

TRADE RELATIONS BETWEEN INDIA AND BRAZI

Monika¹

Research Scholar,
Department of Economics, M.D. University, Rohtak

Dr. Mukesh Kumar²

Department of Economics, M.D. University, Rohtak

Abstract

In recent times, trade has assumed vital importance in growth and development of every country. Trade is also an important factor in deciding the economic relation between two countries. India and Brazil are the fastest emerging economics of the world. Brazil is one of the most important trading partners of India in the entire LAC (Latin America and Caribbean) region. This paper provides a detailed analysis of trade relation between India and Brazil. The paper study the trends of export and import of India and Brazil; analyses the intensity of India-Brazil trade during the period of 2000-01 to 2016-17. Also analyse the composition of India's export and import to Brazil. To fulfil the objectives of the study, secondary data has been used mainly from Ministry of Commerce and Industry, Govt. of India. From the analysis it reveals that share of Brazil in India's export are increasing over the period of time except only few years. India's importance to Brazil as a source of its import also increased over the period of time. In 2000-01 share of Brazil in India's import was 0.2873 but in 2016-17, it is 1.0395. But in almost every year share of Brazil in India's export high than the India's import. The composition of India's exports to Brazil shows that the most dominant export item is 'mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes' (HS code 27) in 2015-16, which accounts 21.12% of our total merchandise exports to the country and the dominant item import from the Brazil is also 'mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes' (HS code 27) which accounts 30.50% of our total merchandise imports in the same year.

Keywords: *Bilateral Trade, Trade Intensity, Composition of Trade, Trade Pattern.*

Introduction

Economic relations between two countries depend on a number of factors like import-export relations, investment between two countries, growth pattern, globalization and so on. Likewise, trade is also an important factor in this context. More precisely, trade is believed to promote the efficient and optimum allocation of resources, allows a country to realize economies of scale, fosters the technological progress, enhances productivity, facilitates the dissemination of knowledge and encourages competition both in domestic and international markets that ultimately leads to optimization of production process and to the development of new products.

In the recent years, developing countries have increasingly emerged as regional and global growth engines, reflecting higher growth in trade and economic activities, as compared to the developed economies. This paper analyzes India-Brazil trade relations. India's links with Brazil can be traced around five centuries ago. However, given the vast distance approximately 14,000 kms that separates India and Brazil and the risky nature of maritime travel until the advent of steam shipping in the 19th Century and interaction between the two countries remained quite insignificant. But later on, as the time passed, relations grew.

India and Brazil both are the two middle income and fastest emerging economies of the world. India's main exports to Brazil have been mineral oil, mineral fuel, man-made filaments, clothing, engineering and electrical equipment, cotton and polyester yarns, medicines and chemicals. On the other hand, India's main imports from Brazil constitute crude oil, copper sulphates, soya oil, raw sugar, denatured alcohol, other minerals of copper and its concentrates, valves, motor pumps, airplanes, wheat, precious and semi-precious stones, etc.

India and Brazil sound good at bilateral relations too, which can be seen in their memberships in different international forums like IBSA, formed in 2003; PTA, framework signed in June 2003; BRICS, established in 2001; G4, G20 and others. This paper endeavours to provide a full-fledged study of trade relations between the two economies.

Objectives of the study

- To examine the trends of export and import of India with Brazil during the period of 2000-01 to 2016-17(Apr-Dec).
- To analyse the export and import intensities of India-Brazil trade during the period of 2000 to 2015.

- To analyse the composition of India's export and import with Brazil in the period 2000-01 and in 2015-16.

Research Methodology

The present study carries out a detailed analysis of India's trade with Brazil by using trade data. The study is based on secondary data which has been taken from various sources such as Ministry of Commerce and Industry, Govt. of India and UNCTAD Org/statistics. The study is analytical in nature to the extent that it seeks to analyze the India's trade relations with Brazil, Trade pattern of India-Brazil & India's Export and Import Intensities with Brazil for the time period of 2000 to 2015. Export and Import intensities have been computed in the following way:

Export Intensity Index: $x_{ij} = X_{ij} \div X_i / M_j \div (M_w - M_i)$

x_{ij} = Export intensity index of country i with country j.

X_{ij} = Export volume of country i to trading partner j.

X_i = Export volume of country i.

M_j = Import volume of country j.

M_w = Total volume of world imports.

M_i = Total import volume of country i.

Import Intensity Index: $m_{ij} = M_{ij} \div M_i / X_j \div (X_w - X_i)$

m_{ij} = Import intensity index of country i with country j

M_{ij} = Import volume of country i to trading partner country j.

M_i = Import volume of country i.

X_j = Export volume of country j.

X_w = Total volume of world exports.

X_i = Total export volume of country i.

If $T_{II} = 0$, indicates no bilateral trade.

If $T_{II} = 1$, shows that trade between members has no geographic bias.

If $0 < T_{II} < 1$, that indicate trade between partners is less intensive.

If $1 < T_{II}$, indicates that trade between partners is more intensive

Table 1**India's Export with Share to Brazil****(In Rs. Lacs)**

Years	India's export to Brazil	India's Total Export	Share of Brazil in India's Export (%)
2000-01	103,267.48	20,357,101.09	0.5073
2001-02	104,449.58	20,901,797.34	0.4997
2002-03	231,830.19	25,513,727.66	0.9086
2003-04	126,651.86	29,336,674.75	0.4317
2004-05	304,711.88	37,533,952.62	0.8118
2005-06	482,853.41	45,641,786.15	1.0579
2006-07	657,677.17	57,177,928.52	1.1502
2007-08	1,013,178.34	65,586,352.18	1.5448
2008-09	1,187,440.98	84,075,505.87	1.4124
2009-10	1,136,483.36	84,553,364.38	1.3441
2010-11	1,833,586.35	113,696,426.38	1.6127
2011-12	2,757,688.27	146,595,939.96	1.8811
2012-13	3,287,202.20	163,431,828.96	2.0114
2013-14	3,387,063.53	190,501,108.86	1.7780
2014-15	3,634,024.10	189,634,841.76	1.9163
2015-16	1,726,086.45	171,637,804.58	1.0057
2016-17(Apr-Dec)	1,212,945.33	133,497,861.57	0.9086

Source: Ministry of Commerce and Industry, Govt. of India.

Table 1 shows that India's merchandise exports to Brazil have been increased during the study period. In 2000-01, India's export to Brazil was 103,267.48 Rs Lacs with the share of 0.51% to total exports. But in 2005-06, share of Brazil in India's export was 1.06% and continuous increased up to year 2012-13. In 2012-13, it was 2.01% whereas in remaining year share of Brazil was more than 1%. In recent time (2016-17 Apr-Dec), India's export to Brazil is 212,945.33 Rs Lacs with the share of 0.91% which shows that Brazil is an important market for India.

Table 2**India's Import with Share from Brazil****(In Rs. Lacs)**

Years	India's Import from Brazil	India's Total Import	Share of Brazil in India's Import (%)
2000-01	66,318.94	23,087,276.04	0.2873
2001-02	146,973.63	24,519,971.86	0.5994
2002-03	153,310.57	29,720,587.40	0.5158
2003-04	144,066.71	35,910,766.37	0.4012
2004-05	356,035.76	50,106,454.03	0.7106
2005-06	395,386.84	66,040,890.33	0.5987
2006-07	448,731.16	84,050,631.33	0.5339
2007-08	381,813.84	101,231,169.93	0.3772
2008-09	544,949.69	137,443,555.45	0.3965
2009-10	1,625,997.86	136,373,554.76	1.1923
2010-11	1,606,429.86	168,346,695.57	0.9542
2011-12	2,042,032.01	234,546,324.45	0.8706
2012-13	2,643,882.72	266,916,195.69	0.9905
2013-14	2,254,729.99	271,543,390.74	0.8303
2014-15	3,303,653.63	273,708,657.84	1.2070
2015-16	2,639,248.46	249,029,868.12	1.0598
2016-17 (Apr-Dec)	1,924,079.60	185,098,520.83	1.0395

Source: Ministry of Commerce and Industry, Govt. of India.

Table 2 shows that India's imports from Brazil have increased substantially from 66,318.94 Rs Lacs in 2000-01 to 1,924,079.60 Rs Lacs in 2016-17 (Apr-Dec). India's total imports have also risen significantly in the same period. Share of Brazil in India's import have increased from 0.287 to 1.040 in 2016-17 (Apr-Dec). But actually this increase is not continuous, share of Brazil had declined in 2002-03 and 2003-04 and rising in 2004-05, declined again up to year 2008-09, rising in 2009-10, going down in the next four years and rising again in the next years i.e. 2014-15, 2015-16 and 2016-17 (Apr-Dec).

Table 3**India's Export-Import and Balance of Trade****(In Rs. Lacs)**

Years	India's export to Brazil	India's Import from Brazil	Balance of Trade
2000-01	103,267.48	66,318.94	36,948.54
2001-02	104,449.58	146,973.63	-42,524.05
2002-03	231,830.19	153,310.57	78,519.62
2003-04	126,651.86	144,066.71	-17,414.85
2004-05	304,711.88	356,035.76	-51,323.88
2005-06	482,853.41	395,386.84	87,466.57
2006-07	657,677.17	448,731.16	208,946.01
2007-08	1,013,178.34	381,813.84	631,364.50
2008-09	1,187,440.98	544,949.69	642,491.29
2009-10	1,136,483.36	1,625,997.86	-489,514.50
2010-11	1,833,586.35	1,606,429.86	227,156.49
2011-12	2,757,688.27	2,042,032.01	715,656.26
2012-13	3,287,202.20	2,643,882.72	643,319.48
2013-14	3,387,063.53	2,254,729.99	1,132,333.54
2014-15	3,634,024.10	3,303,653.63	330,370.47
2015-16	1,726,086.45	2,639,248.46	-913,162.01
2016-17(Apr- Dec)	1,212,945.33	1,924,079.60	-711,134.27

Source: Ministry of Commerce and Industry, Govt. of India.

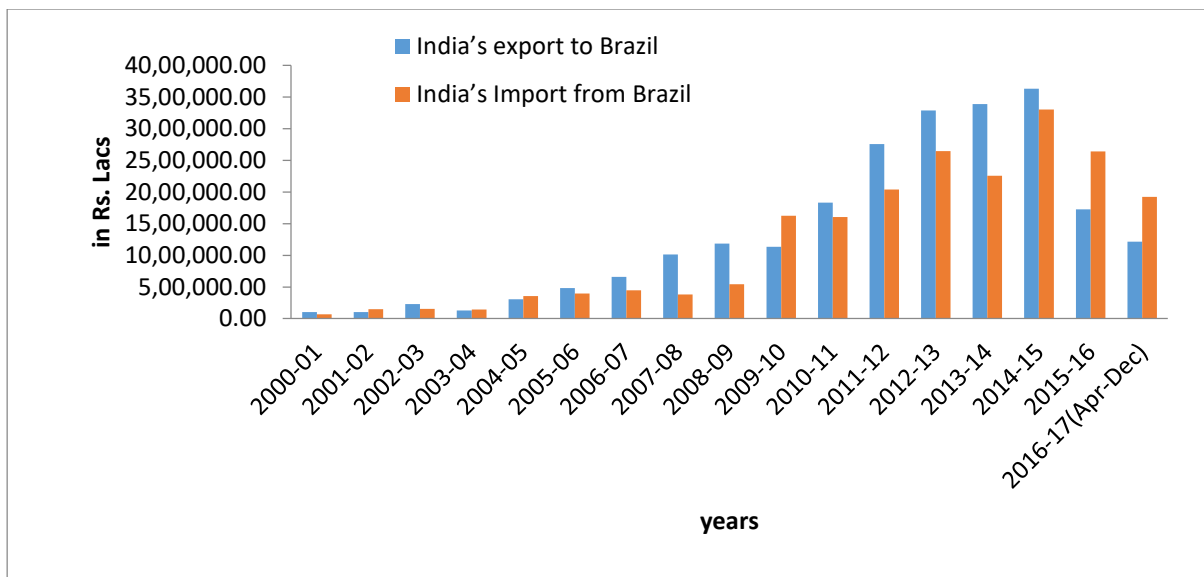
Figure**India's export-import with Brazil**

Table and figure shows India's export-import and balance of trade with Brazil during the study period. It reveals that in most of the years India's exports are more than the imports. Balance of trade is favourable for India except the few years i.e. 2001-02, 2003-04, 2004-05, 2009-10 and in recent 2015-16 and 2016-17 (Apr-Dec).

Table 4

Years	Export Intensity	Import Intensity
2000	0.61	0.32
2001	0.55	0.64
2002	1.29	0.60
2003	0.78	0.44
2004	1.25	0.75
2005	1.50	0.55
2006	1.51	0.48
2007	1.86	0.36
2008	1.20	0.30
2009	1.36	1.08
2010	1.40	0.76
2011	1.44	0.64
2012	1.58	0.73
2013	1.30	0.61
2014	1.43	0.97
2015	0.89	0.88

The above tables depicts that India's Export Intensity Index remained more than unity in majority of the years during the study period 2000-15 which implies that India has huge potentials for increasing exports to Brazil. During the same time, Import Intensity Index value reported to be

less than unity with an exception of the year 2009 (1.08) and in 2014 (0.97) which too was just close to unity; which hints to us that Brazil is not a major source for India's imports.

Table 5**Major Export of India to Brazil in 2000-01**

Code	H.S	Commodity	2000-01	Share
	29	Organic Chemicals	35159.42	34.04
	30	Pharmaceutical Products	8482.10	8.21
	84	Nuclear Reactor, Boilers, Machinery and Mechanical Appliance; Part thereof.	4811.52	4.65
	38	Miscellaneous Chemical Products	4753.64	4.60
	32	Tanning of Dyeing extracts, Tanning and their Deri. Dyes, Pigments and other colouring matters, Paints and Ver, Putty and other mastics, Inks.	3889.92	3.76
	85	Electrical Machinery and Equipments and part thereof, Sound Recorders, and Reproducers, Television image and Sound recorders and reproducers and parts	3876.12	3.75
	40	Rubber and articles there of	4115.09	3.98
	Others		38179.67	36.97
	Total		103267.48	100

Source: Ministry of Commerce and Industry, Govt. of India.

The composition of India's exports to Brazil in 2000-01 shows that the most important export item is 'organic chemicals' (HS code 29) which accounts 34.04% of total export. The second item is 'pharmaceutical products' (HS Code 30) which have a share of 8.21%. On the other hand, share of 'nuclear reactor, boilers, machinery and mechanical appliance; part thereof' (HS Code 84) and 'miscellaneous chemical products' both have same share around 4.60%. The share of 'tanning of dyeing extracts, tanning and their deri. dyes, pigments and other colouring matters, paints and ver, putty and other mastics, inks and electrical machinery and equipments and part thereof, sound recorders, and reproducers, television image and sound recorders and reproducers and parts have also share around 3.75% of total merchandise exports of the country.

Table 6**Major Export of India to Brazil in 2015-16**

Code	H.S	Commodity	2015-16	Share
	27	Mineral Fuels, Mineral Oils and Products of their Distillation, Bituminous Substances, Mineral Waxes	364,636.29	21.12
	29	Organic Chemicals	207,980.17	12.04
	38	Miscellaneous Chemical Products	176,580.34	10.23
	30	Pharmaceutical Products	132,031.22	7.64
	84	Nuclear Reactor, Boilers, Machinery and Mechanical Appliance; Part thereof.	118,803.51	6.88
	87	Vehicles other than Railway or Tramway rolling stock and parts and accessories thereof.	114,354.01	6.62
	54	Man- Made Filaments	83,314.98	4.82
	62	Articles of Apparel and Clothing Accessories not Knitted or Crocheted	68,775.88	3.98
	Others		4,59,610.05	26.62
	Total		1,726,086.45	100

Source: Ministry of Commerce and Industry, Govt. of India.

The composition of India's exports to Brazil in 2015-16 shows that the most important export item is 'mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes' (HS Code 27) which accounts more than 21% of total export to the country. The second item is 'organic chemicals' (HS Code 29) has come down from 34.04% in 2000-01 to 12.04% in 2015-16. The share of 'miscellaneous chemical products' third important item in India's export to Brazil has increased from 4.60% in 2000-01 to 10.23% in 2015-16 and also increased in the share of 'pharmaceutical products' but decreased in 'nuclear reactor, boilers, machinery and mechanical appliance; part thereof' from 6.88 in 2000-01 to 4.65% in 2015-16. The 'vehicles other than railway or tramway rolling stock and parts and accessories thereof', 'man- made filaments' and 'articles of apparel and clothing accessories not knitted or crocheted' have also important item in 2015-16.

Table 7**India's Major Import from Brazil in 2000-01**

Code	H.S	Commodity	2000-01	Share
	15	Animal or vegetable fats and oils and their cleavage Products, Pre edible fats, Animal or vegetable Waxes.	14786.73	22.29
	84	Nuclear Reactor, Boilers, Machinery and Mechanical Appliance; Part thereof.	7772.68	11.72
	87	Vehicles other than Railway or Tramway rolling stock and parts and accessories thereof.	7593.63	11.45
	72	Iron and Steel	5920.51	8.93
	75	Nickel and Article thereof.	3871.98	5.84
	37	Photographic or Cinematographic goods	3457.91	5.21
	71	Natural or cultured Pearl, Precious or Semi	3242.66	4.89
	Others		19672.84	29.66
	Total		66318.94	100

Source: Ministry of Commerce and Industry, Govt. of India.

The most important item imported by India from Brazil in 2000-01 was 'animal or vegetable fats and oils and their cleavage products, pre edible fats, animal or vegetable waxes' (HS Code 15) which enjoyed a share of more than 22%. The second item was 'nuclear reactor, boilers, machinery and mechanical appliance; part thereof' (HS Code 84) also have a high share 11.72%. 'Vehicles other than railway or tramway rolling stock and parts and accessories thereof' (HS Code 87) was also important import item with a share of 11.45%. 'Iron and steel, 'nickel and article thereof', 'photographic or cinematographic goods' and 'natural or cultured pearl, precious or semi' were the other important imported items from Brazil.

Table 8**India's Major Import from Brazil in 2015-16**

Code	H.S	Commodity	2015-16	Share
	27	Mineral Fuels, Mineral Oils and Products of their Distillation, Bituminous Substances, Mineral Waxes	805,088.36	30.50
	17	Sugar and Sugar Confectionery	398,911.47	15.11
	15	Animal or vegetable fats and oils and their cleavage Products, Pre edible fats, Animal or vegetable Waxes.	377,380.54	14.29
	26	Ores, Slag and Ash	216,225.64	8.19
	72	Iron and Steel	172,030.38	6.51
	71	Natural or cultured Pearl, Precious or Semi	137,363.33	5.20
	29	Organic Chemicals	91,653.71	3.47
	Others		4,40,595.03	16.70
	Total		2,639,248.46	100

Source: Ministry of Commerce and Industry, Govt. of India.

The composition of imports from Brazil is almost changing in 2015-16 as compare to 2000-01. In 2015-16, the most important item is 'mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes' (HS Code 27) which have a share more than 30%. The second item is 'sugar and sugar confectionery' (HS Code 17), with a share of around 15%. 'Animal or vegetable fats and oils and their cleavage products, pre edible fats, animal or vegetable waxes' (HS Code 15), third important item with 14.29% share. Other important imported item is 'ores, slag and ash' (H S Code 26), 'Iron and steel' (HS Code 72), and 'organic chemicals'.

Conclusion

From the analysis it is revealed that share of Brazil in India's export are increasing over the period of time except only few years. In 2000-01 share of Brazil in India's export was 0.5073 but in 2015-16, it is 1.0057. In most of the years, share of Brazil in India's export was higher than the India's import and also in the most of the years balance of trade is favourable for India. The composition of India's exports to Brazil shows that the most dominant export item is 'mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes' (HS code 27) in 2015-16, which accounts 21.12% of our total merchandise exports to the country and the dominant import item from the Brazil is also 'mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes' (HS code 27) which accounts 30.50% of our total merchandise imports in the same year. Since Export Intensity Index has come out to be more than one and Import Intensity Index stood less than one over the years; therefore, we can say that India has an opportunity of increasing its

exports to Brazil and thereby, improving the balance of trade which will give an impetus to the nation's growth and will also enhance development.

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