit while China is a trade surplus country. The trade-to-GDP ratio of china was more than that of India since 2008 after that India's trade GDP ratio is continuously more than that of India. The trade % of GDP of both countries has shown a decreasing trend. China's index of export market penetration is around two times to that of India which shows that less trade barriers in comparison to India. The government should take necessary actions for the long term solutions of trade deficit of India such as increase in infrastructure facilities so that the production cost can be reduced and the Indian products can compete in world market. There is an urgent need to focus on research and development in India.

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