



GEOGRAPHICAL DIVERSIFICATION OF INDIA'S FOREIGN TRADE PORTFOLIO: EXPLORING THE DIRECTIONS OF INDIA'S TRADE-FLOW

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Abstract

The liberalization reforms were initiated in India by eliminating various tariff & non-tariff barriers from the imports of technologically advanced production inputs and capital goods with the primary motive of facilitating the up gradation and modernization of the export-oriented production units thereby enhancing the exports. This study will discover the reality behind the contribution of such productive imports in export enhancement by analyzing the overall trade balance figures. This study will assist in the scrutiny of India's trading partners yielding favorable and unfavorable trade balance so as to formulate the future strategies and international policies accordingly. This research may also prove beneficial for the exporters and international traders by providing guidance in the identification of existing major export destinations as well as those having export potential for India in future in the light of the implications of regional integration and trade agreements entered into by India with its various trading partners. The study will also provide the researchers with a snapshot of the geographical orientation of India's foreign trade in terms of the extent of its trade-flows across different regions including EU, North America, Asia and Oceanic, OPEC, Eastern Europe, Asia and Africa among others. Such analysis will assist in framing India's future international policies by considering the dominating regions having a significant potential of influencing the trade position of India through their economic and political activities. The scope of this research is limited to the study of foreign trade statistics from 1991 since the instigation of liberalization reforms in Indian economy.

Introduction

The economic reforms in India pioneered in 1991 had shown the way to eliminate the export pessimism of 1950s and 1960s. It discarded the widely supported misconception that protectionism in industrialized countries or economic nationalism, i.e. domestic production for domestic consumption is economically superior to trade and it was realized that there is no significance of production being domestic while such production is inefficient. With the main objective of bringing transparency in the formulation of export-import policy, the Government of India opted for a five year Foreign Trade Policy (FTP) since 1990s, though a review takes place annually in lieu of the dynamism of the national and international economic environment. The currently existing Foreign Trade Policy of India for the period of 2009-2014 was announced by Shri Anand Sharma, Commerce and Industry Minister, Government of India on 27th August 2009. While noting that the year 2009 has witnessed the most severe recession when the whole world was facing an exceptional economic slowdown and consequent to which, India's exports have also suffered adversely, he announced two main objectives of the current FTP, viz. to double the percentage share of world merchandise trade within next five years and to act as an effective mechanism of economic growth by giving a plunge to employment generation.

The key strategy outlined to achieve these two-fold objectives is higher support for product and market diversification by adding 26 new markets under the Focus Market Scheme (FMS) which include 16 new markets in Latin America and 10 in Asia-Oceania. The incentive available under FMS has been increased from 2.5% to 3% while that under Focus Product Scheme (FPS) has been raised from 1.25% to 2%. A large number of products from various sectors have been considered for benefits under FPS including engineering products, plastic (value added), jute and sisal products, technical textiles, green-technology products like wind mills, wind turbines, electric operated vehicles etc., project goods and certain electronic items. Market Linked Focus Product Scheme (MLFPS) has been widely expanded by insertion of products like pharmaceuticals, synthetic textile fabrics, value added rubber products, value added plastic goods, textile made-ups, knitted and crocheted fabrics, glass products and certain iron and steel products among others. Benefits to these products are provided only if exports are directed to thirteen identified markets, viz. Algeria, Egypt, Kenya, Nigeria, South Africa, Tanzania, Brazil, Mexico, Ukraine, Vietnam, Cambodia, Australia and New Zealand.

The trade reforms instigated through the foreign trade policies of India since the introduction of New Economic Policy in 1991 significantly focussed on the diversification of the India's foreign trade portfolio structure to a large extent and hence now, it's the time to undertake a comprehensive assessment of what has worked for India and what has not, by looking at the strengths and weaknesses of India's foreign trade portfolio in terms of the directions of India's trading partners.



Literature Review

Parikh & Stirbu, (2004) in the discussion paper “*Relationship between Trade Liberalisation, Economic Growth and Trade Balance: An Econometric Investigation*” had undertaken a study of 42 developing countries of Asia, Africa and Latin America in which they first examine the impact of trade liberalisation on economic growth, investment share of GDP, openness, trade balance and current accounts (as percentages of GDP). Both panel data and country by country data are used to measure the impact of liberalisation on domestic economic growth measured in PPP terms. Domestic economic growth is often positively related to liberalisation for many countries of the sample. Next they analysed the impact of growth on trade balance and current account to examine whether higher economic growth due to liberalisation leads to adverse effect on balance of trade. Trade balance is normalised by GDP to take into consideration different sizes of countries.

Raju & Chaturvedi, (2004) in the research paper “*Food Trade, Trade Flows and Trade Policies: A Comparative Analysis of World and India*” brought out the facts and implications of the changing pattern of food-trade. With a view to identify the food products for which the world demand is expanding, the paper carried out a comparative analysis of the structure of global food trade with that of India. The analysis provided two interesting insights; first that India’s export basket continues to be dominated by primary food products even when the world trade in these products is shrinking and secondly, that the consumption shifts in domestic food demand are taking place as reflected by the structure of food imports into India.

Rangarajan, (2004) in the study “*Rules of Origin under Generalised System of Preferences as A Market Access Barrier to Indian Textiles and Clothing Exports- With Special Reference to US and EU Markets*” explained the type and nature of the GSP rules of origin and its escalation as provided by the principal donors such as the EU and USA to the Indian textiles and also determined the extent to which the donor countries’ domestic interests have shaped the rules of origin. The study has dwelt upon the existent state of the local textiles and clothing sector in India and analyzed the implications of the EU and US GSP rules of origin on the nature and competitiveness of textiles and clothing sector in India. The extent to which the rules of origin have constrained the input-output mix of the Indian textiles and clothing sector has been looked into and the study has also considered whether the rules of origin under MFA would affect the ability of India’s garment exporters to compete in the global market once the MFA has been phased out.

Goldberg & Tille, (2005) in the seminar paper “*Vehicle Currency Use in International Trade*” showed that exporters are eager to limit the fluctuations of their prices relative to that of the goods of its competitors, when the goods are substitutes, and hence for this reason would opt for the invoicing currency of their competitors (the so-called “coalescing” effect). Since the lack of disaggregated data may miss the potentially strong heterogeneity in invoicing practices across industries, Goldberg and Tille conducted transaction-based analyses of invoicing practices by US and Canadian firms, industry-by-industry. They found that exporters in industries where goods are close substitutes make little use of their own currency unless they are from the US, and that exporters from a country with a volatile exchange rate also hardly use their own currency. Model calculations are pretty robust in demonstrating that this “coalescing effect”, whereby exporters minimize price differences relative to their competitors by reducing the volatility and transaction costs inherent to using different currencies, goes a long way to explaining the well-known dominance of the US dollar. The use of the US dollar in trade flows that do not involve the United States reflects trade in homogeneous products.

Nicita, (2013) in the research work “*Exchange Rates, International Trade & Trade Policies*” mentioned that the exchange rate plays an important role in a country’s trade performance. Whether determined by exogenous shocks or by policy, the relative valuations of currencies and their volatility often have important repercussions on international trade, the balance of payments and overall economic performance. This paper investigated the importance of exchange rates on international trade by analysing the impact that exchange rate volatility and misalignment have on trade and then by exploring whether exchange rate misalignments affect governments’ decisions regarding trade policies. The methodology consisted of estimating fixed effects models on a detailed panel dataset comprising about 100 countries and covering 10 years (2000-2009).

Research Methodology

Research objective

The main objective of this research study is to analyze the geographical diversification of India’s foreign trade portfolio by exploring the directions of India’s trade-flow among different countries across different regions of the world.

Research hypotheses

The research hypotheses for the present study are as follows -

H₀₁: There is no significant difference among India’s foreign trade balance with its various trading partners across European Union.

H₀₂: There is no significant difference among India’s foreign trade balance with its various trading partners across OPEC Nations.

H₀₃: There is no significant difference among India’s foreign trade balance with its various trading partners across SAARC Nations.



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Techniques of data collection

For undertaking this research study, the secondary data about the Foreign Trade statistics has been collected through various sources like data released by the Directorate General of Commercial Intelligence and Statistics (DGCIS), Kolkata; Economic Survey Reports of various years issued by the Ministry of Finance, Government of India; data as per the Estimates Committee of the Ministry of Foreign Trade; Database on Indian Economy released by the Reserve Bank of India (RBI); various issues of RBI Monthly Bulletin; United Nations' COMTRADE database maintained by the United Nations Conference on Trade and Development (UNCTAD); various editions of International Financial Statistics (IFS), Balance of Payments Statistics Yearbook (BOPSY), Direction of Trade Statistics (DOTS) published by the International Monetary Fund (IMF) among others, using print media as well as internet as an electronic media.

Techniques of data analysis

The relevant data for this research study has been processed and analyzed through SPSS package using the following statistical tools considering their suitability for the appropriate interpretation of the collected data as per the requirements of the study -

1. Descriptive statistics - Arithmetic Mean and Standard Deviation.
2. Compounded Annual Growth Rate (CAGR)
3. Adjusted Compounded Annual Growth Rate (Adj. CAGR) - adjusted for negative Finish Value $[V(t_n)]$ or negative Initial Value $[V(t_0)]$.
4. Friedman Test.

Data Analysis and Interpretation

H₀₁: There is no significant difference among India's foreign trade balance with its various trading partners across European Union.

Table 4.1 - DIRECTION OF FOREIGN TRADE – EUROPEAN UNION (EU)
(Rupees Billion)

Year	Trade Balance (Export – Import)	Belgium	France	Germany	Italy	Netherlands	UK	All EU Countries
2014-15	Export	337.19	303.27	460.77	311.24	386.62	571.79	3028.08
	Import	659.39	270.30	781.81	258.62	170.95	307.33	3009.46
	Trade Balance	-322.20	32.97	-321.04	52.62	215.66	264.47	18.62
2013-14	Export	386.87	309.54	455.61	318.92	487.57	594.78	3139.87
	Import	646.72	223.31	782.10	251.41	189.21	360.43	3013.44
	Trade Balance	-259.85	86.23	-326.48	67.51	298.35	234.35	126.43
2012-13	Export	299.27	271.09	394.47	237.83	573.80	470.78	2744.19
	Import	545.37	253.51	779.34	256.52	129.48	342.31	2843.27
	Trade Balance	-246.1	17.58	-384.87	-18.70	444.33	128.47	-99.08
2011-12	Export	342.08	220.22	379.82	232.83	439.14	413.24	2519.51
	Import	500.03	208.48	780.95	259.62	129.48	366.23	2801.82
	Trade Balance	-157.95	11.74	-401.14	-26.80	309.66	47.01	-282.31
2010-11	Export	263.47	236.88	307.33	207.02	349.67	332.96	2097.08
	Import	391.79	168.67	541.36	193.95	84.22	245.62	2027.79
	Trade Balance	-128.32	68.22	-234.03	13.07	265.46	87.34	69.29
2009-10	Export	177.57	179.99	256.33	160.72	303.01	294.76	1704.27
	Import	284.66	198.29	488.86	182.74	100.49	211.25	1819.37
	Trade	-107.09	-18.30	-232.53	-22.02	202.52	83.51	-115.10



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	Balance							
2008-09	Export	203.09	137.77	291.95	173.65	288.90	303.45	1792.14
	Import	260.58	211.65	549.22	199.84	86.70	267.68	1944.35
	Trade Balance	-57.49	-73.89	-257.28	-26.19	202.20	35.77	-152.21
2007-08	Export	169.43	104.54	205.99	157.48	210.39	269.68	1388.60
	Import	175.46	251.76	397.36	156.95	77.29	199.42	1546.56
	Trade Balance	-6.03	-147.21	-191.37	0.54	133.10	70.26	-157.96
2006-07	Export	157.22	95.06	180.07	162.12	120.83	254.21	1212.96
	Import	187.42	190.59	341.47	121.02	52.33	188.89	1349.90
	Trade Balance	-30.2	-95.53	-161.40	41.11	68.50	65.32	-136.95
2005-06	Export	127.12	92.07	158.77	111.53	109.57	223.99	991.06
	Import	209.2	182.11	266.69	82.16	46.47	174.01	1113.54
	Trade Balance	-82.08	-90.04	-107.92	29.37	63.10	49.98	-122.47
2004-05	Export	112.77	75.53	126.99	102.71	72.11	165.40	788.08
	Import	206.19	85.11	180.42	61.70	35.56	160.24	840.80
	Trade Balance	-93.42	-9.58	-53.43	41.02	36.55	5.16	-52.72
2003-04	Export	82.98	58.86	116.93	79.47	59.24	138.92	638.27
	Import	182.7	50.10	134.11	49.22	24.61	148.62	676.27
	Trade Balance	-99.72	8.76	-17.19	30.25	34.63	-9.70	-38.01
2002-03	Export	80.43	51.98	101.95	65.68	50.71	120.81	557.63
	Import	179.64	52.95	116.37	39.30	18.67	134.39	606.96
	Trade Balance	-99.21	-0.97	-14.42	26.38	32.05	-13.58	-49.33
2001-02	Export	66.32	45.07	85.29	57.54	41.20	103.06	469.57
	Import	131.77	40.26	96.72	33.61	22.25	122.24	497.74
	Trade Balance	-65.45	4.81	-11.43	23.93	18.95	-19.19	-28.17
2000-01	Export	67.18	46.60	87.15	59.79	40.21	105.02	475.61
	Import	131.12	29.27	80.39	33.06	19.99	144.73	480.15
	Trade Balance	-63.94	17.33	6.76	26.73	20.22	-39.71	-4.54
1999-00	Export	59.26	38.88	75.33	48.52	38.38	88.17	406.56
	Import	159.52	31.12	79.80	31.83	20.41	117.29	475.27
	Trade Balance	-100.26	7.76	-4.47	16.69	17.98	-29.12	-68.70
1998-99	Export	54.18	34.91	77.91	44.38	32.12	78.06	376.39
	Import	121.03	30.27	90.06	45.78	19.53	110.28	451.16
	Trade Balance	-66.85	4.63	-12.15	-1.40	12.59	-32.22	-74.77
1997-98	Export	45.18	28.23	71.50	41.45	29.87	79.56	339.86
	Import	99.16	29.65	93.98	34.26	16.55	90.82	396.94
	Trade Balance	-53.98	-1.42	-22.49	7.19	13.33	-11.25	-57.09
1996-97	Export	38.79	25.42	67.20	33.15	30.26	72.67	307.26
	Import	79.94	27.27	100.50	35.05	17.54	75.78	377.18
	Trade Balance	-41.15	-1.84	-33.30	-1.91	12.72	-3.12	-69.92



1995-96	Export	37.48	24.99	66.14	33.92	25.72	67.26	291.29
	Import	56.93	28.12	105.20	35.60	19.07	64.15	344.64
	Trade Balance	-19.45	-3.14	-39.06	-1.68	6.65	3.11	-53.35
1994-95	Export	31.04	18.28	54.88	26.94	18.38	53.05	220.75
	Import	37.89	19.33	68.67	23.27	12.12	48.95	223.39
	Trade Balance	-6.85	-1.05	-13.79	3.67	6.27	4.10	-2.63
1993-94	Export	26.44	15.82	48.28	18.95	16.04	43.26	181.82
	Import	58.81	18.60	56.15	16.86	12.05	48.18	219.62
	Trade Balance	-32.37	-2.78	-7.88	2.09	3.98	-4.93	-37.80
1992-93	Export	19.79	13.66	41.33	18.02	12.03	35.14	151.96
	Import	52.91	17.22	47.99	15.19	11.05	41.05	191.24
	Trade Balance	-33.12	-3.57	-6.66	2.83	0.97	-5.91	-39.28
1991-92	Export	16.44	10.49	31.31	14.30	9.19	28.06	118.99
	Import	34.22	15.16	38.44	11.05	6.89	29.63	139.66
	Trade Balance	-17.78	-4.67	-7.14	3.25	2.30	-1.57	-20.67
*CAGR (%)	Trade Balance	-212.85	10.06	-217.76	12.87	21.83	25.03	4.74
Mean	Trade Balance	-91.29	-8.08	-118.95	12.07	100.92	37.86	-60.36
**Std.Deviation	Trade Balance	82.01	49.95	137.63	24.45	126.56	78.33	80.89
Friedman Test	Trade Balance	Chi-Square(χ^2)		Df			Sig. (2-tailed)	
		104.554		6			.000	

Source : Compiled from the data provided by Directorate General of Commercial Intelligence and Statistics.

*CAGR refers to Compounded Annual Growth Rate.

**Std.Deviation refers to Standard Deviation.

Table 4.1 depicts the directions of foreign trade of India among the European Union countries during the period from 1991-92 to 2014-15. A statistical analysis of the trade balance accruing to India from the different countries in European Union has been undertaken in terms of three major descriptive statistics, viz. arithmetic mean, standard deviation and compounded annual growth rate. Arithmetic mean shows the average trade balance while standard deviation shows the level of variations and diversity in the trade balance accrued to India from each European Union nation calculated on the basis of trade balance figures from 1991-92 to 2014-15. An interpretation of above table demonstrates that the maximum average trade balance among European Union has been accrued to India from Netherlands but with very large variations as is evident from the mean and standard deviation value of Rs.(100.92 ± 126.56) billion. Another point highlighted is that the minimum average trade balance (which is highly negative showing the large excess of imports over exports) has been accrued from Germany but this also with largest variations among the European Union nations as illustrated by the mean and standard deviation value of Rs.(-118.95 ± 137.63) billion. The highest growth since 1991 has been recorded in the trade balance from UK as though the trade balance from UK consistently shows a negative value indicating the excess of imports over exports yet it has shown highest growth over the years in minimizing this excess of imports. The highest decline over the period can be noticed in the trade balance from Germany as highlighted by CAGR figures. The mean trade balance from the overall European Union is negative showing an excess of Rs. 60.36 billion of imports over exports with a growth of 4.74% in the trade balance value since 1991.

Friedman test was run to determine whether there is significant difference among India's foreign trade balance with its various trading partners across the European Union during the period under study and it was found (at 99% level of confidence) that there was a statistically significant difference, $\chi^2(6) = 104.554, p = 0.000 (p < 0.01)$, and therefore, we reject the null hypothesis H_{01} by concluding that there is significant difference among India's foreign trade balance with its various trading partners across the European Union.



H₀₂: There is no significant difference among India's foreign trade balance with its various trading partners across OPEC Nations.

Table 4.2 - DIRECTION OF FOREIGN TRADE – OPEC COUNTRIES
(Rupees Billion)

Year	Trade Balance (Export – Import)	Indonesia	Iran	Iraq	Kuwait	Saudi Arabia	UAE	All OPEC Countries
2014-15	Export	246.74	255.30	50.90	73.33	680.37	2018.53	3444.86
	Import	918.45	545.88	867.79	815.11	1712.21	1596.25	8361.38
	Trade Balance	-671.71	-290.59	-816.89	-741.78	-1031.84	422.28	-4916.53
2013-14	Export	293.40	300.60	55.25	64.35	738.64	1847.79	3371.61
	Import	890.35	627.98	1116.38	1033.63	2205.15	1741.27	9837.14
	Trade Balance	-596.96	-327.38	-1061.13	-969.28	-1466.52	106.52	-6465.53
2012-13	Export	289.96	182.56	69.73	57.78	532.45	1978.32	3422.19
	Import	809.66	630.26	1045.96	901.84	1846.85	2129.23	10216.45
	Trade Balance	-519.70	-447.70	-976.24	-844.06	-1314.40	-150.91	-6794.26
2011-12	Export	321.01	115.12	37.09	56.65	272.08	1722.68	2782.91
	Import	697.59	654.48	906.52	791.88	1493.50	1711.27	8322.30
	Trade Balance	-376.58	-539.36	-869.43	-735.23	-1221.42	11.42	-5539.39
2010-11	Export	259.25	113.37	30.75	84.47	212.96	1538.66	2437.69
	Import	451.36	497.25	409.77	469.76	928.55	1491.23	5652.85
	Trade Balance	-192.11	-383.88	-379.02	-385.29	-715.59	47.43	-3215.16
2009-10	Export	146.05	88.07	22.63	37.10	185.52	1133.48	1786.18
	Import	410.09	546.36	332.73	389.88	806.64	917.99	4381.89
	Trade Balance	-264.04	-458.28	-310.09	-352.78	-621.12	215.49	-2595.71
2008-09	Export	115.78	115.65	19.81	36.28	229.40	1102.29	1787.89
	Import	307.51	558.22	342.85	432.00	897.47	1059.26	4483.79
	Trade Balance	-191.74	-442.57	-323.04	-395.71	-668.07	43.03	-2695.90
2007-08	Export	86.93	78.45	10.91	27.45	149.23	629.15	1086.62
	Import	194.21	439.46	274.95	309.60	781.10	542.33	3112.55
	Trade Balance	-107.28	-361.01	-264.03	-282.15	-631.88	86.82	-2025.93
2006-07	Export	91.77	65.65	9.21	27.80	117.11	544.45	948.12
	Import	188.65	345.16	250.05	271.14	605.62	391.75	2550.94
	Trade Balance	-96.88	-279.51	-240.84	-243.34	-488.50	152.70	-1602.82
2005-06	Export	61.11	52.61	6.90	22.75	80.13	380.39	674.83
	Import	133.18	31.10	0.09	20.45	72.27	192.77	494.58
	Trade Balance	-72.07	21.51	6.81	2.30	7.86	187.62	180.24
2004-05	Export	59.88	55.33	5.89	18.94	63.45	330.15	593.43
	Import	117.62	18.43	0.05	13.75	58.46	208.53	450.32
	Trade Balance	-57.74	36.90	5.84	5.19	4.98	121.62	143.10
2003-04	Export	51.80	12.26	0.01	14.66	51.62	235.53	438.58
	Import	97.51	54.48	5.77	6.55	33.90	94.65	257.75
	Trade Balance	-45.72	-42.22	-5.77	8.12	17.72	140.88	180.83
2002-03	Export	39.98	12.50	0.00	12.13	45.53	161.03	333.18
	Import	66.83	42.19	3.45	8.69	24.43	46.31	168.39
	Trade Balance	-26.85	-29.69	-3.45	3.44	21.10	114.72	164.80
2001-02	Export	25.45	13.54	0.00	9.84	39.41	118.84	249.17
	Import	49.45	31.69	10.40	3.51	22.13	43.64	141.44



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	Trade Balance	-23.99	-18.15	-10.40	6.32	17.29	75.20	107.72
2000-01	Export	18.26	9.65	0.32	9.10	37.60	118.67	221.57
	Import	41.58	12.07	9.86	5.15	28.38	30.11	122.84
	Trade Balance	-23.32	-2.42	-9.55	3.95	9.22	88.56	98.73
1999-00	Export	14.11	54.22	8.65	6.69	32.17	90.25	168.82
	Import	41.55	10.37	3.84	82.86	130.71	101.15	556.86
	Trade Balance	-27.44	43.85	4.82	-76.17	-98.54	-10.90	-388.04
1998-99	Export	7.79	6.69	1.53	6.93	32.58	78.57	149.38
	Import	34.88	19.93	6.36	63.15	77.05	72.41	326.70
	Trade Balance	-27.09	-13.24	-4.83	-56.22	-44.48	6.16	-177.32
1997-98	Export	16.25	6.38	0.42	6.91	25.65	62.90	131.10
	Import	27.19	23.53	6.89	85.46	93.22	66.15	349.50
	Trade Balance	-10.94	-17.15	-6.48	-78.55	-67.58	-3.25	-218.40
1996-97	Export	21.01	6.92	0.08	5.49	20.49	52.40	114.62
	Import	21.25	31.04	0.00	85.37	98.32	61.63	360.06
	Trade Balance	-0.24	-24.12	0.08	-79.88	-77.83	-9.23	-245.44
1995-96	Export	22.16	5.19	0.02	4.53	16.13	47.78	102.99
	Import	15.43	20.01	0.00	65.90	67.73	53.74	255.70
	Trade Balance	6.73	-14.83	0.02	-61.37	-51.59	-5.97	-152.71
1994-95	Export	8.72	4.92	0.01	4.21	13.68	39.75	76.26
	Import	10.08	16.85	0.00	46.48	49.28	48.14	189.96
	Trade Balance	-1.36	-11.92	0.01	-42.27	-35.60	-8.39	-113.71
1993-94	Export	7.37	5.01	0.12	3.32	16.02	36.32	74.72
	Import	3.75	11.91	0.00	35.32	48.36	31.46	163.78
	Trade Balance	3.62	-6.90	0.12	-32.00	-32.33	4.86	-89.06
1992-93	Export	4.01	3.31	0.17	3.14	11.80	23.59	51.80
	Import	1.74	11.52	0.00	27.63	43.33	32.20	138.34
	Trade Balance	2.27	-8.20	0.17	-24.50	-31.53	-8.61	-86.55
1991-92	Export	3.62	3.02	0.00	1.29	8.66	18.20	38.50
	Import	1.65	14.35	0.06	7.51	35.56	30.75	94.20
	Trade Balance	1.97	-11.33	-0.06	-6.22	-26.90	-12.55	-55.69
*CAGR (%)	Trade Balance	-228.86	-214.74	-251.26	-223.02	-216.91	16.81	-221.39
Mean	Trade Balance	-138.30	-151.18	-219.31	-224.06	-356.15	67.31	-1520.95
**Std.Deviation	Trade Balance	202.04	198.32	350.17	304.68	484.68	110.79	2272.70
Friedman Test	Trade Balance	Chi-Square(χ^2)			Df	Sig. (2-tailed)		
		49.696			6	.000		

Source : Compiled from the data provided by Directorate General of Commercial Intelligence and Statistics.

*CAGR refers to Compounded Annual Growth Rate.

**Std.Deviation refers to Standard Deviation.

Table 4.2 witnesses the trade balance accruing to India from the six major OPEC countries during the period from 1991-92 to 2014-15. The statistical analysis in terms of arithmetic mean and standard deviation shows the average trade balance and the level of deviations in the trade balance accrued to India from the major OPEC countries and it can be concluded that among OPEC, the maximum average trade balance (which is also the only positive trade balance) has been accrued to India from UAE but with very large variations as is evident from the mean and standard deviation value of Rs.(67.31± 110.79) billion. Another point highlighted is that the minimum average trade balance (which is highly negative showing the large excess of imports over exports) has been accrued from Saudi Arabia but this also with largest variations among the OPEC nations as illustrated by the mean and standard deviation value of Rs.(-356.15 ± 484.68) billion. Since 1991, India recorded positive growth in trade balance with only one country in OPEC, i.e. UAE showing a growth of 16.81% over the years. The trade balance from UAE initially in 1991 showed a negative value indicating the excess of imports over exports for about one decade after which it eventually turned into a positive figure. The highest decline over the period can be noticed in the trade balance from Iraq indicating the increase in the excess of imports over exports as highlighted by CAGR figures. The mean trade balance from the overall OPEC is also negative showing an excess of Rs. 1520.95 billion of imports over exports with a decline of 221.39% in the trade balance value since 1991 implying the considerably negative contribution of OPEC in the trade balance of India.



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Friedman test was run to determine whether there is significant difference among India's foreign trade balance with its various trading partners across the OPEC during the period under study and it was found (at 99% level of confidence) that there was a statistically significant difference, $\chi^2(6) = 49.696$, $p = 0.000$ ($p < 0.01$), and therefore, we reject the null hypothesis H_{02} by concluding that there is significant difference among India's foreign trade balance with its various trading partners across the OPEC.

H_{03} : There is no significant difference among India's foreign trade balance with its various trading partners across SAARC Nations.

Table 4.3 - DIRECTION OF FOREIGN TRADE – SAARC COUNTRIES
(Rupees Billion)

Year	Trade Balance (Export – Import)	Afghanistan	Bangladesh	Bhutan	Maldives	Nepal	Pakistan	Sri Lanka	All SAARC Countries
2014-15	Export	25.81	394.40	20.51	9.33	278.59	113.53	410.38	1252.56
	Import	16.13	37.94	9.15	0.26	39.16	30.41	46.43	179.48
	Trade Balance	9.68	356.46	11.36	9.07	239.44	83.12	363.95	1073.08
2013-14	Export	28.79	374.11	21.55	6.43	217.70	138.33	276.44	1063.35
	Import	12.88	29.03	9.19	0.24	32.04	26.07	40.64	150.09
	Trade Balance	15.91	345.08	12.36	6.19	185.66	112.26	235.79	913.25
2012-13	Export	25.69	279.83	12.67	6.66	168.06	112.33	216.88	822.12
	Import	8.61	34.68	8.92	0.34	29.58	29.44	34.04	145.62
	Trade Balance	17.08	245.15	3.75	6.32	138.47	82.89	182.83	676.50
2011-12	Export	24.29	183.87	11.04	5.98	131.30	74.48	209.51	640.48
	Import	6.22	27.93	9.74	0.92	26.39	19.18	34.36	124.74
	Trade Balance	18.07	155.94	1.30	5.06	104.91	55.31	175.16	515.75
2010-11	Export	19.21	147.53	8.02	4.56	98.71	92.55	159.62	530.19
	Import	6.62	20.31	9.17	1.45	23.39	15.14	22.79	98.88
	Trade Balance	12.59	127.21	-1.16	3.10	75.32	77.41	136.84	431.31
2009-10	Export	22.04	115.01	5.61	3.79	72.51	74.61	102.90	396.46
	Import	5.90	12.05	7.23	0.17	21.47	13.05	18.50	78.37
	Trade Balance	16.13	102.96	-1.62	3.61	51.05	61.56	84.40	318.09
2008-09	Export	18.23	113.19	5.09	5.90	71.54	65.33	108.94	388.21
	Import	5.93	14.19	6.88	0.18	22.56	16.68	16.24	82.65
	Trade Balance	12.31	99.00	-1.79	5.72	48.98	48.64	92.70	305.56
2007-08	Export	10.02	117.43	3.49	3.61	60.64	78.27	113.74	387.20
	Import	4.40	10.35	7.83	0.17	25.27	11.59	25.41	85.01
	Trade Balance	5.62	107.09	-4.34	3.44	35.36	66.69	88.33	302.19
2006-07	Export	8.22	73.66	2.60	3.11	42.01	61.07	102.06	292.74
	Import	1.56	10.34	6.40	0.14	13.85	14.63	21.30	68.21
	Trade Balance	6.66	63.32	-3.80	2.97	28.17	46.44	80.77	224.53
2005-06	Export	6.32	73.69	4.39	2.99	38.07	30.52	89.64	245.61
	Import	2.59	5.62	3.93	0.09	16.82	7.95	25.58	62.57



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	Trade Balance	3.73	68.06	0.46	2.90	21.26	22.57	64.06	183.04
2004-05	Export	0.00	73.29	3.80	2.14	33.39	23.41	63.50	199.53
	Import	0.00	2.67	3.19	0.03	15.54	4.27	17.00	42.69
	Trade Balance	0.00	70.62	0.61	2.11	17.85	19.15	46.49	156.83
2003-04	Export	0.00	79.99	4.11	1.95	30.76	13.19	60.62	190.61
	Import	0.00	3.57	2.41	0.02	13.14	2.65	8.95	30.73
	Trade Balance	0.00	76.42	1.71	1.93	17.61	10.54	51.67	159.88
2002-03	Export	0.00	56.91	1.89	1.53	16.96	9.98	44.57	131.84
	Import	0.00	3.00	1.56	0.02	13.64	2.17	4.40	24.78
	Trade Balance	0.00	53.91	0.33	1.51	3.32	7.81	40.18	107.06
2001-02	Export	0.00	47.80	0.36	1.28	10.23	6.87	30.09	96.62
	Import	0.00	2.82	1.14	0.02	16.98	3.09	3.21	27.26
	Trade Balance	0.00	44.98	-0.78	1.26	-6.75	3.78	26.88	69.37
2000-01	Export	0.00	42.72	0.05	1.12	6.43	8.54	29.25	88.10
	Import	0.00	3.67	0.96	0.01	11.65	2.93	2.06	21.28
	Trade Balance	0.00	39.04	-0.92	1.12	-5.22	5.61	27.19	66.82
1999-00	Export	0.00	27.57	0.33	0.32	6.55	4.03	21.64	60.43
	Import	0.00	3.39	0.78	0.02	8.17	2.96	1.92	17.23
	Trade Balance	0.00	24.19	-0.45	0.30	-1.62	1.07	19.72	43.20
1998-99	Export	0.00	41.89	0.40	0.35	5.15	4.46	18.39	70.65
	Import	0.00	2.63	0.26	0.00	6.09	9.02	1.59	19.59
	Trade Balance	0.00	39.26	0.14	0.35	-0.94	-4.56	16.81	51.06
1997-98	Export	0.00	29.23	0.50	0.33	6.32	5.32	18.18	59.87
	Import	0.00	1.89	0.50	0.01	3.54	1.65	1.12	8.71
	Trade Balance	0.00	27.34	-0.01	0.32	2.78	3.67	17.06	51.16
1996-97	Export	0.00	30.85	0.78	0.37	5.88	5.58	16.95	60.41
	Import	0.00	2.21	1.20	0.01	2.28	1.28	1.60	8.58
	Trade Balance	0.00	28.64	-0.42	0.36	3.61	4.30	15.35	51.83
1995-96	Export	0.00	35.09	0.58	0.53	5.35	2.57	13.44	57.55
	Import	0.00	2.87	1.16	0.01	1.64	1.51	1.39	8.58
	Trade Balance	0.00	32.22	-0.59	0.52	3.71	1.06	12.05	48.97
1994-95	Export	0.00	20.24	0.35	0.48	3.77	1.80	11.51	38.15
	Import	0.00	1.20	0.57	0.01	1.15	1.66	0.97	5.55
	Trade Balance	0.00	19.04	-0.23	0.48	2.62	0.14	10.55	32.60
1993-94	Export	0.00	13.49	0.31	0.25	3.08	2.01	9.03	28.17
	Import	0.00	0.56	0.09	0.01	0.91	1.37	0.63	3.57
	Trade Balance	0.00	12.93	0.22	0.24	2.17	0.64	8.40	24.61
1992-93	Export	0.00	10.29	0.06	0.22	2.10	1.47	7.18	21.33
	Import	0.00	0.22	0.04	0.00	0.72	3.76	0.40	5.13
	Trade	0.00	10.07	0.03	0.22	1.38	-2.28	6.78	16.20



	Balance								
1991-92	Export	0.00	7.99	0.03	0.12	1.90	0.99	4.29	15.32
	Import	0.00	0.14	0.01	0.00	0.70	2.12	0.28	3.26
	Trade Balance	0.00	7.85	0.02	0.12	1.20	-1.13	4.01	12.06
*CAGR (%)	Trade Balance	11.18	18.05	31.75	20.69	25.89	20.69	21.65	21.55
Mean	Trade Balance	4.91	89.87	0.67	2.47	40.43	29.45	75.33	243.12
**Std.Deviation	Trade Balance	6.75	96.94	3.81	2.46	64.84	35.23	88.05	289.79
Friedman Test	Trade Balance	Chi-Square(χ^2)			Df		Sig. (2-tailed)		
		143.931			7		.000		

Source : Compiled from the data provided by Directorate General of Commercial Intelligence and Statistics.

*CAGR refers to Compounded Annual Growth Rate.

**Std.Deviation refers to Standard Deviation.

Table 4.3 explores the directions of foreign trade of India among the SAARC countries during the period from 1991-92 to 2014-15 in terms of the descriptive statistical analysis of the trade balance values accrued to India from each of the SAARC nation. The results suggested the highly positive contribution of SAARC in India's trade performance uplifting the India's trade balance to a large extent. The mean trade balance accrued to India from SAARC over the study period is Rs.(243.12 ± 289.79) billion. As evident from the table, all the SAARC nations continuously show positive values of trade balance during the study period, with exception of Bhutan, Nepal and Pakistan contributing negatively in few years. The credit of highest mean trade balance value (but with highest deviation as well) being taken by Bangladesh and second highest by Srilanka. The mean trade balance accrued to India from Bangladesh over the study period is Rs.(89.87 ± 96.94) billion while that from Sri Lanka is Rs.(75.33 ± 88.05) billion. The lowest and the second lowest mean trade balance can be attributed to Bhutan (Rs. 0.67 ± 3.81 billion) and Maldives (Rs. 2.47 ± 2.46 billion) respectively due to the very low volume of India's trade with both these nations. Another SAARC nation contributing very less to India's trade balance is Afghanistan with a mean trade balance of (Rs. 4.91 ± 6.75 billion) as it started trading with India only by 2005-06 and that too in small volume but since then it continuously contributed positively in India's trade balance.

The CAGR values indicate a considerable growth of 21.55% in the trade balance accrued to India from SAARC during the study period with highest growth of 31.75% being recorded in the trade balance with Bhutan while the lowest growth of 11.18% being contributed by Afghanistan, but it needs to be mentioned here that it is the compounded growth rate of the trade balance accrued from Afghanistan in just 9 years as already mentioned, India started trading with Afghanistan only since 2005-06. The good thing about SAARC's contribution in India's Trade performance is that all SAARC nations showed growth in their trade balance with India during the period instead of decline.

Friedman test was run to determine whether there is significant difference among India's foreign trade balance with its various trading partners across the SAARC during the period under study and it was found (at 99% level of confidence) that there was a statistically significant difference, $\chi^2 (7) = 143.931, p = 0 .000 (p < 0.01)$, and therefore, we reject the null hypothesis H_0 by concluding that there is significant difference among India's foreign trade balance with its various trading partners across the SAARC.

Results and Discussion

The maximum average trade balance among European Union has been accrued to India from Netherlands but with very large variations. The minimum average trade balance (which is highly negative showing the large excess of imports over exports) has been accrued from Germany but this also with largest variations among the European Union nations. The highest growth since 1991 has been recorded in the trade balance from UK as though the trade balance from UK consistently shows a negative value indicating the excess of imports over exports yet it has shown highest growth over the years in minimizing this excess of imports. The highest decline over the period can be noticed in the trade balance from Germany. The mean trade balance from the overall European Union is negative showing an excess of Rs. 60.36 billion of imports over exports with a growth of 4.74% in the trade balance value since 1991. Also, we came across a significant difference among India's foreign trade balance with its various trading partners across the European Union.



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Among OPEC, the maximum average trade balance (which is also the only positive trade balance) has been accrued to India from UAE but with very large variations. The minimum average trade balance (which is highly negative showing the large excess of imports over exports) has been accrued from Saudi Arabia but this also with largest variations among the OPEC nations. Since 1991, India recorded positive growth in trade balance with only one country in OPEC, i.e. UAE showing a growth of 16.81% over the years. The trade balance from UAE initially in 1991 showed a negative value indicating the excess of imports over exports for about one decade after which it eventually turned into a positive figure. The highest decline over the period can be noticed in the trade balance from Iraq indicating the increase in the excess of imports over exports as highlighted by CAGR figures. The mean trade balance from the overall OPEC is also negative showing an excess of Rs. 1520.95 billion of imports over exports with a decline of 221.39% in the trade balance value since 1991 implicating the considerably negative contribution of OPEC in the trade balance of India. Significant difference has been found among India's foreign trade balance with its various trading partners across the OPEC.

The study brought out the highly positive contribution of SAARC in India's trade performance uplifting the India's trade balance to a large extent. All the SAARC nations continuously show positive values of trade balance accrued to India during the study period, with exception of Bhutan, Nepal and Pakistan contributing negatively in few years. The credit of highest mean trade balance value (but with highest deviation as well) being taken by Bangladesh and second highest by Srilanka. The lowest and the second lowest mean trade balance can be attributed to Bhutan and Maldives respectively due to the very low volume of India's trade with both these nations. Another SAARC nation contributing very less to India's trade balance is Afghanistan as it started trading with India only by 2005-06 and that too in small volume but since then it continuously contributed positively in India's trade balance. The CAGR values indicate a considerable growth of 21.55% in the trade balance accrued to India from SAARC during the study period with highest growth of 31.75% being recorded in the trade performance with Bhutan while the lowest growth of 11.18% being contributed by Afghanistan. The good thing about SAARC's contribution in India's Trade performance is that all SAARC nations showed growth in their trade balance with India during the period instead of decline. Also there is significant difference among India's foreign trade balance with its various trading partners across the SAARC

References

1. Bhanushali, K. (2007). Recent Change in the Dimensions of India's Foreign Trade. International Seminar on Impact of Intellectual Property Rights in Post WTO Era: India and Canada, 22-24 March. Vadodara: Centre for Canadian Studies - M. S. University of Baroda.
2. Chakraborty, D., Chaisse, J., & Kumar, A. (2012). EU-India Bilateral Trade and Investment Agreement: A Review of Issues. Working Paper Series, November, W.P. No: EC-12-16. New Delhi: Indian Institute of Foreign Trade.
3. Chaudhuri, B. R., & Chakraborty, D. (2010). Export Potential at the State-Level: A Case Study of Karnataka. Working Paper Series, November, W.P. No: EC-10-02. New Delhi: Indian Institute of Foreign Trade.
4. Dubai Economic Council. (2012). Dubai's Foreign Trade: Diversification, Challenges and Policies. December 29.
5. Giovanni, J. d., & Levchenko, A. A. (2010). The Risk Content of Exports: A Portfolio View of International Trade. NBER Working Paper Series, May, W.P. No.16005. Cambridge: National Bureau of Economic Research.
6. Halikias, J. G. (1980). An Econometric Analysis of the Foreign Trade of Greece. University of Warwick, Department of Economics.
7. Joseph, J., Tharian, G. K., & Joseph, T. (2006). Trends in India's External Trade in Rubber and Rubber Products: An Inter Temporal Analysis. Foreign Trade Review, Vol. XL, No. 4, January-March.
8. Joshi, R. M., Nag, B., & Gupta, A. (2012). India's Export Opportunity in Africa: Issues and Challenges in Select Sectors. Working Paper Series, April, W.P. No: EC-13-18. New Delhi: Indian Institute of Foreign Trade.
9. Kaur, A. (2012). Pattern of India's Foreign Trade in Pre and Post Reform Era: An Empirical Investigation. International Journal of Advancements in Research & Technology, Vol. 1(5), October.
10. Kumar, S., & Mathur, S. K. (2009). Trade Patterns between India and China. Kanpur: Indian Institute of Technology. Mejia, J. F. (2011). Export Diversification, International Trade and Economic Growth: A Survey of the Literature. In Export Diversification and Economic Growth: An Analysis of Colombia's Export Competitiveness in the European Union's Market, pp. 9-47. Berlin: Springer-Verlag Heidelberg.