



A comparative study on India: China trade intensity

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Abstract

The legacy of relations between India and China began to change in the 1980s, with the opening of both economies. Though India and China are the two most populated countries in the world, but recently a political tension arose between these two countries. Gradually this political tension turns into an economic tension. India Govt takes various steps against china products i.e. by banning various Chinese products and services to give a threat on the china export. In this research paper it is tried to find how the bilateral trade relations between these two countries have been changed. Except the above it is also tried to find that whether various steps taken by India Govt against Chinese products and services have any major impact on china foreign trade or not? Various curb on Chinese product really have any major impact on the china economy or not? It is also tried to find that how much does India depend economically on China? How Indo-China trade relation has made an impact on India's and China's GDP?

Keywords: India, China, bilateral trade, trade intensity index, trade dependence index, GDP

Introduction

Since the first century A.D. both the nations had wide ranging cultural contact with the spread of Buddhism from India to China. Two countries had conflict of interests in Tibet. At the end of its civil war in 1949, China wanted reassert control over Tibet and to set free the Tibetan people from Lamaism and Feudalism by the use of arms in 1950. To avoid antagonizing china, the then prime minister Mr Jawaharlal Nehru communicated Chinese leaders that India had not any political, territorial interests or to seek special principles in Tibet. With Indian support, Tibetan delegates signed an agreement in May 1951 recognizing Chinese sovereignty assuming that the existing political and social system in Tibet would carry on. In ending the Korean War (1950-53), direct negotiation between two Asian giants started supported by India's mediatory efforts. In 1954, India China signed an eight years agreement in Tibet that lay out the foundation of their relationship in the form of Panchasheela. The slogan in 1950s was Hindi-Chini-Bhai-Bhai (brother).

Indo-China Political Turbulence

- Indo-China Political turbulence started from the Sino-Indian war, which took place in 1962, when Indian and Chinese troops fought over the Himalayan territory of Aksai Chin.
- Since the 1962 war there have occurred numerous infrequent stand-offs between Indian armed forces and Chinese armed forces along the disputed territory.
- In Northern Ladakh in 2013 and Eastern Ladakh in 2014 the two states whereby these stand-offs become an opportunity to militarily flex their muscles.
- In 2017, the situation escalated when China attempted to form a road that would extend its border into India.

- Further tensions have been building since India's revocation of Article 370 in 2019 and China's resistance against India's infrastructure plans in the borderlands.
- In September 2019, another violent clash took place near the PangongTso (lake), an area that China has control over two thirds of.

This political turbulence has also made effect into bilateral trade. India is considering a range of economic measures aimed at Chinese firms amid the border tensions between two countries.

- The government is considering trade and procurement curbs targeting China.
- It is also increasing scrutiny of Chinese investments in many sectors, and weighing a decision to keep out Chinese companies including 5G trials.
- Recently, the Union Minister for Road Transport and Highways has announced that Chinese companies would not be allowed to take part in road projects.
- The ban on 59 Chinese apps is one of the economic measures taken by India, with other measures likely to follow if tensions along the Line of Actual Control (LAC) continue without disengagement.

India wants to indicate that China cannot continue trade and investment relations as normal if China does not agree to return to the status quo of April before its incursions along the LAC began.

Literature Review

The trends in the growth rate of China-India trade shows a huge potential focused on their political achievements. Kumari and Malhotra (2014) in their paper "Trade-led growth In India and China: A comparative Analysis" tries to find out

the impact of export-import growth on economic growth of both India and China. The study concludes that China performed better as compared to India, the reasons being the reforms speed, policy implementation and the nature of political governance. Suresh (2012) in his paper “Exchange Rate Impact on Bilateral Trade between India and China” tries to find how Chinese Renminbi (RMB) impacts India’s trade with China. The findings hold that appreciation in RMB will impact India’s trade, mainly with higher elasticity for imports. Kowalski (2008) in his working paper “China and India: A Tale of Two Trade Integration Approaches” compares the key features of the trade integration processes and the economic outcomes in China and India. It reveals that Chinese reforms regarding manufacturing trade is likely to be one of the key reasons for China’s better economic performance. On the other hand India has gone a long way in tariff reduction on non-agricultural products but due to moderate protection the manufacturing sector is likely to face hurdles.

Kumari (2014) ^[6] in her paper “India’s foreign trade with China with special reference to agricultural commodities” tries to study mainly the changes in India’s trade relation with China since the liberalisation of its trade. The study concludes that the liberalisation of trade has a positive effect on India’s relation with the Chinese Government. The emergence of external sector has helped both the countries to improve their growth during the last two decades.

Siddiqui and Alam (2017) in their paper attempt to find out India and China’s trade pattern from 2005-2016 and also attempt to examine the proportion of Chinese electronic toys in India. The study concludes that the introduction of economic reforms and liberalisation benefitted both the countries in integrating with the world economy and attaining higher growth. Indian markets are flooded with Chinese toys, which are giving a tough competition to the domestic producer of Indian toy industry. Dimaranan, Ianchovichina and Martin (2007) ^[2] in their working paper “China, India, and the Future of the World Economy: Fierce Competition or Shared Growth?” tries to understand the implications of India and

China’s growth for other developing countries.

Objective of the Research

1. How bilateral trade between India and china has been changed in last 10 years
2. Bilateral Trade Analysis: Intensive and Extensive

To gather a comprehensive and in-depth information and pattern between India and China, an intensive-cum-secondary trade analysis has been conducted

- a) Trade Dependence Index
- b) Rate of Import Penetration
- c) Trade Intensity Index
- d) Export to GDP ratio

From the above trade analysis we can find

1. India’s various economic measures aimed at Chinese firms how much affected the China’s economy?
2. India’s dependency on China’s product and services.
3. To see the relationship of Import from China on India’s GDP growth
4. To see the relationship of Export to India on China’s GDP growth.

Research Methodology

To find the above objectives we worked on secondary data.

Export and import trade data Of India, China and world has been analysed for last 10 years. That means from 2009-10 to 2019-20. Not only that, India’s and China’s international trade has also been compared with the GDP of the respective countries. The study used correlation coefficient to show the relationship between GDP growth of India and China with import/export from China to India

Data Analysis

To find out that How bilateral trade between India and china has been changed in last 10 years following data has been represented

Table 1

1year	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
India China Total Bilateral Trade	42.44	57.65	73.39	65.78	65.86	72.35	70.72	71.45	89.71	87.07	81.87



Fig 1

Despite of political turbulence In last 10 years India-China bilateral trade gradually increased from 42.44 billion US\$ to 81.87 billion US\$. That is almost 92.90% increase. But since 2017-18 India china bilateral trade has been decreased. However after Indo china war in 1962, major political turbulence occur in 2017 when Chinese troops with construction vehicles and road-building equipment began extending an existing road southward in Doklam, a territory which is claimed by both China as well as India's ally. After 2017-18 India-china bilateral trade has been reduced to 81.87 billion US\$ from 89.71billion US\$ i.e almost 8.74% decreased in last 3 years. So it is clearly said that India china bilateral trade has been affected due to India china political turbulence.

**Bilateral Trade Analysis
Trade Dependence Index**

The trade dependence index, or trade to GDP ratio, or the openness index is a measure of the importance of international trade in the overall economy. It gives an indication of the degree to which an economy is open to trade. Openness of an economy is determined by a large number of factors, most importantly by trade restrictions like tariffs, nontariff barriers, foreign exchange regimes, non-trade policies and the structure of national economies.

Trade to Gdp Ratio

Table 2

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
India	34.81	36.98	43.62	43.29	41.18	37.19	30.58	28.77	28.99	31.11	27.41
China	43.31	48.85	48.23	48.02	43.46	41.06	35.74	32.81	33.36	33.26	31.91

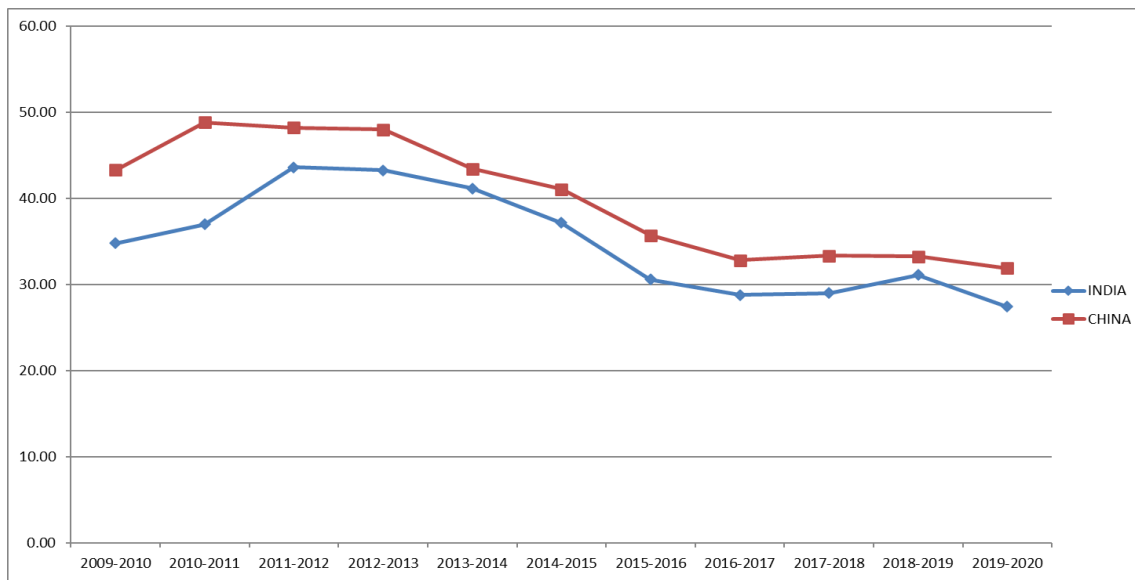


Fig 2

India's dependence on trade has fallen from 43.62% in 2011-12 to 27.41% in 2019-20 i.e almost 37% decreased, indicating higher inclusiveness in Gross Domestic Products and relatively lower susceptibility to external shocks and volatility, ceteris paribus. China's dependence on trade has also declined from 48.85% in 2010-11 to 31.91% in 2019-20 i.e.35%decreased. It indicates that China's economy is also self-dependent and does not depend highly on international trade. So various ban on Chinese products and services does not have any major impact on china economy or china GDP.

Import penetration rate

The import penetration rate shows to what degree domestic demand (the difference between GDP and net exports) is satisfied by imports. It is also called as self-sufficiency ratio. The index may be used as the basis of specific policy objectives targeting self-sufficiency. It may provide an indication of the degree of vulnerability to certain types of external shocks. Import penetration ratios show the extent to which the demand of goods or services is being met by foreign producers rather than from domestic production.

Table 3

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
India's import penetration rate in china	2.15	2.42	2.79	2.59	2.54	2.77	2.77	2.56	2.72	2.42	2.15
China's import penetration rate in india	0.24	0.24	0.24	0.16	0.16	0.12	0.09	0.09	0.11	0.12	0.12

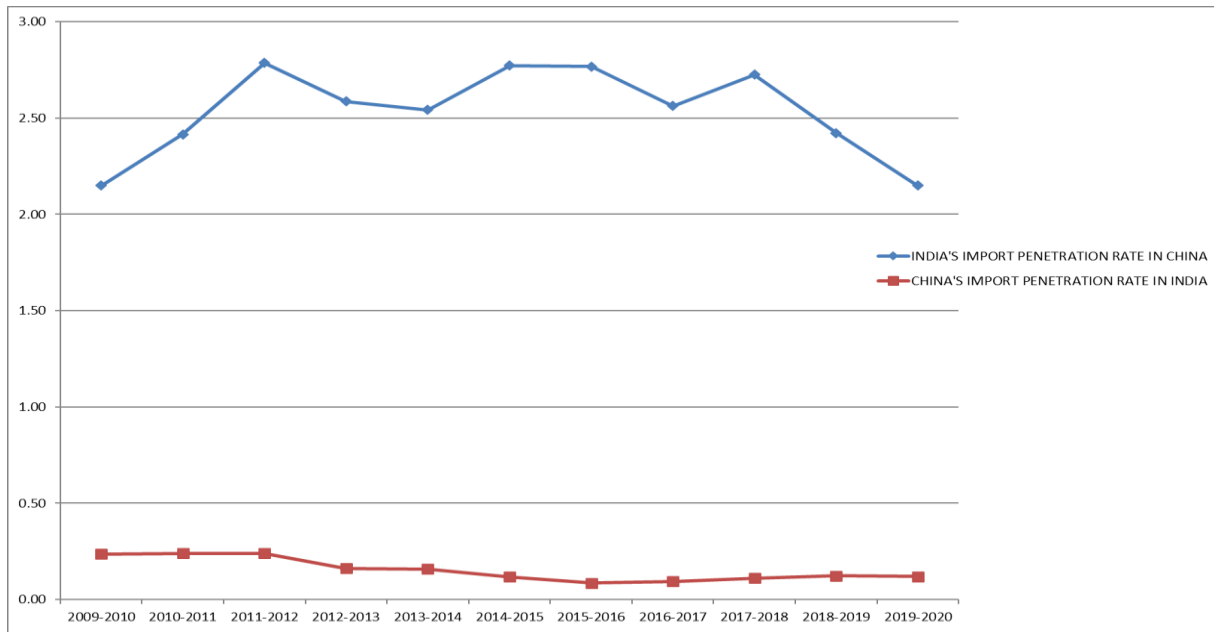


Fig 3

Over the years, products from China have deeply penetrated into the Indian markets. As indicated from the chart above, China’s import penetration in India increased from 2.15% in 2009-10 to 2.72% in 2017-18. Although the trend has witnessed a decline in the last 2 years. On the other hand, India’s import penetration rate in China’s market has remained abysmally low and has fallen to a new low in the recent years. So from import penetration rate it has been concluded that India is more dependent on China’s product.

Avoiding Chinese product in India, India’s economy may be hampered.

Trade Intensity Index

The trade intensity index (T) is used to determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade. TII value greater than 1 indicates an intense trade relationship.

Table 4

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
India's TII in china	0.81	0.62	0.62	0.41	0.46	0.37	0.34	0.37	0.42	0.46	0.46
China's TII in india	1.12	1.14	1.09	0.96	0.97	1.09	1.18	1.22	1.29	1.07	1.00

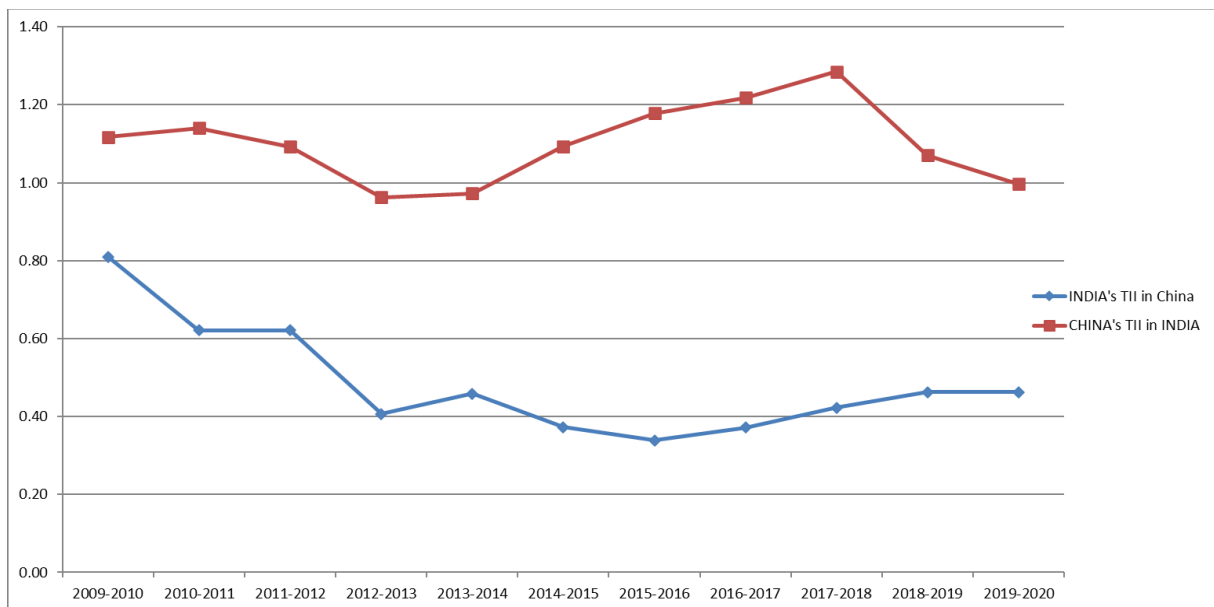


Fig 4

Substantiating the claims of Import Penetration Rate, China has created a significant presence in India's ever growing consumer market. China has an intense export relationship with India. China's TII in India is always greater than 1. But India's export relationship with China has remained laggard and abysmal since the beginning of their trade

relationship. India's TII in china is constantly decreasing and in 2019-20 it is only 0.46. It is indicating that China market is not depending on Indian export but Indian market is dependent on China export product.

Export to GDP ratio

Table 5

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
China's % of GDP to export to India	0.60	0.71	0.73	0.61	0.53	0.58	0.56	0.55	0.62	0.51	0.46

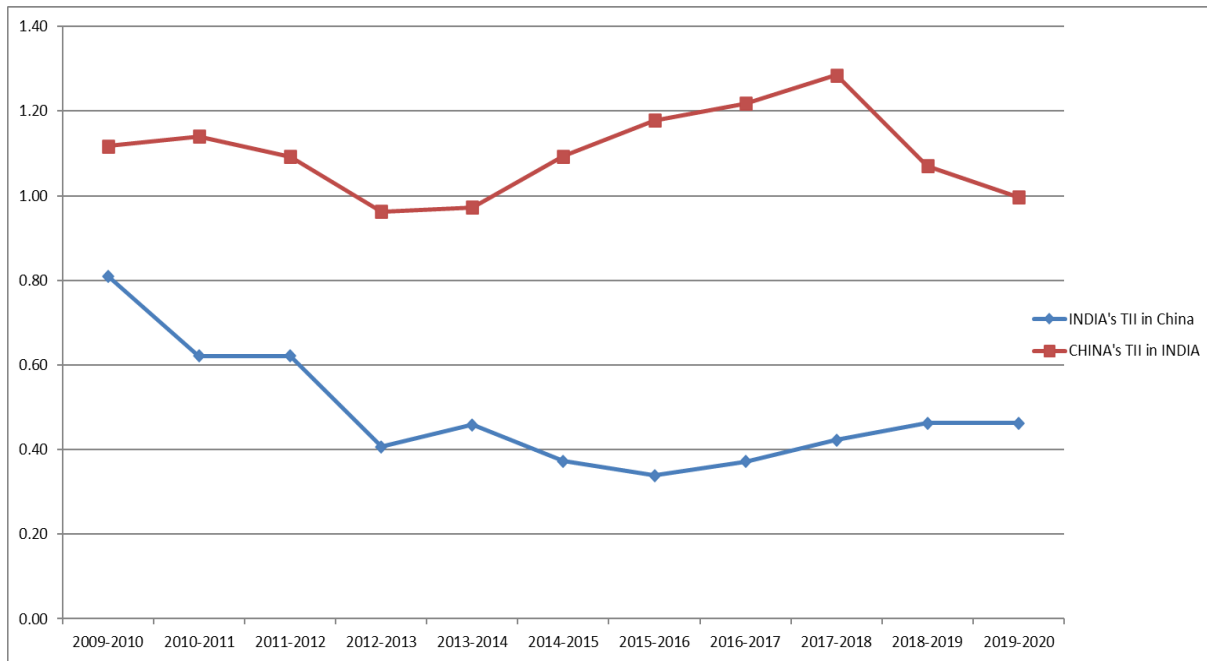


Fig 5

Further, to judge the above conclusion we make a data about china's % of GDP to export to India. However China's % of GDP to export to India is very negligible. i.e. on an average 0.59%. So India's imports from China do not play any significant role in China's economy also. So banned the Chinese products has no impact on china's economy.

Relationship of Import from China on India's GDP growth

To examine the relationship of import from China and India's GDP growth, we find out the correlation coefficient between the two sets of data from the year 2011-12 to 2019-20

Table 6

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
India gdp growth rate	8.80	0.25	1.59	9.82	3.16	9.09	15.60	2.28	5.97
India import from china	55.31	52.25	51.03	60.41	61.71	61.28	76.38	70.32	65.26

Correlation coefficient (R) = 0.566
R (Square) = 0.32

R value denotes the correlation between the import from China and the GDP growth of India. It shows a correlation of 0.566 which signifies a positive correlation between import from China and the GDP growth of India. The R (square) value denotes how much proportion of variation in GDP growth, can be explained by the imports from china. Only 32% can be explained in this model, which means that GDP growth is being affected by growth in import only by 32%. So

we conclude that GDP growth of India is affected by import from China. So India's GDP growth may be hampered by putting banned on chienesee goods and service.

Relationship of Export to India on China's GDP growth.

To examine the relationship between export to India and China's GDP growth, we find out the correlation coefficient between the two sets of data from the year 2011-12 to 2019-20

Table 7

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
China gdp growth rate	24.06	12.99	12.17	9.46	5.59	1.55	9.59	12.87	3.22
China export to India	55.31	52.25	51.03	60.41	61.71	61.28	76.38	70.32	65.26

Correlation coefficient (R) = (-) 0.32

R (Square) = 0.1024

R value denotes the correlation between the export to India and the GDP growth of China. It shows a negative correlation of (-) 0.32 which signifies a negative correlation between export to China and the GDP growth of China. Though (-) 0.32 correlation signifies a negative relation but not so strong correlation between import to India and the GDP growth of China. The R (square) value denotes how much proportion of variation in GDP growth can be explained by the exports to India. Only 10% can be explained in this model, which means that GDP growth is being affected by growth in export only by 10%. So we conclude that GDP growth of China is not affected by export to India. So China's GDP growth not be hampered if Indian Govt put any banned on Chinese goods and service.

Finding and Conclusion

- During the first decade of 21st century, the presence of Chinese products in Indian market has grown profoundly and exponentially. During 2010-2020, India's imports from China jumped to a whopping 115 times, from USD 30.82 billion to USD 65.26 billion.
- Astoundingly, India's trade deficit with China expanded 153% during the same period. However after 2017-18 for last 2 years India's trade deficit with China narrowed marginally to USD 48.65 billion in 2019-20 from USD 63.05 billion in 2017-18.
- China has been able to enhance its footprint in India to a greater extent. The intensity of Chinese products in Indian market has been continuously rising since 2009. Conversely, Indian products have a weak intensity in China's market and have been consistently falling over the years.
- India-china bilateral trade gradually decreases after 2017-18. It may be the effect of political disturbance.
- Trade to GDP ratio for both India and China is in decreasing trend. That indicates both the states are becoming self-dependent, where trade to GDP ratio for Singapore is more than one 150%. So band on Chinese product or anti-dumping against China by India has not made any serious issue for China international trade.
- From import penetration ratio we are observing that India is more dependent on China's product. So banned on Chinese product Indian economy will be hampered. In 2019-20 only 0.46% of GDP of China is coming from export to India. So the share is very negligible. Whereas in 2019-20 India's export from China is about 2.27% of India's GDP.
- There is a positive relation between India's GDP growth and import from China but there is a weak negative relation between China's GDP growth and export to India.
- So various economical steps taken by India against China

product may be hampered the Indian economy more than the China economy.

- India sources around 70% of its active pharmaceutical ingredients (APIs) from China to supply its vast pharmaceutical industry that includes Sun Pharmaceutical Industries, Lupin and IPCA Labs. India's pharma imports from China were \$2.68 billion in 2019-20.

References

1. Bussiere M, Mehl A. China's and India's roles in global trade and finance: Twin Titans for the new Millennium (Occasional paper series no. 80), 2008.
2. Dimaranan B, Ianchovichina E, Martin W. China, India, and the Future of the World Economy: Fierce Competition or Shared Growth. 2007; 2:21-25.
3. Embassy of India, Beijing. Economic and-trade-relation. php: International journal of Management, IT and Engineering ISSN: 2249-0558. 2017; 1:81-90.
4. IMC- Economic Research & Training Foundation. India-China Trade Relation. 2017; 1:34-42.
5. Jain D, Nair K, Jain V. Factors Affecting GDP (Manufacturing, Services, Industry): An Indian Perspective. Annual Research Journal of Symbiosis Centre for Management Studies, Pune. 2015; 3:38-56.
6. Kumari D. Trade-Led Growth in India and China: A Comparative Analysis. Journal of International and Global Economic Studies. 2014; 7(2):68-88.
7. <http://tradestat.commerce.gov.in>
8. <http://trademap.org>
9. <https://skdrdpindia.org>