



A study of Trade patterns in the USA Market

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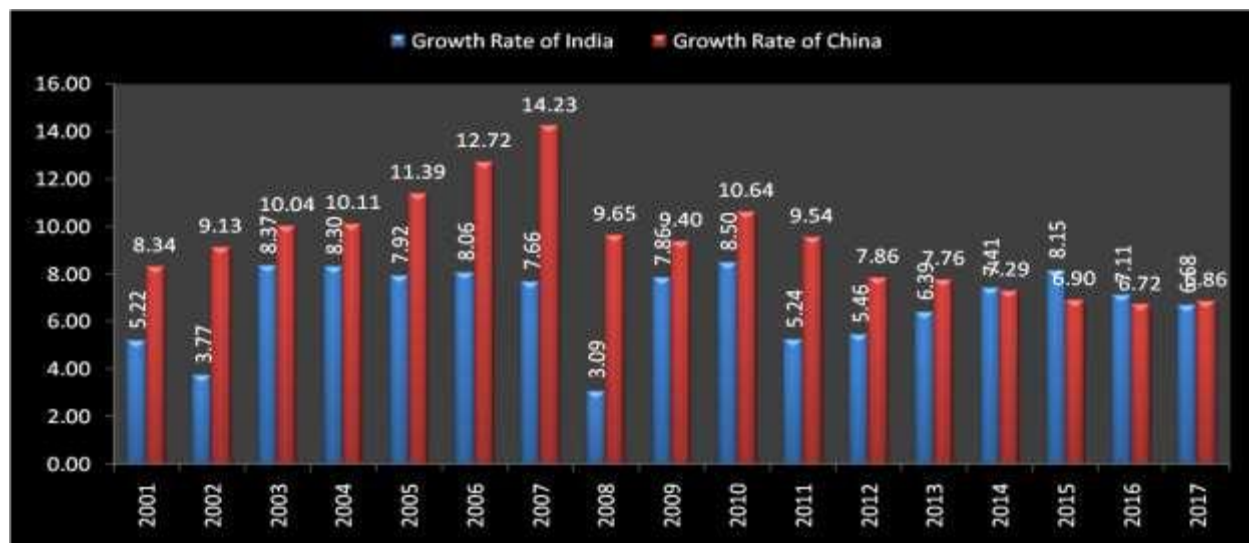
Abstract: India and China are two emerging giants of Asia in 21st century who astonished entire world with their growth performance. Both the nations are most populous countries in the world and contribute approximately 36 percent in world population. Both are well integrated with rest of the world. India is founder member of WTO where China joined WTO with the commencement of twenty first century. Now China is the largest exporter and second largest importer of goods following the USA. So it becomes necessary to analyze the implications of China's integration with world and impact on India. The USA is the largest trade partner of China and India. By employing Import Share Index on the USA's import, it has been observed that shares of both the nations have increased with passes of time and India stands nowhere before China in the USA market. By employing Origin Specific Categorical Import Share Index, an attempt has been made to identify the goods in which both the nations are competing.

Keywords: China, India, USA, Trade, Competition.

Introduction

China and India are the two emerging and fastest growing economies of Asia. Both the economies are similar in many ways e.g. both are the most populous economies in the world. The combined population of both the nations is 2769.1 million (China's 1415.05 million and India's 1354.05 million) which consists more than 36 percent of the world population. Area wise, China is 5th largest country (9,596,960 sq km) and India is 8th largest country (3,287,263 sq km) in the world. China is the largest economy in terms of purchasing power e.g. \$23.21 trillion (2017 est.) GDP and India is the third largest economy after the USA in the same term with \$9.474 trillion (2017 est.) GDP. Both are of fastest growing economies in Asia as depicted in the following graph. From 2003 to 2007, the growth rate of China has been in double digits and highest in 2007 e.g. 14.23 per cent. India also grew at more than seven per cent during this period. The impact of global recession of 2008 is visible on growth of both the nations.

Figure 1: Annual Percentage Growth Rates of China and India Since 2001 to 2017



Source: Based on United Nations Statistics Divisions data

The main reason for this slowdown is the recession started from the USA and USA is largest trade partner of both the nations which halted the growth in that year. Since 2013, both countries are growing almost at same rate.

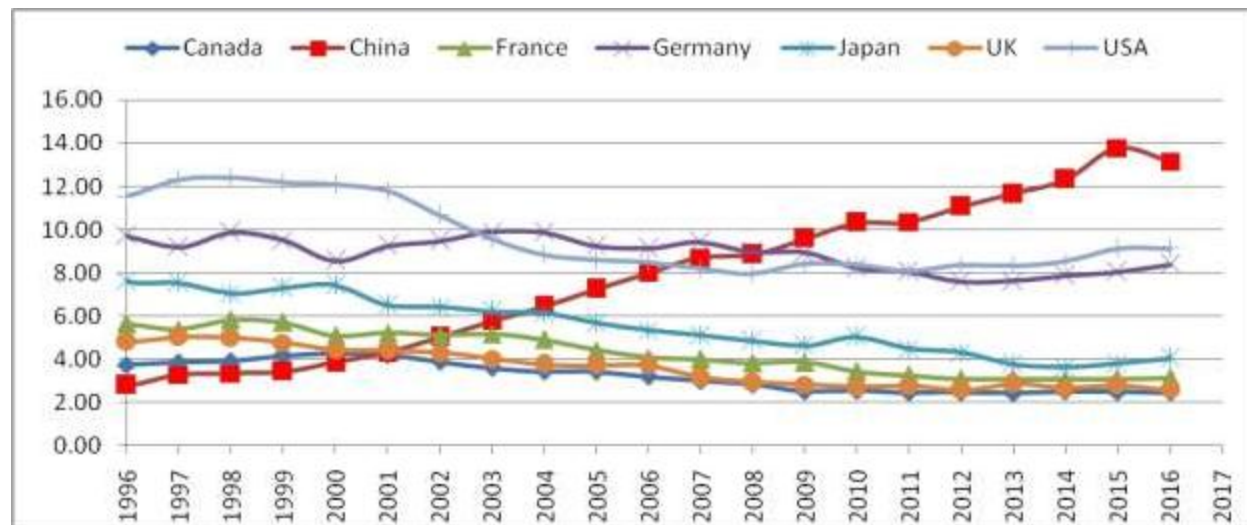
Both the nations are members of WTO and BRICS. India is one of the founder members of WTO while China became the member in 2001 after a long negotiation of 16 years. China's accession to WTO paved the path of economic progress and integration with rest of the world. After her accession to WTO, China emerged as a trade oriented economy which astonished entire world.

1.2 China's Emergence as a Trade Oriented Economy in 21st Century

China's overwhelming trade performance has acquired a remarkable space in international trade in the world. Since 1950 to 2014, world's total merchandise exports increased 306 times. It was USD 62.00 billion in 1950 and reached USD 19.002 trillion in 2014. If we glance at China's total merchandise exports, it was USD 550.00 million in 1950 and reached USD 2.3423 trillion in 2014, more than 4258 times increase has been noticed which contributes more than ten percent in world's total exports as mentioned above.

The same surge is visible in imports also. The world's total merchandise imports in 1950 was recorded USD 64.00 billion and it reached USD 19.091 trillion in 2014, near about 298 times more since 1950 to 2014. Where as China's total merchandise imports were recorded USD 580.00 million in 1950 and USD 1.96 trillion in 2014 near about 3378 times more (Chauhan and Kumar, 2014c).

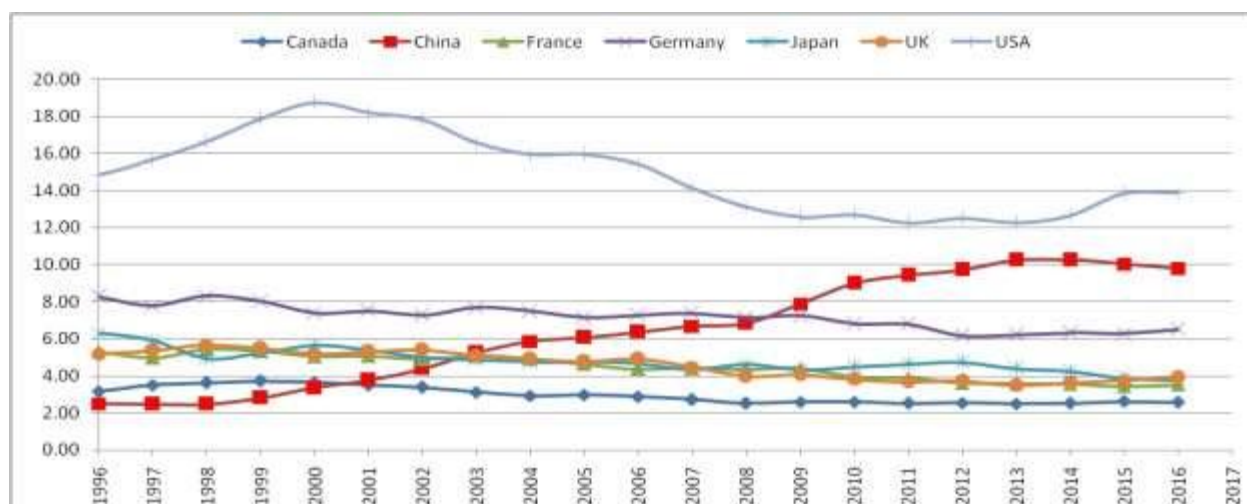
Figure 2: Percentage Share of Merchandise Exports of Canada, China, France, Germany Japan, UK and USA in the World's Exports since 1995 to 2016



Source: Based on United Nations Statistics Division Data

It is clear from Figure 2 that China has registered its remarkable contribution in world exports. It can be observed that China's share of commodity exports in world has been increasing. In the following countries, first of all China crossed Canada in 2001. In 2001, Canadian exports share was 4.195 and Chinese share was 4.295 percent. After that China surpassed United Kingdom in 2002 where China's share was 5.010 percent and UK's share was 4.311. China's increasing share surpassed France in 2003, Japan in 2004, USA in 2007 and finally Germany in 2010

Figure 3: Percentage Share of Merchandise Imports of Canada, China, France, Germany, Japan, UK and the USA in World's Imports since 1995 to 2016



Source: Based on United Nations Statistics Division Data

It is clear from the Figure 3 that China has registered its remarkable contribution in world imports. It can be observed that China's share of commodity imports in world has been increasing. In the following countries, first of all China crossed Canada in 2001. In 2001, Canadian imports share was

3.51 and Chinese share was 3.76 percent. After that China surpassed Japan, France and UK in 2003 where China's share was 5.25 percent and shares of Japan, France and UK were 4.87, 5.07 and 5.08 respectively. China's increasing share surpassed Germany in 2009. Where China imported 7.87 and Germany imported 7.25 percent of world's total imports. Now China is the 2nd largest importer of goods after USA with 9.78 percent where the USA imports 13.88 percent of world's total merchandise imports.

Review of Selected Literature

Chauhan and Kumar (2014a) have tried to study the growth pattern of China since her pre reforms era to 2012 and identify the role of trade. Chauhan and Kumar (2014b) has made an attempt to glance at the trade competitiveness between India & China and found that export competition between both the nations has declined in rest of the world. Chauhan and Kumar (2014c) have discussed the trade performance of China in world. Singh (2014) has made an attempt to examine and compare bilateral trade between the two economies and to draw implications for trade and economies cooperation between India and china in future. Sahu (2018) has discussed the India-China trade relation and its impact on India's GDP. This selected review of literature has guided us to set objectives and research technique for the present paper.

Relevance of the Study

Now it becomes important to glance at the trade competitiveness of India and China in the USA market because both are the emerging and neighboring economies in Asia and the USA is the largest trade partner of both.

The entire paper has been organized in four sections. Section 1 is devoted to introduction, selected review of literature and relevance of the study. Section 2 focuses on some trade indexes under research methodology. Section 3 shows results and their interpretation and finally section 4 is for conclusion of the paper.

2. Research Methodology

Source of Data

For calculating the growth rates, a time series data on GDP have been sourced from United Nations Statistics Division

The data on trade flows of the USA, China and India according to SITC Rev.3 at 2 digits codes level have been sourced from UN Comtrade Statistics Database for constructing some trade indices.

Technique

Import Share Index: This index tells us that how important is a particular trade partner in terms of the overall import profile of an economy. Changes in the import share over time may indicate that the economies in question are becoming more integrated. The import share is the percentage of imports from the origin to the destination in the total imports of the destination. It ranges between zero to hundred. Higher value indicates greater importance to selected trading partner.

$$\text{Import Share Index} = \frac{m_{ab}}{M_{aw}} \times 100 \dots \dots (1)$$

Where m_{ab} is total imports of country a from country b and M_{aw} is total imports of country a from world.

The Import Share Index has been employed on the US imports for India and China. It shows share of India and China in total imports of the USA.

Import Category Index: To understand the sectoral import share of the USA in her total merchandise imports, Import Category Index has been used. It addresses the trade (import) profile of an economy by measuring the proportion of total imports of the economy that are accounted for by particular product categories. The index can be defined as the percentage share of imports of particular product categories of the country to its total imports.

Where

MCI = Import Category index

m_i = import flow of commodity i by the country from the world

M = total import flow to the country from the world

The value of this index ranges between 0 to 100 percent, a high value indicates greater importance of the product in the export profile of the economy

$$MCI = \frac{m_i}{M} \times 100 \dots \dots \dots 2$$

Origin Specific Categorical Import Share Index:

$$OSCMSI = \frac{m_{ic}}{M_{iw}} \times 100 \dots \dots \dots 3$$

Where

OSCMSI = Origin Specific Categorical Import Share Index

m_{ic} = import of product i from origin c

M_{iw} = total import of product i from world

Origin Specific Import Category Index shows the share of a particular product imported from a specific origin in total import of the same product from the world. Its value ranges between 0 and 100. Higher value indicates more importance for an import partner for that product.

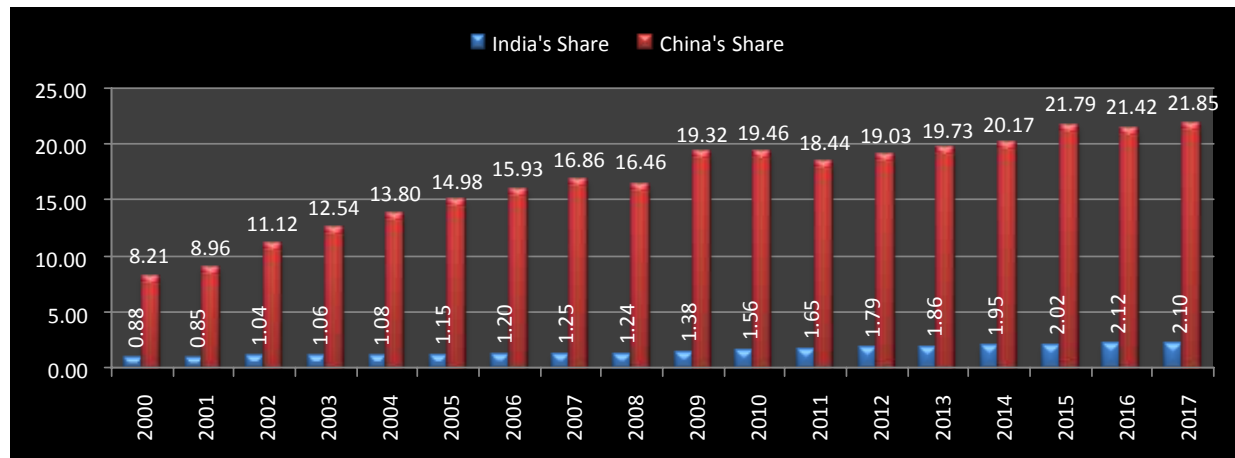
3. Results and Main Findings

The following results have been obtained by employing above three indexes and their possible interpretation is as follow:

China and India in the US market

The above Figure 4 show the Import Share Index of the USA in which shares of China and India have been depicted. It indicates importance of China and India for USA as an import partner. This index has been increasing continuously for India and China with some negligible oscillations.

Figure 4: Share of China and India in Import Share Index of the USA Since 2000 to 2017



Source: Based on UN Comtrade Statistics

This figure shows that China occupies larger space in the US market as compare to India which also indicates greater importance of China for USA. In 2000, more than eight percent of the USA's imports were from China which became more than sixteen per cent by 2007 and near about 22 per cent in 2017. On the other side, India's share was 0.88 percent in 2000 which became 1.25 per cent by 2007 and 2.10 per cent in 2017. This shows that, in whole period of eighteen years, China possesses more than ten times market in the USA as compare to India and because of this China garners more importance in the USA trade profile. USA's imports from China and India, although have increased at almost same rate averagely, e.g. 9.63 and 10.09 per cent per annum respectively. China's this overwhelming performance has displaced major import partners of the USA. In 2006, the European Union and Canada were the largest import partners of the USA with 18.3 and 16.8 per cent share respectively and China was on 3rd rank in this queue with 15.93 per cent share. But now China is the largest import partner of the USA with 21.85 per cent share. On the other hand India does not fall even in top ten trade partners of the USA.

Now it becomes necessary to know that why does China matter a lot for the USA as compare to India. For analyzing this, Import Category Index and Origin Specific Categorical Import Share Index have been employed at 2 digits codes level according to SITC Rev.3 and the following results have been obtained.

Major Products in Import Profile of the USA

According to this classification, 66 items fall in this category. Employing Import Category Index, 22 items have been identified which consist more than 80 percent of imports of the USA. For simplicity, these 22 items have been further classified into two categories e.g. (i) Major Import Category and (ii) Minor Import Category.

(i) Major Import Category

There are 8 items out of 22 which fall in Major Import Category. These items consist more than 50 per cent share of USA's total merchandise imports. Name of the items have been shown in Table 1 and main items of this category are Petroleum, petroleum products and related materials (S3-33), Electrical machinery, apparatus and appliances, n.e.s. (S3-77) and Road vehicles (S3-78).

(i) Minor Import Category

There are 14 items out of 22 which fall in this category. These items consist more than 25 per cent share in total merchandise imports of the USA. The main items of this category are Organic chemicals (S3-51), Non metallic mineral manufactures, n.e.s. (S3-66), Power generating machinery and equipment (S3-71), Other industrial machinery and parts (S3-74), Other transport equipment (S3-79) etc.

Table 1: Import Category Index of the USA for Selected Years

SITC Code	Commodity Description	2001	2005	2008	2011	2014	2017
S3-33	Petroleum, petroleum products and related materials	8.81	14.72	21.11	19.45	13.90	7.88
S3-75	Office machines and automatic data processing machines	6.65	5.79	4.84	5.44	5.10	5.55
S3-76	Telecommunication and sound recording apparatus	5.51	6.10	5.96	5.98	6.27	6.71
S3-77	Electrical machinery, apparatus and appliances, n.e.s.	7.42	5.86	5.35	6.24	6.74	7.75
S3-78	Road vehicles	13.80	11.49	8.98	8.94	10.83	12.08
S3-84	Articles of apparel & clothing accessories	5.60	4.62	3.81	3.91	3.86	3.79
S3-89	Miscellaneous manufactured articles, n.e.s.	5.04	4.74	4.55	4.30	4.43	4.79
S3-93	Special transactions and commodities not classified according to kind	4.25	3.18	2.97	2.67	3.08	3.79
Sum of Major	Major Import Categories	57.08	56.50	57.57	56.94	54.21	52.34
S3-51	Organic chemicals	2.60	2.24	2.25	2.44	2.19	1.85
S3-54	Medicinal and pharmaceutical products	1.63	2.27	2.77	3.10	3.18	4.14
S3-65	Textile yarn and related products	1.28	1.30	1.07	1.12	1.17	1.23
S3-66	Non metallic mineral manufactures, n.e.s.	2.05	2.09	1.78	1.78	1.96	1.99
S3-67	Iron and steel	1.21	1.76	2.30	1.81	2.05	1.61
S3-68	Non-ferrous metals	1.71	1.72	1.99	2.02	1.62	1.78
S3-69	Manufactures of metal, n.e.s.	1.86	2.06	1.98	1.86	2.05	2.29
S3-71	Power generating machinery and equipment	3.17	2.42	2.46	2.52	2.79	2.90
S3-72	Specialized machinery	1.71	1.85	1.69	1.88	2.02	2.25
S3-74	Other industrial machinery and parts	2.92	3.12	3.19	3.37	3.94	4.19
S3-79	Other transport equipment	2.09	1.12	1.15	1.07	1.55	1.44
S3-82	Furniture and parts thereof	1.63	1.96	1.59	1.56	1.86	2.25
S3-85	Footwear	1.34	1.09	0.95	1.04	1.12	1.11
S3-87	Professional and scientific instruments, n.e.s.	1.87	1.77	1.75	1.95	2.12	2.39
Sum of Minor	Minor Import Categories	27.08	26.79	26.92	27.52	29.63	31.42
(i)+(ii)	Major plus Minor Categories	84.16	83.29	84.49	84.45	83.84	83.76

Source: Based on UN Comtrade Statistics

Competitiveness of China and India in the USA Market

In this section, an attempt has been made to identify the items in which these two emerging Asian giants are competing in their largest destination. This section also clarifies that why China matters a lot for the USA as compare to India international trade. The following Table 2 shows China and India Specific Categorical Import Share Index of the USA. In this table red text show share of China and blue text shows share of India.

There are five items out of eight in major import categories of the USA in which China dominates and India stands nowhere except two items. China's market penetration in these items has increased in last seventeen years with passes of times. In 2001, the USA imported 14.19 per cent of its office machines and automatic data processing machines (S3-75) from China which became 57.46 per cent in 2017. Likewise, the shares of telecommunication and sound recording apparatus (S3-76), electrical machinery, apparatus and appliances, n.e.s. (S3-77), articles of apparel & clothing accessories (S3-84) and miscellaneous manufactured articles, n.e.s. (S3-89) also accrued from 16.10, 10.76, 13.89 and 34.36 per cent in 2001 to 58.62, 27.59, 35.16 and 46.94 per cent in 2017 respectively (shown in red colored text). Although share of India has also increased for the same product but it remains less than one except item no. S3-84 and S3-89, which is far behind China (shown in blue text). India occupies a small space in articles of apparel & clothing accessories and miscellaneous manufactured articles which are not else specified but can not beat China.

Table 2: China and India Specific Categorical Import Share Index of the USA for Major and Minor Products

SITC Code	Commodity Description- Major Import Categories	20 01	20 01	20 05	20 05	20 08	20 08	20 11	20 11	20 14	20 14	20 17	20 17
S3-33	Petroleum, petroleum products and related materials	0.3 2	0.2 0	0.2 6	0.3 0	0.1 9	0.0 6	0.0 6	0.7 4	0.1 3	1.4 1	0.3 6	1.4 5
S3-75	Office machines and automatic data processing machines	14. 19	0.0 2	43. 09	0.0 4	51. 56	0.0 9	62. 52	0.1 2	63. 08	0.0 6	57. 46	0.1 1
S3-76	Telecommunication and sound recording apparatus	16. 10	0.0 3	33. 07	0.1 1	38. 14	0.2 5	43. 27	0.3 1	54. 07	0.2 1	58. 62	0.0 8
S3-77	Electrical machinery, apparatus and appliances, n.e.s.	10. 76	0.2 8	18. 85	0.5 7	23. 30	0.7 5	27. 26	0.6 4	26. 91	0.5 7	27. 59	0.5 8
S3-78	Road vehicles	0.8 9	0.0 7	2.3 0	0.1 5	3.5 1	0.2 4	4.3 9	0.3 7	4.6 9	0.3 5	5.3 4	0.4 2
S3-84	Articles of apparel & clothing accessories	13. 89	3.0 3	26. 40	4.2 2	34. 65	4.1 4	39. 44	4.1 0	38. 11	4.0 6	35. 16	4.4 4
S3-89	Miscellaneous manufactured articles, n.e.s.	34. 36	1.3 1	44. 28	2.6 8	48. 95	2.0 6	47. 19	2.1 4	47. 07	2.0 6	46. 94	2.3 0
S3-93	Special transactions and commodities not classified according to kind	2.5 1	0.2 5	5.2 4	0.4 1	6.4 9	0.5 3	6.9 2	0.6 8	6.1 1	0.5 8	6.8 2	0.9 1
	Commodity Description- Minor Import Categories	20 01	20 01	20 05	20 05	20 08	20 08	20 11	20 11	20 14	20 14	20 17	20 17
S3-51	Organic chemicals	1.6 5	0.9 0	4.3 6	1.5 3	8.8 7	2.8 3	9.2 2	3.5 5	11. 75	4.0 9	15. 51	4.7 1
S3-54	Medicinal and	1.6 8	0.8 2	1.7 5	0.9 5	2.6 7	2.7 8	2.7 2	4.9 0	2.6 9	6.7 1	2.7 8	6.4 6

	pharmaceutical products												
S3-65	Textile yarn and related products	12.71	7.17	26.91	9.03	34.08	10.41	37.70	11.77	39.55	13.07	41.26	14.06
S3-66	Non metallic mineral manufactures, n.e.s.	9.25	9.31	11.54	10.08	12.58	11.66	13.46	17.05	13.95	18.17	15.77	19.69
S3-67	Iron and steel	3.20	1.17	8.39	2.49	15.50	4.52	6.87	3.38	8.62	3.03	5.34	2.90
S3-68	Non-ferrous metals	1.53	0.16	3.42	0.37	4.80	0.30	3.74	0.30	5.73	0.42	5.95	1.46
S3-69	Manufactures of metal, n.e.s.	19.37	1.78	31.19	1.98	36.83	2.06	38.62	2.15	38.25	2.33	39.89	2.48
S3-71	Power generating machinery and equipment	1.53	0.23	3.92	0.60	6.22	1.09	7.73	1.00	8.87	1.03	10.31	1.12
S3-72	Specialized machinery	1.69	0.22	4.71	0.70	7.39	0.94	7.95	0.91	11.47	0.98	15.21	1.00
S3-74	Other industrial machinery and parts	7.26	0.44	13.89	0.92	18.03	1.34	21.06	1.58	22.13	1.68	23.48	1.66
S3-79	Other transport equipment	0.55	0.03	1.57	0.18	2.10	0.25	3.15	0.29	2.87	0.45	2.57	0.50
S3-82	Furniture and parts thereof	26.97	0.51	45.23	0.69	50.55	0.63	50.46	0.87	47.56	1.11	49.58	1.32
S3-85	Footwear	64.05	0.67	71.19	0.80	74.19	1.00	73.87	0.92	65.71	1.36	55.76	1.77
S3-87	Professional and scientific instruments, n.e.s.	5.52	0.15	8.53	0.26	10.84	0.39	11.15	0.43	12.70	0.40	13.44	0.47

Source: Based on UN Comtrade Statistics

There are fourteen items which fall in minor category of the USA's import. China dominates in ten items out of these fourteen. The USA imported 1.65 per cent of its total organic chemicals (S3-51) from China in 2001 which became 15.51 per cent in 2017. Likewise, these share of textile yarn and related product (S3-65), Non metallic mineral manufactures, n.e.s. (S3-66), Manufactures of metal, n.e.s. (S3-69), Power generating machinery and equipment (S3-71), Specialized machinery (S3-72), Other industrial machinery and parts (S3-74), Furniture and parts thereof (S3-82), Footwear (S3-85), Professional and scientific instruments, n.e.s. (S3-87) etc. soared from 12.71, 9.25, 19.37, 1.53, 1.69, 7.26, 26.97, 64.05 and 5.52 per cent in 2001 to 41.26, 15.77, 39.89, 10.31, 15.21, 23.48, 49.58, 73.87 (in 2011) and 13.44 per cent in 2017 respectively. This clearly shows that China dominates the market of maximum products in the USA. The above Table 2 shows that the share of India in almost every item has increased over time but India can not surpass China. In some items India is competitive with China in the USA market e.g. the share of India in organic chemical was 0.90 per cent in 2001 which became 4.71 per cent in 2017. Likewise, the shares in medicinal and pharmaceutical products (S3-54), textile yarn and related products (S3-65) and non metallic mineral manufactures, n.e.s. (S3-66) was 0.82, 7.17 and 9.31 per cent in 2001 which soared to 6.46, 14.06 and 19.69 per cent in 2017 respectively.

4. Conclusion

The above discussion shows that being the largest importer, the USA is the largest destination for China and India but China is the largest origin for the USA. The shares of both the nations have increased merchandise import of the USA with almost same rate of growth but China occupies largest space in the market. Except only countable number of items India stands nowhere before China in the US market.

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