



A Research Report on

**ANALYSIS OF BILATERAL TRADE RELATIONS OF INDIA
WITH CHINA AND USA**

**in partial fulfilment of Dissertation project for award of degree of
Master of Science in Economics**

Submitted By :
Kangabam Jeffrey
(11503613)

Supervised By :
Dilfraz Singh
(Assistant Professor)

**School of Business
LOVELY PROFESSIONAL UNIVERSITY
Phagwara, Punjab
April, 2017**

DECLARATION

I, Kangabam Jeffrey, hereby declare that this work is the product of my own research effort, undertaken under the supervision of Dilfraz Singh, Assistant Professor, School of Business, Lovely Professional University. No part of this thesis has formed the basis for the award of any degree or fellowship previously. All sources have been acknowledged.

Kangabam Jeffrey

Lovely Professional University (LPU)

Date & Signature

CERTIFICATION

This is to certify that the declaration statement made by the student is correct to the best of my knowledge and belief. The Dissertation Project Proposal based on the technology / tool learnt is fit for the submission and partial fulfilment of the conditions for the award of Master of Science in Economics from Lovely Professional University, Phagwara.

Signature of Faculty Mentor

Name: Dilfraz Singh

Designation: Asst. Professor

Lovely Professional University

Phagwara, Punjab

Date: 29/04/2017

ABSTRACT

The paper attempts to present a theoretical framework of identifying the composition and patterns of trade flow between India and China and India and USA and finding the revealed symmetric comparative advantage (RSCA) over the two participating economies. This will help in determining the export performance of the country. Using the bilateral trade of the involving countries the composition and share of imports and exports are studied and examined the top ten traded commodities from both China and USA. The data found that India imports more from China and in contrast, India exports more to USA. The result of RSCA indicates that India has CA (comparative advantage) over USA in most amongst the top ten traded commodities and India has CDA (comparative disadvantages) over China. It can be due to the fact that India's export are mainly raw material and labour oriented items such as mineral fuels and stones and coins which is again very competitive in accordance with the China's economy.

Keywords: Export; Import ; Comparative Advantage (CA); Comparative Disadvantage (CDA); Revealed comparative advantage(RCA);Revealed Symmetric Comparative Advantage (RSCA);

CONTENTS

INTRODUCTION	1
• OVERVIEW OF TRADE AGREEMENTS BETWEEN CHINA AND USA	2
REVIEW OF LITERATURE	4
OBJECTIVE OF THE STUDY	8
RATIONALE OF THE STUDY	8
METHODOLOGY & DATA COLLECTION	9
DATA ANALYSIS	11
• COMPARISON OF INDIA'S EXPORT TO CHINA AND USA	11
• COMPARISON OF INDIA'S IMPORT TO CHINA AND USA	12
• COMPOSITION OF INDIA'S TOP 10 EXPORTS' COMMODITIES TO CHINA AND USA FROM 2000-2015	14
• COMPOSITION OF INDIA'S TOP 10 IMPORTS' COMMODITIES FROM CHINA AND USA FROM 2000-2015	16
REVEALED SYMMETRIC COMPARATIVE ADVANTAGE MEASURES	18
CONCLUSION	22
REFERENCES	23

INTRODUCTION

Trade has very become necessary, now more than before, for the existence of countries that is known to have limited or skewed resources. It is hard for economies to remain in self-isolation. Trade has make economies more integrated than ever before and has been reducing the barrier of cross-border investment, distance, time-zones, differences in government regulation and business system. These flows of products are influenced by macroeconomic factors prevailing in both the trading economies and the world as well. Therefore the countries, aware of their diversified trade, felt the need to engage in international trade. Trade pattern gives an overall picture of what types of goods and services are being traded and which countries are involved. The study of trade reflects the economic growth of both developed and less developed companies. Trade between two countries is an absolute necessary in this new era of globalisation. The international trade start gaining momentum only after the late 18th and 19th century and continued by some countries, including India and China, opening up their economies to the international market. After 1945, rules started regulating with the formation of bilateral and multilateral trade agreements like GATT (General Agreement on Tariffs and Trade) & Bretton Woods institutions (IMF and World Bank). The study of trade of India also reflects the volume, composition and trade pattern with partner countries. It was only after independence that India's trade pattern began to change. The Industrial Policy 1991 made an array of reforms regarding trade and India was brought into the trade-map of the world. These reforms have led to breakthrough change in the performance of the external sector in India. Despite being 7th largest economy based on nominal GDP and being 3rd largest in terms purchasing power parity (according to IMF reports of World Economic Outlook 2016), the trade deficit in India has gone up to 4 percent to USD 10.16 billion in October 2016.

India exports approximately 7500 commodities to about 190 countries, and imports about 6000 from 140 countries. Looking from the figure below, India exported US\$262003.7 million worth of commodities in 2015-16 which was a decrease from previous 2014-15 that stood at US\$310352 million and it imported US\$380356.3 million as compared to US\$448033.4 worth of commodities. Oil exports in 2015-16 were low with US\$30423.5 as compared with the past few consecutive years. Non-oil exports were US\$ 231580.2 million in 2015-16. Whereas oil imports for 2015-16 was valued at US\$82879.9 million as against the US\$138325.5 million of 2014-15 and non-oil imports were registered at US\$297476.4 million in 2015-16 as decline from US\$309707.9 of 2014-15. The trade balance for 2015-16 was stood at US\$-118352.6 million which was lower than the balance of US\$-118401.3 million during 2014-15. Overall the trade balance has improved. India's export and import figures reflect the subdued economic scenario both domestic and globally. Both exports and imports have contracted from between 2014 to 2016 (from the figure below). We can see that it also imports more than it exports. At the moment, with GDP growth of US being negative while China's on a decelerated six-year low, India needs to revive production and pick up demand to boost economic growth.

India's Foreign Trade (in US\$ million)

Years	Exports	Imports	Trade Balance
2000-01	44560.3	50536.5	-5976.2
2001-02	43826.7	51413.3	-7586.6
2002-03	52719.4	61412.1	-8692.7
2003-04	63842.6	78149.1	-14306.5
2004-05	83535.9	111517.4	-27981.5
2005-06	103090.5	149165.7	-46075.2
2006-07	126414.1	185735.2	-59321.2
2007-08	162904.2	251439.2	-88535
2008-09	185295	303696.3	-118401.3
2009-10	178751.4	288372.9	-109621.4
2010-11	251136.2	369769.1	-118632.9
2011-12	305963.9	489319.5	-183355.7
2012-13	300400.7	490736.7	-190336
2013-14	314415.7	450213.7	-135798
2014-15	310352	448033.4	-137681.4
2015-16	262003.7	380356.3	-118352.6

Source: Handbook of Statistics, RBI

Overview of Trade Agreements between China and USA

There have been regular meeting from these two countries at political and official levels on bilateral, global and regional issues. From the past many years we can see several structured dialogues mechanism applied trying to strengthen bilateral engagement on economic and trade related issues. However, despite the tremendous trade and economic relation, there has been no single free trade agreement (FTA) with these two countries.

India and China have come a long way to play an increasing dominant role in world economic affairs. According to the Ministry of Commerce and Industry, India's largest trading partner still happens to be China. From the earlier period both India and China have been saying in public that they are committed to engage in FTAs (Free Trade Agreements).

However no major breakthrough has been made towards the signing of proper FTA from both India and China. In fact, there have been several occasions where the two countries tried to have a meeting over a possible FTA but still remain unproductive. The main items of India's trade to China include ores, iron and steel, slag and ash, organics, cottons and plastics. On the other hand China exports to India were moderately diversified and include not only organic chemicals, electrical machinery and equipment, cement, nuclear reactors, miner fuels and oils, but also manufactured items, technology products, resource-based products. It was found that China exports to India have been growing at a rate greater than overall Indian exports as well as overall China exports. Simply put, China is penetrating into Indian economies at a pace much quicker than in any of its other export markets. It was 2003 that both India and China established a Joint Study Group to examine the potential of economic growth. The 4th work group meeting on RTA which was held on June 4-5, 2007, reached a consensus on main topics like goods trade, service trade and investment trade and investment facilities, and economic cooperation. In October 2007, the Joint Task Force finalized its report on the feasibility of a China-India Regional Trading Arrangement (RTA) and found that both the countries will be benefitted from such arrangement. In December 2007, at the second China-India Financial Dialogue in Beijing, the two countries vowed to boost exchanges and cooperation on bond markets development so that channels for direct financing can be expanded, to gradually open capital markets and to boost financial supervision to guard against risk brought about by short-term cross-border capital flows.

On the other hand, considering India and USA, there has been a cordial trade relation which was even helpful in influencing future international system, democracy, prosperity and peace across the world. The trade relations over the years have grown to reach US \$ 62117.21 million in 2015-2016. The India-US trade policy forum was established in July 2005 with an agenda to make an arrangement between the two Governments to discuss trade and investment issues. Minister of Commerce and Industry, Government of India and United States representative co-chaired the TPF. The forum consisting of five Focus Groups discussed the issues and concerns regarding this problem. The dialogued addresses a range of issues that led to some noticeable changes in key sectors and to create a momentum for ever increasing bilateral trade. In addition to TPF, in April 2007, a PSAG (Private Sector Advisory Group) was formed to provide with views and advice from non-government trade and investment experts. India's important exports to US were precious stones including gold and diamonds, woven and knit apparel, organic chemicals and machinery, and miscellaneous textile article. India's imports consist of sophisticated machinery, medical and surgical equipments, aircraft, spacecraft, etc. Though the two countries have been making effort to strengthen the bilateral ties, it remains to be seen whether the two parties could actually live up to its word. Last time India and US met in Trade Policy Forum, Delhi October 20, 2016, both agreed to strengthened economic relationship and engaged in bilateral trade to increase in the trade. Minister Sitharaman and ambassador Froman discussed and exchanged views on a range of trade and investment issues, particularly (i) Agriculture, (ii) Trade in services and Trade in Goods, (iii) Promoting Investment in Manufacturing, and (iv) Intellectual Property. Both countries could be seen discussing the trade agreements of their respective partners. However both have yet to explore the topic of free trade agreement in this meeting since the

inception of TPF. The forum has gained momentum with regular ministerial meetings in 2014, 2015, 2016. During Prime Minister Modi's visit in September 2014, it was decided to establish an India-US Investment initiative, with a special focus on facilitating FDI, portfolio investment, capital market development and financial of infrastructure. This dialogue has been discussed in the meeting of 2015. US firms will be lead partners in developing Allahabad, Ajmer and Vishakhapatnam as Smart Cities. The importance of e-commerce, retail and direct selling in facilitating trade in goods was acknowledged by both sides. India noted that 100 percent foreign direct investment (FDI) is now permitted in the marketplace model of e-commerce as well as in the distribution of food products produced in India, including through e-commerce.

REVIEW OF LITERATURE

Tinbergen (1962) proposed that bilateral trade flows between two countries were directly proportional to the gross national product and inversely proportional to the distance between them. He also found that aside from economic variables, political and economic factors also played a part in determining the volume of trade between countries.

Balassa & Nolan (1989) studied the comparative advantage of Japan and USA and found that USA was increasing its comparative advantage in natural resource intensive product while still specialized in physical as well as human capital intensive goods. There was an increase in the comparative advantages of high technology products from both the countries.

Leaner and Levinsohn (1994) surveyed and studied the distance effect on bilateral trade and said that its finding was one of the clearest and most robust empirical findings. They suggested geographic size and isolation could affect both the total trade of a country and also the composition of that trade. Further suggestions were also provided for future empirical research.

Dalum et al (1998) examined whether the OECD countries were characterised by high degree of their export specialisation pattern at the country level or not and tested whether these countries have become more or less specialised. The result showed that a country specialisation patterns were rather sticky. De-specializations with the context of economic integration were also discussed and also contrast the findings along with similar topic on technological specialisation.

Deardorff (1998) analysed bilateral trade taking two cases of the Heckscher-Ohlin model. In first case if demand were non-correlated with supplies or if preferences were homothetic and identical, there was flowing of the expected trade to the frictionless trade with gravity equation. For the second case, countries that produced distinctive goods are either CES (Constant Elasticity of Substitution) or Cobb-Douglas. It also added the increase in distance ends up adding on relative transport costs.

Feenstra et al (1998) identifies the determinants of bilateral trade deficit between US and China and found that there was widening trade deficit due to opposing macroeconomic

factors of both the countries and increased movement of production of US imports to China from East Asia.

Frankel and Romer (1999) offered measures of the geographic component of one countries trade to get influential variables estimates of the effect of trade on income. It was seen that ordinary least-squares estimates overemphasize the trade effects providing no evidence. Also trade was seen to have a moderately statistically significant positive effect on income.

Kalbasi (2001) studied the theoretical background of the Intra-Industry Trade of Iran to identify the trend and pattern of IIT across SITC categories. The results indicated that Iran had a very low industrial base relative to OECD countries.

Rihardson and Zhang (2001) found that USA has comparative advantage in differentiated producer goods though and comparative disadvantage in standardized producer and consumer goods. The consumer good patterns are found to be very remarkably unstable and uneven across trading partners and at different levels of aggregation. They were less unsuccessful in finding out sectoral niche comparative advantage than geographical niche comparative advantages.

Smarzynska (2001) analysis was found to be statistically significant estimated using the intra-OECD trade flows. The results also shows that two countries located at the periphery rely more on bilateral trade than a pair of countries located close to the central counterparts. The study show that omitting the location measure influences the estimated impact of regional country groupings in a systematic manner which might led to policy implications.

Veeramani (2002) implies that trade expansion towards IIT (intra-industry trade) was favoured by the atmosphere of the liberalized policy. It also showed how one group of countries imports from one countries and then simultaneously exports to other. As country's income distribution became more dissimilar, the more intense the IIT, in most industry groups, becomes. It can be observed that bilateral trade happens when there is a closer distance between the partners and when the market of the trading partner widened their market size.

Don P. C and Denise L. S (2003) identified the industry and country level determinants of intra-industry trade between USA and developing countries. It was found that trade orientation and economic size influenced IIT positively; IIT also declined with greater differences in relative factor endowments. It showed that IIT happen in non-standard, vertically differentiated, made-to-order, labour intensive products by worldwide integrated industries. The paper lamented that IIT should focus on both empirical and theoretical model of North-South trade based labour cost differences, the differences of quality and the degree of product standardization between North-South in keeping with view of the relation to vertical product differentiation and country specifications.

Baier and Bergstrand (2004) estimated the endogeneity of FTAs (free trade agreement) and suggested that trade flow is increased to quintupled by the effect of FTAs between two

member countries. However they failed to address the impact of such agreement on non trading members nor on trade between non members as well.

H Lai and SC Zhu (2004) fitted asymmetric trade barriers and international differences in production costs through a monopolistic competition model and detected that a presence of highly non-linear bilateral trade equation. A study of the model indicated that there will be shifting of trade liberalisation from rich to poor countries and from within trading partners to intercontinental trading partners.

Batra and Khan (2005) analysed the pattern of comparative advantage at various levels of disaggregation of commodities and found no correlation between the manufacturing sectors of India and China in the global economy. When ranked according to the comparative advantage at the constituent six digit commodity level, sectors occupying among top ten places as per the RCA indices, were not able to keep their position.

Sen (2006) discussed the adjustment of India, China and ASEAN to the term 'new regionalism' through comparative bilateral and regional analysis of their initiatives. It was remained sceptical that these initiatives will not lift them upto the global free trade platform, unless supported by unilateral and multilateral liberalisation.

Wu Y and Zhou Z (2006) focused on the changing trends of bilateral trade of two countries through studying of trade intensity, intra-industry trade and comparative advantages of the two countries.

Wu Y (2007) reviewed India and China's service sector development and its determinant of demand. It was concluded that India needs industrialisation more than now due to the rising rural population and IT service alone would not be capable of contributing to the economic growth. Meanwhile, China was seen to be relentless in expanding service sector trade.

Z Hong (2007) observed the role of ASEAN, India and China and other power economies and suggested that ASEAN has been playing a significant role in bringing the whole asian region together. He examined the changing regionalism and globalisation on ASEAN relation and their impacts on India.

Cuñat and Maffezzoli (2007) presented a comparative advantage model that is capable of generating sizable increase in trade volumes over time. A fall in tariffs has increased the scale of specialisation with the factor endowments given leading to bigger volume in the short run. Further, a fall in tariff also raised the factor price of abundant factor of each country. The study indicated a disproportional increase in the trade share data due to fall in tariffs.

Quereshi M.S and Wan G. (2008) identified the export performances and trade complementariness and competitiveness pattern of India and China with each other as well as with the world. It proposed that the exports of labour intensive products created by China can be reduced in the long run.

Veeramani, C (2008) took a comparative analysis of the changing export performance and observed the patterns of resource allocation in India and China. It exposed that India need not be fear of ‘Chinese Invasion’ of export markets by calling it as a myth. He noticed an improvement in comparative advantage in technology and human capital intensive good of both countries. He also said that India as compared to China needed to do away with the bottlenecks on infrastructures and policy rigidity of the factor markets if they want to have a efficient resource allocation process and export activities in India. He did not agree with the statement that import liberalisation would lead to large scale disappearance of domestic industries.

Burange et al (2009) analysed revealed comparative advantage India’s service trade from 1908 to 2007; to compare the growth in both pre and post liberalisation period. Further he emphasised that in order to have sustainable growth India need to focus rather on global environment than focussing on internal policy.

Muthiah (2010) took a swot analysis to look in the basic figures and details of trade for India and China with the view of global economies and various bilateral moves.

Paul (2010) examined whether India’s business cycle has synchronised with that of the economy of US, post India’s liberalisation in the early 1990’s. it was found that with liberalisation intensified over time India’s business cycle has increasingly been synchronised with USA. This coordination was viewed as business cycle transmission from USA to India due to the reason that USA output variations were arguably exogenous to India. This synchronization was also helped by trade and monetary policy.

Das, Banga and Kumar (2011) deconstruct the India service led growth in lieu of falling external demand and found that the external demand does not influence most sectors that have high shares in GDP and hence have no much impact in the declining of growth rates. However it can be affected by the global crisis as it is possible that the effects gets pass into the economy as different stage. He said wholesale/retail trade, banking and retail services were the sectors that have the potential to sustain the growth of Indian economy being having the high shares in the GDP.

E Marelli and M. Signorelli (2011) analysed the trade relations and its effect on India and China economic growth by observing past institutional reforms and comparing the trade and FDI. They used panel data to estimate economic growth and trade openness with addition of control variables such as gross fixed capital formation. The result showed that there is a positive effect in opening up the economy and integrating with the world economy.

Chatterji et al (2014) said that after India’s economy changes from state led growth model to pro-market model, the relationship between economic growth and trade openness has been increasingly evolving. There was no evidence of significant association of trade barriers and growth.

Mohanty S.K (2014) analysed the trend of India's trade with China's market and followed an in depth study of increasing regionalism between India and China to focus on sustainable trade potential of India and China.

Nath, Lui and Tochkov (2015) examined the pattern and determinants of CA (comparative advantage) of services trade of USA with China and India from 1992 to 2010. It was found that US still have CA in most services despite being an exception in services like travel and transportation and computer and information services. India has the capabilities to gain advantage in particular services. China was persistent in maintaining dominance over USA over period of time. It suggested that USA should focused in relative abundance of sector specific labour, human capital, and FDI inflows to have as Significant CA over China and India.

OBJECTIVE OF THE STUDY

- To analyse the composition and pattern of the trade in mercantile trade between India and USA and India and China.
- To find the top ten traded export and import commodities based on the absolute value from the hundred commodities.
- To calculate revealed comparative advantage between India and the US and India and China.

RATIONALE OF THE STUDY

The paper will emphasised its importance on the study of India's trade by collecting import and export data of the participating countries. The data are to be collected over a certain period of time from relevant websites and are observed to find out the trading pattern and composition of the trade. This study will look into the trade flow of the countries to see whether we are exporting more or are we importing more; what good are we trading; which goods and services are been exchanged. It will be helpful in determining the performance of the economies comparing with the other economies. It will also enable us to study the degree of openness of the countries engage in the trade. Further it will enable us to understand the implications of trade barriers like tariff and non-tariffs and its impact on remittance and foreign direct investment.

Also, this paper will help in framing and improving trade policies and existing Free Trade Agreements (FTAs). It can be helpful in providing information to the Government to take better decision and strategic negotiations. The policymakers can analyse the trade composition of export and import between these countries and find out what kind of product or items these countries are trading. Further they can decide which goods and services should emphasise in both domestic as well as international market to take advantage in dominating the market.

METHODOLOGY & DATA COLLECTION

The purpose also is to study behaviour of the trade of a country through revealed comparative analysis (RCA) which is a most widely used measured index from Balassa's(1965) RCA. RCA can be defined as the measurement of relative export performance of a country. In other words, RCA is the relative country's share of world exports of a product or commodity divided by its share of total world export. It shows the export performance of the country which can be useful in indicating trade potential of the country. Countries with identical RCA figures are likely to have low bilateral trade intensities unless there is involvement of intra-industry trade. Specifically, The RCA index for country i and commodity j is calculated as follows:

$$RCA_{ij} = \frac{\left(\frac{X_{ij}}{X_{it}} \right)}{\left(\frac{X_{wj}}{X_{wt}} \right)}$$

Where, X_{ij} = the values of country I's exports of product j

X_{wj} = the values of world exports of product j

X_{it} = the country's total exports

X_{wt} = world total exports

The interpretation of RCA is relatively simple. The index value is ranged from 0 to ∞ with 1 as the breakeven point. That is, a value less than unity means the country has no comparative advantage; on the other hand, a value above 1 implies the product has a revealed comparative advantage in the product. The index is flexible, there is no particular rules on what product should be used. It shows consistency with the changes in relative's factor endowment and productivity, meaning it shows considers the intrinsic advantage of a particular export commodity. That being said it cannot distinguish improvement in factor endowments with trade policies by a country.

However for this paper, since the world consist of two countries that are into trading, this index will be using the modified version of *Nath, Lui and Tochkov (2015)* which is expressed as below:

$$RCA_{ij} = \frac{\left(\frac{X_{ij}}{\sum_{j=1}^n X_{ij}} \right)}{\left(\frac{X_{ij}+M_{ij}}{\sum_{j=1}^n X_{ij} + \sum_{j=1}^n M_{ij}} \right)}$$

Here X_{ij} denotes the values of India's exports of commodities j ($j=1, \dots, n$) to country i ($i=$ China, USA). M_{ij} is the value of country i 's exports of commodities j to India (*i.e.* India's import of commodities j from country i). In other words, the bilateral RCA index is the share of a given commodities in total India's exports to China/USA relative to the share of India's trade (exports as well as imports) in this commodities with China/USA in total India's commodity trade with China/USA. In this also the value take the range from 0 to ∞ where values exceeding 1 indicates that India has comparative advantage (CA) in j and values between 0 and 1 indicates that India has comparative disadvantage (CDA) in a given commodities vis-a-vis China or USA.

RCA index however suffers from the problem of asymmetry and has a tendency net trade flows and intra-industry trade. It is asymmetric for the reason that, values on one side of unity are not comparable with those on the other side. To address this problem, *Dalum, Laursen and Villumsen (1998)* suggest transforming the RCA into

$$RSCA_{ij} = \frac{RCA_{ij}-1}{RCA_{ij}+1}$$

where, RSCA is the revealed symmetric comparative advantage (RSCA). The interpretation of RSCA is slight different from the interpretation of RCA in such a way that the index value ranges between -1 to +1. Positive values indicate that India has a CA with China/USA while negative values indicate that the India has CDA vis-à-vis China/USA in commodities j . That being said, this would not be a serious issue because we are not examining distributional dynamics and evolution of CA; we are simply trying to know which commodities has CA over China/USA.

Study is done through collection of export and import figures from the relevant source and illustration using tables, graph or trend lines wherever necessary. Sorting of the commodities from the hundred 2-digit code of grouped commodities will be carried out for every year from 2000 to 2015 and thereafter, top 10 traded export and import commodities from each year will be analysed based on the absolute value from the hundred commodities. From the top ten export and import commodities of each year, we add for the total absolute value of each year and sort the highest and find the top ten traded commodities out of the total added.

Data are collected from The Directorate General of Commercial Intelligence and Statistics (DGCI&S), which is under the Ministry of Commerce, Government of India. These are secondary data collected over a period from 2000 to 2015. The data has been retrieved as 2-digit code of grouped commodities. The other data sources are collected from World Bank websites and WITS (World Integrated Trade Solution).

DATA ANALYSIS

This section talks about empirical data's that are collected over 15 years from the source mentioned above. The study will be focus on the direction and trend pattern of trade. The composition of trade and trend analysis will be studied using graphical presentation and trend line. This section will be divided into three parts; first will be the comparison of exports and imports from both the countries; composition of exports and imports of top ten traded commodities; and lastly to find revealed comparative advantage.

COMPARISON OF INDIA'S EXPORT TO CHINA AND USA

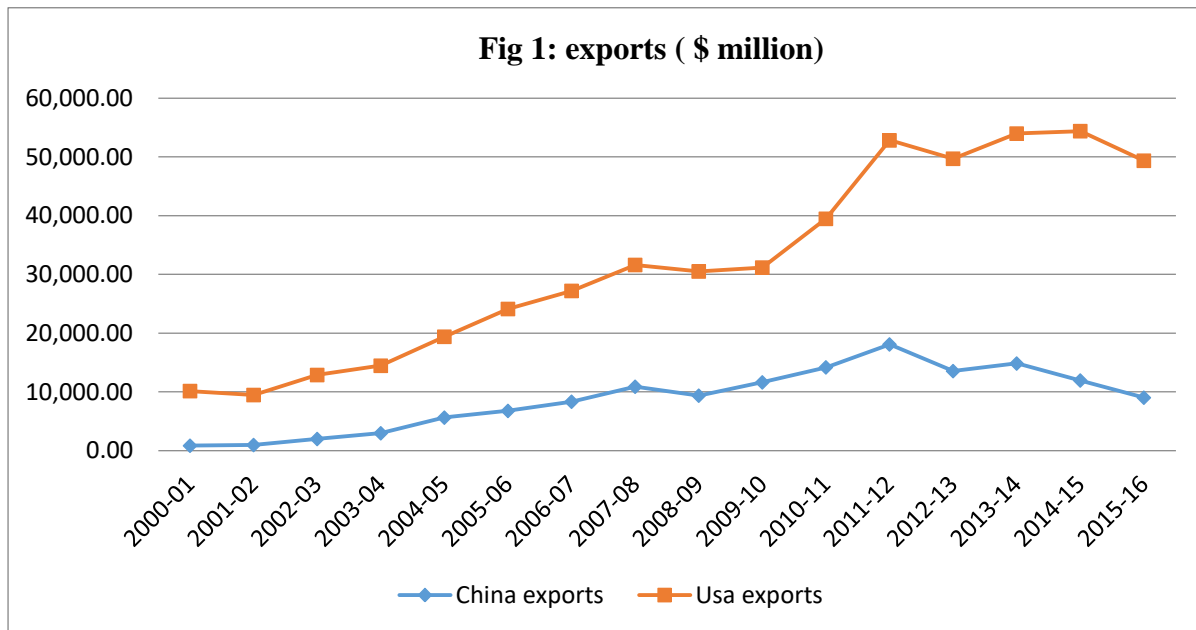
The following figure shows India's exports and imports from China and USA and the absolute figure obtained from the data over 2000-2015. The data also include the respective percentage share and percentage share of the growth rate.

Table 1: India's export to China and USA (in \$ million)

Year	China exports	%Share	%Growth	USA exports	%Share	%Growth
2000-01	831.30	1.8656	54.22	9,305.12	20.8821	10.83
2001-02	951.95	2.1721	14.51	8,513.34	19.425	-8.51
2002-03	1,975.48	3.7472	107.52	10,895.76	20.6674	27.98
2003-04	2,955.08	4.6287	49.59	11,490.03	17.9975	5.45
2004-05	5,615.88	6.7227	90.04	13,765.75	16.4788	19.81
2005-06	6,759.10	6.5565	20.36	17,353.06	16.8328	26.06
2006-07	8,321.86	6.583	23.12	18,863.47	14.922	8.7
2007-08	10,871.34	6.6641	30.64	20,731.34	12.7083	9.9
2008-09	9,353.50	5.0479	-13.96	21,149.53	11.414	2.02
2009-10	11,617.88	6.4995	24.21	19,535.49	10.9289	-7.63
2010-11	14,168.86	5.6717	21.96	25,291.91	10.1242	29.47
2011-12	18,076.55	5.9081	27.58	34,741.60	11.3548	37.36
2012-13	13,534.88	4.5056	-25.12	36,155.22	12.0357	4.07
2013-14	14,824.36	4.715	9.53	39,142.10	12.4496	8.26
2014-15	11,934.25	3.8456	-19.5	42,448.66	13.6782	8.45
2015-16	9,010.35	3.4353	-24.5	40,335.82	15.3783	-4.98

Source: Authors' calculation from monthly statistics of Indian Foreign Trade.

It is reported that China is the India's largest trading partners with total trade (sum of export and import) (as per 2014-15). As seen from the table 1, the exports to China gradually increase from US\$831.30 million in 2000 to US\$18706.55 million in 2011 with a growth rate of 27.58% and starts declining till it reaches US\$9010.35 million in 2015 with a negative growth rate of -24.5 %. The percentage share from export seems to increase in the beginning from 2000 to 2008-09 and starts declining till 2015 which is stood at 3.43%. India seems to have a good growth rate of exports to China from 2001 to 2007.



Source: Authors presentation from monthly statistics of Indian Foreign Trade.

From table 1, we can see India's export to USA gradually increasing from the very beginning of 2000 to 2015 with a value of US\$ 40,335.82 million with a percentage share of 15.37%. Highest export was seen at US\$42,448.66 million in 2014. The highest growth rate of export was at 2010 to 2011 with growth rate rising from 29.47% to 37.36%. Thereafter, it declines to 4.07% in 2012 ending with a negative growth rate of -4.98 in 2015.

By and large, from the fig.1, it is obvious that India exports more to USA than it does to China. The export to USA in 2015 is US\$40,335.82 million with a share of 3.4353 and the exports to China stood at US\$9,010.35 with a share of 15.3783. Both China and USA seems to have moderate fluctuation in percentage share of exports.

COMPARISON OF INDIA'S IMPORT FROM CHINA AND USA

Table 2 given below shows the import absolute figures of China and USA from India over a period of 2000 to 2015. As a developing country, there has been a significant expansion in the imports of India. If we look in China imports from the table below, there is a notable increase in imports from US\$1,502.20 million in 2000 to US\$61,706.83 million in 2015 with

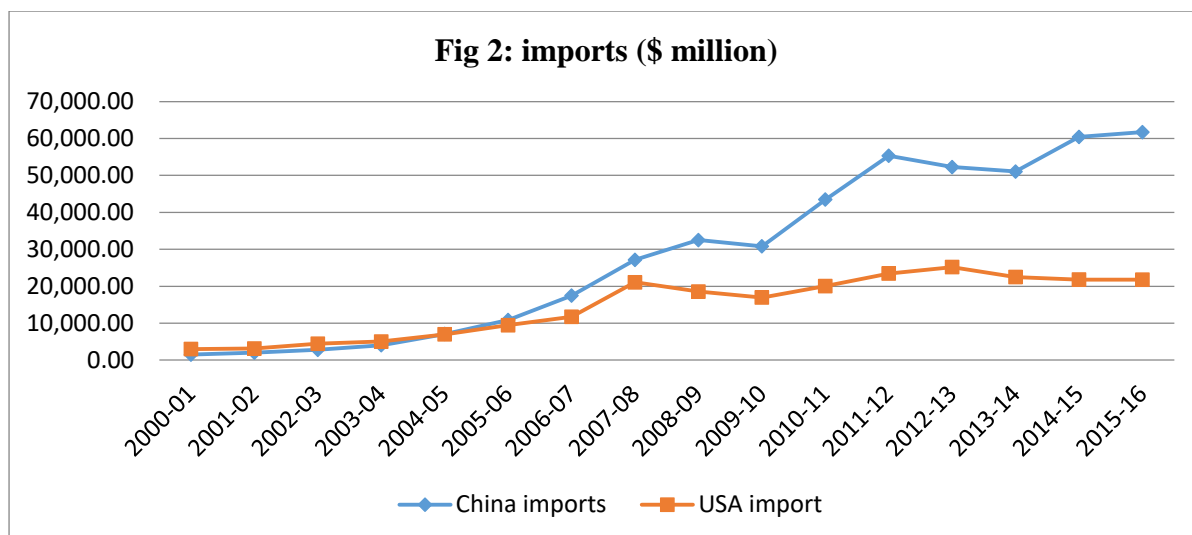
a percentage share of 16.19 %. The percentage share of imports also found to be increasing over time with 2.97% in 2000 to 16.19% in 2015. The percentage growth was seen to be positive till 2008 with 19.71% of growth from the previous 2007 of 55.34%. It then starts fluctuating ending with 2.14% of growth in 2015.

Table 2: India's imports from China and USA (in \$ million)

Year	China imports	%Share	%Growth	USA imports	%Share	%Growth
2000-01	1,502.20	2.9725		3,015.00	5.966	
2001-02	2,036.39	3.9608	35.56	3,149.62	6.1261	4.46
2002-03	2,792.04	4.5464	37.11	4,443.58	7.2357	41.08
2003-04	4,053.21	5.1865	45.17	5,034.83	6.4426	13.31
2004-05	7,097.98	6.3649	75.12	7,001.35	6.2783	39.06
2005-06	10,868.05	7.2859	53.11	9,454.74	6.3384	35.04
2006-07	17,475.03	9.4086	60.79	11,738.24	6.3199	24.15
2007-08	27,146.41	10.7872	55.34	21,067.24	8.3715	79.48
2008-09	32,497.02	10.7005	19.71	18,561.42	6.1118	-11.89
2009-10	30,824.02	10.6889	-5.15	16,973.68	5.886	-8.55
2010-11	43,479.76	11.7586	41.06	20,050.72	5.4225	18.13
2011-12	55,313.58	11.3042	27.22	23,454.92	4.7934	16.98
2012-13	52,248.33	10.6469	-5.54	25,204.73	5.1361	7.46
2013-14	51,034.62	11.336	-2.32	22,505.08	4.9989	-10.71
2014-15	60,413.17	13.4841	18.38	21,814.60	4.869	-3.07
2015-16	61,706.83	16.1957	2.14	21,781.39	5.7168	-0.15

Source: Authors' calculation from monthly statistics of Indian Foreign Trade

India's import from USA also can be seen increasing with US\$3015 million in 2000 with 5.96% of share from the imports reaching a \$21,781.39 million worth in 2015 with a share of 5.71% from 2015. The share of percentage from 2000 to 2015 seems to be moderate with 2007-08 having the highest share of 8.37%. The percentage growth from 2001 to 2007-08 was also positive and thereafter reverse with few fluctuation ending with -0.15% of growth in 2015.



Source: Authors' calculation from monthly statistics of Indian Foreign Trade

From fig 2. we can understand that USA started it out as a leading importer to India in the beginning of 2000 with US\$3015 million; follow closely by China with US\$1,502.20 million. With the liberalisation of China and India's global demand picking up China easily surpassed the pace of importing and ending as the highest importer to India reaching a total of US\$61,706.83 million in 2015 as compared with \$21,781.39 million of USA in 2015. It can be said that India, looking by the volume of trade, generally relies on more on import than on export.

COMPOSITION OF INDIA'S TOP 10 EXPORTS' COMMODITIES TO CHINA AND USA FROM 2000-2015

Table 3 gives the total export values of China and USA respectively obtained from computation of highest total given by the sorting of all top ten traded commodities of each year i.e. from 2000 to 2015. From the previous table 1, we have found that India exports more to USA than China. Here in this table given below we can see that the volume of export of top ten commodities is also comparatively larger than that of China's export. The only common item that is exported to the two countries is the Organic Chemicals and Mineral fuels, mineral oils and its products, bituminous substances, mineral waxes.

For China the following commodities occupy the top ten respectively: (i)Ores, slag and ash with a total of US\$4250.51 million; (ii)Cotton with US\$21542.42 million; (iii)Copper and articles thereof worth US\$11819.77 million; (iv)Organic chemicals with \$8905.94 million; (v)Mineral fuels, mineral oils and its products, bituminous substances, mineral waxes with a total of US\$5625.11; (vi)Iron and steel with US\$5542.39million; (vii)Plastic and articles thereof with US\$5124.1 million; (viii)Salt, sulphur, earths and stone, plastering materials lime and cement with US\$4821.82 million; (ix)Nuclear reactors and parts thereof with US\$3853.49 million; (x)Inorganic chemicals, organic and inorganic compounds of precious metals and parts thereof with a value of US\$1481.87 million.

Table 3: Top 10 exports' commodities to China and USA from 2000-2015 (\$ million)

China top ten commodity	Total	USA top ten commodity	Total
ORES, SLAG AND ASH	42450.51	NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMIPRECIOUS STONES, PRE.METALS, CLAD WITH PRE.METAL AND ARTCLS THEREOF; IMIT.JEWELRY; COIN.	83,870.63
COTTON	21542.42	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, NOT KNITTED OR CROCHETED..	25,787.12
COPPER AND ARTICLES THEREOF	11819.77	PHARMACEUTICALS PRODUCTS	23,407.77
ORGANIC CHEMICALS	8905.94	OTHER MADE UP TEXTILE ARTICLES; SETS; WORN CLOTHING AND WORN TEXTILE ARTICLES; RAGS.	19,631.64
MINERALS FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	5625.11	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, KNITTED OR CROCHETED..	15,628.21
IRON AND STEEL	5542.39	ARTICLES OF IRON OR STEEL	14,531.26
PLASTIC AND ARTICLES THEREOF	5124.1	NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF	14,106.72
SALT; SULPHUR; EARTHS AND STONE; PLASTERING MATERIALS; LIME AND CEMENT	4821.82	ORGANIC CHEMICALS	13,901.66
NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF	3853.49	MINERALS FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES	13,790.97
INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIOUS METAL, OF RARE EARTH METALS, OR RADIELEM. OR OF ISOTOPES.	1481.87	ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THEREOF; SOUND RECORDERS AND PRODUCER, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS..	8,751.22

Source: Authors' calculation from monthly statistics of Indian Foreign Trade

For USA exports, Natural or Cultured pearls, stones, jewellery and metals and articles thereof ranks first with a value of US\$83870.63 million. Next followed by, Articles of Apparel and Clothing accessories, not knitted or crocheted with US\$25787.12 million. The third is by Pharmaceutical products with US\$23407.77 million. The rest is followed by Others made up Textile articles and worn Clothing and Textiles articles, Rags with US\$19631.64; Articles of Apparel and Clothing, knitted or crocheted with US\$15628.21 million; Articles of Iron and Steel with US\$14531.26 million; Nuclear Reactors, Boilers, Machinery and its appliances and parts thereof US\$14106.72 million; Organic Chemicals with US\$13901.66 million; Mineral fuels, mineral oils and its products, bituminous substances, mineral waxes with US\$13790.97 million; Lastly there is Electrical Machinery and Equipments and Sound recorders and Television Image and Sound Recorders and Reproducers, and Parts thereof with US\$ 8751.22million.

COMPOSITION OF INDIA'S TOP 10 IMPORTS' COMMODITIES FROM CHINA AND USA FROM 2000-2015

Table 4 shown below also follows the same computation as done in the Table 3. It gives the import data of top ten traded commodities from 2000 to 2015. It is also known from the above study that China is the top importer to India from the past few years and the results can be clearly seen in this table also. The volume of trade in the top ten commodities to China is notably higher than that of USA.

Table 4: Top 10 imports' commodities from China and USA from 2000-2015 (\$ million)

China top ten commodity	Total	USA top ten commodity	Total
ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THEREOF; SOUND RECORDERS AND PRODUCER, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS..	129165.65	NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF	33342.68
NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF	82186.88	AIRCRAFT, SPACECRAFT, AND PARTS THEREOF.	28488.09
ORGANIC CHEMICALS	44739.16	NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMIPRECIOUS STONES, PRE.METALS, CLAD WITH PRE.METAL AND ARTCLS THEREOF; IMIT.JEWELRY;COIN.	24775.77
PROJECT GOODS; SOME SPECIAL USES.	19752.65	ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THEREOF; SOUND RECORDERS AND PRODUCER, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS.	19038.05
FERTILISERS	17562.17	OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC MEASURING, CHECKING PRECISION, MEDICAL OR SURGICAL INST. AND APPARATUS PARTS AND ACCESSORIES THEREOF	14445.5
IRON AND STEEL	16489.72	MINERALS FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES.	13146.95
ARTICLES OF IRON OR STEEL	12246.72	MISCELLANEOUS GOODS	10386.76
PLASTIC AND ARTICLES THEREOF.	9484.79	MISCELLANEOUS CHEMICAL	7345.04
MINERALS FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES.	6372.05	FERTILISERS	7258.03
OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC MEASURING, CHECKING PRECISION, MEDICAL OR SURGICAL INST. AND APPARATUS PARTS AND ACCESSORIES THEREOF	6026.58	ORGANIC CHEMICALS	7074.88

Source: Authors' calculation from monthly statistics of Indian Foreign Trade

Unlike the exports, more than half of the commodities can be seen occurring in the table that are imported from both the countries. There is Electrical Machinery and Equipments and Sound recorders and Television Image and Sound Recorders and Reproducers, and Parts thereof. Then there is also Nuclear Reactors, Boilers, Machinery and its appliances and parts thereof. Followed by Organic Chemicals; Fertilisers; Mineral fuels mineral oils and its products, bituminous substances, mineral waxes; and Optical Photographic cinematographic measuring, Checking Precision, Medical or Surgical Instruments and Apparatus and accessories thereof. This means that major items have been repeatedly imported from both the countries for all the 15 years.

Among the commodities imported from China, Electrical Machinery and Equipments and Sound recorders and Television Image and Sound Recorders and Reproducers, and Parts thereof with the value of US\$129165.65 million dominating for all periods from 2000-2015. Next highest commodity is Nuclear Reactors, Boilers, Machinery and its appliances and parts thereof with US\$82186.88 million. Organic chemical come as a third with a value of US\$44739.16 million. Next is Project Goods and some Special Uses with US\$19752.65 million. Fertiliser comes fifth with US\$17562.17 million. Next by Iron and Steel with US\$16489.72 million. Articles of Iron or steel occupy seventh with US\$12246.72 million. Eighth spot is by Plastic and articles thereof with US\$9484.79 million. Next is Mineral fuels, mineral oils and its products, bituminous substances, mineral waxes with US\$6372.05 million. Last is Optical Photographic cinematographic measuring, Checking Precision, Medical or Surgical Instruments and Apparatus and accessories thereof with a value of US\$6026.58 million.

For USA imports, Nuclear Reactors, Boilers, Machinery and its appliances and parts thereof took the first spot with a value of US\$33342.68 million. Next followed by, Aircraft, Spacecraft and parts thereof with US\$28488.09 million. The third is by Natural or Cultured pearls, stones, jewellery and metals and coins and articles thereof with US\$ 24775.77 million. The rest is followed by Electrical Machinery and Equipments and Sound recorders and Television Image and Sound Recorders and Reproducers, and Parts thereof with US\$19038.05 million; Optical Photographic cinematographic measuring, Checking Precision, Medical or Surgical Instruments and Apparatus and accessories thereof with US\$14445.5 million; Mineral fuels, mineral oils and its products, bituminous substances, mineral waxes with US\$13146.95 million; Miscellaneous Goods with US\$10386.76 million; Miscellaneous Chemical product with US\$7345.04 million; Fertilisers with US\$7258.03 million; Lastly there is Organic chemical with US\$ 7074.88 million.

One thing we noticed here is that some items are exported and imported simultaneously from the same country. Like in case of China, we found the following commodities engaging in both export and import: Organic chemical; Iron and Steel; Plastic and articles; Nuclear Reactors, Boilers, Machinery and its appliances and parts thereof; Mineral fuels, mineral oils and its products, bituminous substances, mineral waxes. Similarly in case of USA also we found India exporting and importing simultaneously. The items include Nuclear Reactors, Boilers, Machinery and its appliances and parts; Natural or Cultured pearls, stones, jewellery and metals and coins and articles thereof; Electrical Machinery and Equipments and Sound recorders and Television Image and Sound Recorders and Reproducers, and Parts thereof; Mineral fuels, mineral oils and its products, bituminous substances, mineral waxes; and Organic chemical.

REVEALED SYMMETRIC COMPARATIVE ADVANTAGE (RSCA) MEASURES

But before further going into RSCA, it is necessary to examine RCA to calculate the relative advantage or disadvantage of a certain country in a certain class of goods or services. Here for this study, RCA are calculated by taking the top ten export commodities as shown in the Table 3. RCA implies that the indices should range from 0 to ∞ with values exceeding 1 indicates CA and values between 0 and 1 indicates CDA. On contrary, RSCA suggest that the value index should range from -1 to +1 and that positive values indicates a country has CA (comparative advantage) whereas negative value indicates a country has CDA (comparative disadvantage). The revealed symmetric comparative advantage measures for bilateral trade between India and China are presented in Table 6.

TABLE 5.1: RCA of India's trade with China

Year	Ores, Slag And Ash	Cotton	Copper And Articles Thereof	Organic Chemicals	Minerals Fuels, Mineral Oils And Products Of Their Distillation ; Bituminous Substances ; Mineral Waxes	Iron And Steel	Plastic And Articles Thereof	Salt; Sulphur; Earths And Stone; Plastering Materials; Lime And Cement	Nuclear Reactors, Boilers, Machinery And Mechanical Appliances; Parts Thereof	Inorganic Chemicals; Organic Or Inorganic Compounds Of Precious Metal, Of Rare Earth Metals, Or Radi.Elem. Or Of Isotopes.
2000-01	1.93	1.66	0.00	0.65	0.00	2.13	2.13	0.78	0.18	0.00
2001-02	2.09	1.76	0.00	0.54	0.00		2.17	1.06	0.00	0.50
2002-03	2.07	1.62	0.00	0.54	0.00	2.16	2.16	2.16	0.22	1.16
2003-04	2.10	1.52	0.00	0.57	0.56	2.22	2.22	2.22	0.27	1.06
2004-05	2.26	1.25	1.73	0.71	0.00	1.96	2.33	2.33	0.21	1.41
2005-06	2.40	1.95	0.00	0.64	0.00	1.50	1.45	2.45	0.14	1.51
2006-07	2.41	2.05	2.16	0.58	0.20	0.99	1.31	2.47	0.11	1.36
2007-08	2.51	2.22	2.01	0.53	0.28	0.34	0.68	2.54	0.12	0.72
2008-09	2.62	1.97	0.00	0.33	0.00	0.46		2.64	0.11	2.64
2009-10	2.60	2.38	2.21	0.38		0.72	0.98	2.61	0.12	0.00
2010-11	2.46	2.28	2.17	0.38	2.48	0.68	0.79	2.48	0.10	
2011-12	2.57	2.50	2.37	0.44	2.60	0.62	0.96	2.60	0.09	
2012-13	2.59	2.47	2.39	0.45	2.63	0.44	0.94	2.63	0.11	
2013-14	2.38	2.30	2.20	0.35	2.43	0.60	0.72	2.43	0.12	
2014-15	2.23	2.30	2.21	0.35	2.44	0.00	0.42	2.44	0.11	
2015-16	2.35	2.28	2.15	0.30	2.45	0.00	0.38	2.45	0.10	

Source: Authors' calculation from monthly statistics of India Foreign Trade

TABLE 5.2: RCA of India's trade with USA

Year	Natural Or Cultured Pearls, Precious Or Semiprecious Stones, Pre.Metals, Clad With Pre.Metal And Artcls Thereof; Imit.Jewlry; Coin.	Articles Of Apparel And Clothing Accessories, Not Knitted Or Crocheted.	Pharmaceu ticals Products	Other Made Up Textile Articles; Sets; Worn Clothing And Worn Textile Articles; Rags.	Articles Of Apparel And Clothing Accessories, Knitted Or Crocheted.	Articles Of Iron Or Steel	Nuclear Reactors, Boilers, Machinery And Mechanical Appliances ; Parts Thereof	Organic Chemicals	Minerals Fuels, Mineral Oils And Products Of Their Distillation; Bituminous Substances ; Mineral Waxes	Electrical Machinery And Equipment And Parts Thereof; Sound Recorders And Producer, Television Image And Sound Recorders And Reproducers, And Parts thereof
2000-01	2.01	2.13	0	2.09	2.13	1.91	0.58	0		0
2001-02	2.02	2.17	0	2.11	2.17	0	0	1.19		0
2002-03	6.26	6.63	0	6.51	6.63	0	0	3.81		1.51
2003-04	2.02	2.22	0	2.12	2.22	0	0	0	0	0
2004-05	2.12	2.33	0	2.29	2.33	0	0	1.14	0	0
2005-06	2.2	2.44	0	2.42	2.45	2.12	0	1.39	0	0
2006-07	2.18	2.47	2.18	2.45	2.47	2.02	0.79	1.35	0	0
2007-08	2.13	2.54	2.3	2.53	2.54	2.27	0.78	1.34	1.36	0.99
2008-09	1.99	2.64	2.29	2.52	2.64	2.32	0.78	2.64	0	1.38
2009-10	1.98	2.61	2.32	2.54	2.61	2.15	0.67	2.61	0.92	1.28
2010-11	1.62	2.48	2.29	2.42	2.48	2.16	0.76	1.56	1.14	1.26
2011-12	1.94	2.6	2.41	2.51	2.6	2.25	0.88	2.6	0	1.42
2012-13	1.6	2.63	2.44	2.53	0	2.32	0.94	1.63	1.23	1.38
2013-14	1.91	2.43	2.25	2.34	2.43	2.06	0.9	1.55	1.75	0
2014-15	1.72	2.44	2.26	2.36	2.44	2.15	1.02	1.68	1.78	0
2015-16	1.8	2.45	2.31	2.38	2.45	2.09	0.79	1.57	1.5	0

Source: Authors' calculation from monthly statistics of India Foreign Trade

These two tables 5.1 & 5.2 give the indices of RCA derived from the estimation of product group and a country. The two tables are offered just in case to check if there is any similarity with RSCA when interpreted as per the measure. From the above Table 5.1 & 5.2, when the indices of RCA and RSCA are compared through each and every period of time, CA that has prevail in the commodities in RCA seems to be similar with that of CA appearing in the RSCA. Table 5.1 indicates India has more commodities of CDA over China. On the other hand, Table 5.2 shows India being on advantage over USA with CA mostly coming from commodities like natural pearl, precious and semiprecious stone and articles thereof; other made up, textiles and its related articles; apparel and clothing, both knitted and not knitted, crocheted, etc.

Table 6: Bilateral RSCA in India's trade with China

Year	Ores, Slag And Ash.	Cotton.	Copper And Articles Thereof.	Organic Chemicals	Mineral Fuels, Mineral Oils And Products Of Their Distillation; Bituminous Substances; Mineral Waxes.	Iron And Steel	Plastic And Articles Thereof.	Salt; Sulphur; Earths And Stone; Plastering Materials, Lime And Cement.	Nuclear Reactors, Boilers, Machinery And Mechanical Appliances; Parts Thereof.	Inorganic Chemicals ; Organic Or Inorganic Compounds Of Precious Metals, Of Rare-Earth Metals, Or Radi. Elem. Or Of Isotopes.
2000-01	0.32	0.25	-1.00	-0.22	-1.00	0.36	0.36	-0.12	-0.69	-1.00
2001-02	0.35	0.27	-1.00	-0.30	-1.00	-1.00	0.37	0.03	-1.00	-0.33
2002-03	0.35	0.24	-1.00	-0.30	-1.00	0.37	0.37	0.37	-0.64	0.07
2003-04	0.35	0.21	-1.00	-0.27	-0.28	0.38	0.38	0.38	-0.58	0.03
2004-05	0.39	0.11	0.27	-0.17	-1.00	0.32	0.40	0.40	-0.65	0.17
2005-06	0.41	0.32	-1.00	-0.22	-1.00	0.20	0.18	0.42	-0.76	0.20
2006-07	0.41	0.34	0.37	-0.27	-0.67	0.00	0.13	0.42	-0.80	0.15
2007-08	0.43	0.38	0.34	-0.31	-0.56	-0.49	-0.19	0.44	-0.79	-0.17
2008-09	0.45	0.33	-1.00	-0.51	-1.00	-0.37	-1.00	0.45	-0.81	0.45
2009-10	0.44	0.41	0.38	-0.45	-1.00	-0.17	-0.01	0.45	-0.78	-1.00
2010-11	0.42	0.39	0.37	-0.45	0.43	-0.19	-0.12	0.43	-0.82	-1.00
2011-12	0.44	0.43	0.41	-0.39	0.44	-0.23	-0.02	0.44	-0.83	-1.00
2012-13	0.44	0.42	0.41	-0.38	0.45	-0.39	-0.03	0.45	-0.80	-1.00
2013-14	0.41	0.39	0.38	-0.48	0.42	-0.25	-0.16	0.42	-0.79	-1.00
2014-15	0.38	0.39	0.38	-0.49	0.42	-1.00	-0.41	0.42	-0.79	-1.00
2015-16	0.40	0.39	0.36	-0.54	0.42	-1.00	-0.45	0.42	-0.81	-1.00

Source: Authors' calculation from monthly statistics of India Foreign Trade

From the above Table 6, the indices for Organic Chemicals and Nuclear Reactors, Boilers, Machinery and Mechanical Appliances; Parts thereof are all negative for the entire period. Also Commodities such as Minerals Fuels, Mineral Oils and Products of Their Distillation; Bituminous Substances, Mineral Waxes; Iron and Steel; Plastic and Articles Thereof; Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metal, of Rare Earth Metals, or Radi. Elem. or of Isotopes. are almost dominated by negative values. This indicates that China has CA over India in this commodity or in other words, India has CDA over China. India was at disadvantage in copper and mineral related products till 2009-10 periods. However, the indices suggest that India has CA over China in trading commodities such as Ores, Slag and Ash; Cotton; Copper and Articles thereof; Salt; Sulphur; Earths and Stone; Plastering Materials; Lime and Cement as most of them have positive value all throughout the entire period.

CONCLUSION

It is no surprise that China and USA are among the top trading partners of India with China as the first and USA second. The US is also India's largest investment partner. India has been engaging in a trade with China and USA over the last few decades. Growth in both diplomatic and economic relation has increased the significance of bilateral trade. India seems to enjoy a balance of trade with both the countries. Even though India does not have any FTA's at the moment, bilateral trade relation is the only thing these countries benefit from each other.

Currently for 2016-2017(Jan-April), the export to China goes down to 7886.2US\$ million with a percentage share of 3.59% and import stood at 50840.1US\$ million with a share of 16.46%. India's export to USA hovers around 34511.61US\$ million with a share of 15.73% and import is at 17602.03US\$ million with a share of 5.69%. From the study, we learned that China is remarkably keeping the pace of import to India and USA is the export destination of India. This may well be due to fact that China, since the liberalisation, being in a trade surplus accumulation and at the same time reducing trade tariff to the commodities that are imported to India. Based on result, we can draw the following general conclusion that India has CA over US but CDA over China. China's high import from India relative to its export could be another reason why China has CDA over India. Furthermore, this can also be due to the fact that India exports to US mainly consist of labour and service intensive commodities which are in high demand by the US. If we look at China, India's export are mainly raw material and labour oriented items such as mineral fuels and stones and coins which is again very competitive. Also most of China's exports came from final processing and assembly of intermediate goods coming from other Asian neighbours. Most of the commodities that India has comparative disadvantage over China and USA are found to be similar. India should focus on these commodities which have similar traits and specialize more on commodities that gives advantage over the other partners. India advantage and disadvantage vis-à-vis China exhibits high level of persistence over time while India is likely to continue have advantage over USA.

However, besides the problem of asymmetric and relative export performance, RCA also fails to highlight the circumstances of the market or the problem arising out of economic and political implications. There are many interesting product groups floating in the economy which is little to very little unknown to us. A glimpse into this category might give us a potential market with significant growth. A good geographical location is also one of the explanations for good bilateral relations. It is important to analyze the structure of market activities to understand the significance of foreign markets. The study is carried out in a limited time period. The results shown here only provide a measure of the importance of India merchandise exports. a further study into the service exports would be of value to give an overview of India's export economy.

REFERENCES

- Das, R. Banga, and D. Kumar, (2011) “Global economic crisis: Impact and restructuring of the services sector in India,” Asian Development Bank Institute, Working Paper series, no. 311.
- Baier, S. L. and J. H. Bergstrand (2004), ‘Economic Determinants of Free Trade Agreements’, *Journal of International Economics*, 64, 1, 29–63.
- Balassa, B. and M. Noland (1989). “Revealed Comparative Advantage in Japan and the United States”, *Journal of International Economic Integration*, 4, pp.8-22.
- Batra, A & Khan, Z (2005) “Revealed Comparative Advantage: An Analysis For India And China” Indian Council For Research On International Economic Relations, Working Paper No.168
- Burange, L.G., Chaddha, S.J. & Kapoor, P. (2009), “India’s Trade in Services”, *Indian Economic Journal*, 58 (2), 44-62.
- Chatterji, M, Sushil, M, Dastidar, S.G. (2014) “Relationship Between Trade Openness And Economic Growth Of India: A Time Series Analysis” *Journal of Academic Research in Economics*, Vol. 6, Issue 1, p45-69. 25p.
- Clark, D. and Stanley, D. (2003) “Determinants of Intra-Industry Trade between the United States and Industrial Nations”, *International Economic Journal* 17 (3), pp. 1-18
- Cuñat, A & Maffezzoli, M. (2007), “Can Comparative Advantage Explain the Growth of US Trade?” *The Economic Journal*, Vol. 117, No. 520, pp. 583-602
- Deardroff, A (1998) “Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World? The Regionalization of the World Economy”, *National Bureau of Economic Research*, ed. by Frankel, J.A., p. 7 – 32.
- Feenstra, R.C., Wen Hai, Wing T.Woo, Shunli Yao(1998) “The US-China Bilateral Trade Balance: Its Size And Determinants”, Working Papers 989, University of California, Department of Economics.
- Frankel, J.A. & Romer.D. (1999) “Does Trade Cause Growth?”, *The American Economic Review*, Vol.89,No.3.
- Huiwen Lai and Susan Chun Zhu (2004) “The Determinants of Bilateral Trade” *The Canadian Journal of Economics*, Vol. 37, No. 2, pp. 459-483
- J. David Richardson and Chi Zhang (2001) “Revealing Comparative Advantage Chaotic or Coherent Patterns across Time and Sector and U.S. Trading Partner?”, NBER

Kalbasi, Dr. Hassan (2001) "The Gravity Model and Global Trade Flows", Paper in the Conference of EcoMod, Washington DC.

Leamer, E.E & Levinsohn J (1994) "International Trade Theory: The Evidence" National Bureau of Economic Research, Working Paper 4940.

Marelli, E. & Signorelli M. (2011), "China and India: Openness, Trade and Effects on Economic Growth" The European Journal of Comparative Economics, Vol. 8, n. 1, pp. 129-154

Ministry of Commerce and Industry, Government of India,
<http://www.commerce.gov.in/DOC/index.aspx>

Mohanty, S.K. (2014) "India-China Bilateral Trade Relationship" Research and Information System for Developing Countries, A Report for RBI.

Muthiah, K (2010) "CHINDIA – the changing times of China and India bilateral relations" Management Research Review, Vol. 33 No. 1, pp. 23-40

Nath, H. K., Liu, L., & Tochkov, K. (2015), "Comparative advantages in U.S. bilateral services trade with China and India", Journal of Asian Economics, Vol. 38, pp. 79-92

Paul, B.P. (2010) "Liberalization and India's Business Cycle Synchronization with the US", Indian Economic Review, New Series, Vol. 45, No. 1, pp. 159-182.

Qureshi, M. & Wan, G. (2008) "Trade Expansion of China and India: Threat or Opportunity?" The World Economy, 31, issue 10, p. 1327-1350,

Sen, R. (2006) "New Regionalism" in Asia: A Comparative Analysis of Emerging Regional and Bilateral Trading Agreements involving ASEAN, China and India" Journal of World Trade

Smarzynska, B. (2001) "Does relative location matter for bilateral trade flows? An extension of the gravity model", Journal of Economic Integration 16(3): 379–398

Tinbergen Jan (1962), "An Analysis of World Trade Flows: *Shaping the World Economy*", ed. by Jan Tinbergen, New York, The Twentieth Century Fund.

Veeramani, C (2002) "Intra-Industry Trade of India: Trends and Country-Specific Factors" Weltwirtschaftliches Archiv, Bd. 138, H. 3, pp. 509-533

Veeramani, C (2008) "India and China: Changing Patterns of Comparative Advantage?" In R Radhakrishna (Eds.) *India Development Report 2008* (pp. 145-156), New Delhi (India): Oxford University Press.

World Development Indicators, World Bank.

World Trade Organization, <http://www.wto.org> .

Wu, Y. (2007) "Service Sector Growth in China and India: A Comparison". *China: An International Journal* 5 (1), 137 -154.

Yanrui Wu & Zhangyue Zhou (2006) "Changing bilateral trade between China and India" *Journal of Asian Economics*, Vol. 17, pg. no.509-518

Zhao, Hong (2007) "India and China: Rivals or Partners in Southeast Asia?" *Contemporary Southeast Asia*; Apr; 29, 1; ProQuest Central pg. 121