

## **STRUCTURAL CHANGE IN COMPOSITION OF INDIA'S EXPORT DURING POST-ECONOMIC REFORM PERIOD**

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### **ABSTRACT**

*The composition of India's foreign trade has undergone substantial changes, particularly, after the liberalization and globalization. Our major exports now includes manufacturing goods such as Engineering Goods, Petroleum Products, Chemicals and allied Products, Gems and Jewelleries, Textiles, Electronic Goods, etc. which constitute over 80 per cent of our export basket. This study is focusing on the structural change in the composition of commodities exported from India during last more than two decades since 1987. The dominance pattern is top-heavy. Gems and Jewelry is at the top. Overall mobility and turnover is 12.3 per annum on an average basis. The annual compound growth rate of concentration ratio of composition of commodities is positive and statistically significant. Average value of concentration ratio is 0.071. The increasing trends of concentration ratio has been supplemented and complemented to the dominance pattern. India has insignificant share in the world trade. India is required to make its commodities more competitive at the world level. There is also required to add new commodities and services at competitive price in the export basket for increasing export performance. For this, India needs a comprehensive policy measure and integrated efforts.*

**KEYWORDS:** Export, Trade, Composition, Dominance, Concentration

### **INTRODUCTION**

The process of globalization has got momentum through the process of economic integration, and in the expansion of the volume of International Trade. India has been a relatively new comer to the process of expansion of international trade since its opening up to world trade only began after the crisis in 1991. The opening up to international trade should be seen as a crucial aspect of the new approach to economic Policy and as an integral part of the process of reforms. In 1991, the government introduced some changes in its Policy on trade, foreign Investment, Tariffs and Taxes under the name of "New Economic Reforms". The economic reforms process introduced since 1991 with focus on liberalization, openness, transparency and globalization has enabled increased integration of the Indian economy with the rest of world. The growth rate of India's trade is increasingly dependent on exogenous factors such as world trade growth (especially those of the trading partners), international price changes and development in the competitor countries. Cross currency exchange rates as well as dollar rupee exchange rate movements also get reflected in the performance of India's trade. Indian exports have come a

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long way from the time of independence in terms of value. The total value of India's merchandise exports increased from US \$ 1.3 billion in 1950-51 to US \$ 63.8 billion in 2003-04 – a compound rate of 7.6 per cent [Malik, (2005)]. Indian economy and foreign trade has shown progress post liberalization. In contrast to the pre-reform period (1950-90), the actual growth of exports in the post-reform period has been above the potential offered by the growth of world demand. The gap between the actual and potential is mainly explained by an improvement in the overall competitiveness of India's exports [Virmani, (2003), Veeramani, (2007)]. The composition of India's foreign trade has undergone substantial changes, particularly, after the liberalization and globalization. Our major exports now includes manufacturing goods such as Engineering Goods, Petroleum Products, Chemicals and allied Products, Gems and Jewelleries, Textiles, Electronic Goods, etc. which constitute over 80 per cent of our export basket (Mathor and Sagar, 2015).

**Objective of the study:** To study the structural changes in India's export composition during post reform period.

**Hypotheses:** There is no change in composition of goods and services of India's export during post reform period.

The hypothesis is tested with the help of an elaborate methodology laid out in section 4.

## **EXPORT-IMPORT POLICY OF INDIA**

The Export-Import Policy (EXIM Policy), announced under the Foreign Trade (Development and Regulation Act), 1992, would reflect the extent of regulations or liberalization of foreign trade and indicate the measures for export promotion. Although the EXIM Policy is announced for a five-year period, announcing a Policy on March 31st of every year, within the broad frame of the Five Year Policy, for the ensuring year. A very important feature of the EXIM policy since 1992 is freedom on various dimensions. Licensing, quantitative restrictions and other regulatory and discretionary controls have been substantially eliminated. The Commerce Ministry, Government of India announces the integrated Foreign Trade Policy FTP in every five year. This is also called EXIM policy. This policy is updated every year with some modifications and new schemes. New schemes come into effect on the first day of financial year, i.e., April 1, every year. The Foreign Trade Policy which was announced on August 28, 2009 is an integrated policy for the period 2009-14. Export-Import (EXIM) Policy frames rules and regulations for exports and imports of a country. This policy is also known as Foreign Trade Policy. It provides policy and strategy of the government to be followed for promoting exports and regulating imports for attaining a share of at least 1 % of global merchandise trade. This policy is periodically reviewed to incorporate necessary changes as per changing domestic and international environment. In this policy, approach of government towards various types of exports and imports is conveyed to different exporters and importers. Export refers to selling goods and services to other countries, while import means buying goods and services from other countries. Now in the era of globalization, no economy in the world can remain cut-off from rest of the world. Export and

import play a significant role in the economic development of all the developed and developing economies. With the growth of international organisations like WTO, UNCTAD, ASEAN, etc., world trade is growing at a very fast rate.

## REVIEW OF LITERATURE

Mathor and Sagar (2015) state that the exports are increasing at a decreasing rate but the imports are increasing at an increasing rate. Trade deficit increased very sharply from 2004-05 to 2009-10. The composition of India's foreign trade has undergone substantial changes, particularly, after the liberalization and globalization. Our major exports now includes manufacturing goods such as Engineering Goods, Petroleum Products, Chemicals and allied Products, Gems and Jewelleries, Textiles, Electronic Goods, etc. India's Exports of Services Important: Since data below is for latest time period hence data above too should be of same period so as to maintain consistency. It is a remarkable achievement that we have transformed ourselves from a predominantly primary goods exporting country into a non-primary goods (manufactured goods) exporting country. By exploiting the benefit of GATS now India is becoming the largest exporter of services.

Bhat (2011) reported that the post reform period in India has witnessed significant changes in the trend, pattern and structure of external trade. The share of manufacturing sector has marginally fallen in the GDP and significantly declined in the share of export. The growth of services was more pronounced in GDP growth and is reflected in the increasing share of services in exports. The share of primary products has fallen in export and that of petroleum products showed an increase. The author hence reported that in near future India may emerge as an 'Asian Petroleum Hub'. He further remarked that India has not taken the advantage of international segmentation of production process and the export is still heavily dominated by labour intensive products characterized by a slow growing international demand and protected markets.

Pillania (2008): Indian economy and foreign trade are on a growth trajectory. Indian exports have come a long way in value terms from the time of gaining independence in 1947. The total value of India's merchandise exports increased from US \$ 1.3 billion in 1950-51 to US \$ 63.8 billion in 2003-04 – a compound rate of 7.6 per cent. Trade growth has picked up post liberalization of 1991. The composition of trade is now dominated by manufactured goods and services. India services exports share in global exports is more than double of that of Indian manufacturing exports. East Asian countries, particularly China have become a major trading block. There is huge untapped potential for Indian foreign trade in years to come.

Sahni (2014): The changing structure of India's exports throws some interesting light on both the demand pattern and supply factors that are increasingly influencing India's exports and the manner in which its production structures, institutions, and policies are responding to it. Regarding changes in the composition of exports since 1980s, it may be observed that the share of agriculture and allied products has been declining while that of ores and minerals has

remained more or less steady. Share of manufactured goods has increased generally. Although the opening up of the Indian economy since the early 1990s provided impetus for higher growth for most of the commodities, some products gained more than the others. India's merchandise exports are predominated by the manufacturing sector which accounted for more than three-fourth of its total exports during post-reform period.

Sophie et al; reported that export in India is still heavily dominated by labour intensive products characterised by a slow growing international demand protected markets. This goes against the statement of Razen Sally (2011) who in his article stated that India is not exploiting its labour abundance and concomitant comparative advantage in labour intensive export, particularly in manufacturing. Kalirajan investigated how open India's trade has been after a decade of economic reforms. He said that Indian exporters still face many obstacles which affect their export prospects. For instance, reservation of items for the small scale sector, labour laws which restrict flexibility in hiring and firing and complicated port procedures hinder the export sector.

The topic is well studied comprehensively and intensively under heading of composition and direction of India's foreign trade. However, no study is fully devoted to the composition of India's export of goods and services. This paper is focusing on the detailed study of composition of India's export of goods and services by using new and stylized indices.

The existing literature considered composition of India's export as a part of the study of composition and direction of foreign trade. There is a few existing literature which focused on detailed and comprehensive ways to study on the structural changes in composition of India's export of goods and services. This literature gap is main motivation for the study of this paper. There has been a considerable change in composition of export of goods and services since integration of Indian economy with the world under new trade policy 1991. This paper is focusing on the changes in India's export composition of goods and services under shift of foreign trade policy from 'import-substitution' to 'export-promotion' strategy. This paper will help to fill the existing literature gap and contribute to existing literature on comprehensive and detailed dynamics of compositions goods and services of India's export during post reform period.

## **DATA AND RESEARCH METHODOLOGY**

**Data:** the study uses secondary data published by Reserve Bank of India (RBI) ([www.rbi.org.in](http://www.rbi.org.in)) on composition of India's export of goods and services. The period of study is 1987-88 – 2014-15.

### **Dominance Patterns**

Dynamic changes in the pattern of export of commodities would result in changing ranks of different commodities exported from India. This represents a state of competition amongst exported commodities. It is normally not possible for any single commodity to dominate to be exported for whole period 1987 to 2013. Even if a commodity is not at top in one or more years it should be possible to capture the dominating exported commodity. It is interesting to know

whether there is any dominant commodity or a constant flux in the ranking of different commodities. Dominance can be studied in three ways:

1. The rankings patterns at three points of time, which is a discrete measure of dominance.
2. Index of Rank Dominance (IRD) which is a relative dominance measure by ranks, (Murthy, 2011). This is measure of continuous dominance.
3. Bode horn's measure of competition.

The index of rank dominance (IRD) is an innovative measure which tells us a coefficient that expresses the degree of dominance of an ordinal measure such as rank. IRD has further refined as a relative- Relative Index of Rank Dominance (RIRD), which measures dominance in a relative sense. This gives the proportionate weight of the rank dominance index.

### Index of Rank Dominance

Amongst the top ten commodities which has the dominant position (i.e. highest rank) for the longest period is estimated with the help of index of rank dominance (Bhanu Murthy, 2011).

$$I_{RD} = \frac{\sum_{i=1987}^{2013} (\text{Rank Score})_i}{\text{Maximum Rank Score} \times \text{No. of Years}}$$

$I_{RD}$  = is the index of Rank Dominance.

Rank Score = 10, 9, 8... (In decreasing order of rank).

There are four properties of this new index:

1. The value of  $I_{RD}$  lies between 0 and 1, that is,  
 $0 < I_{RD} \leq 1$   
 $I_{RD}$  measures in relative terms the position of the most dominant commodity over period from 1987 to 2013 for exporting commodity. The value of  $I_{RD}$  lies between zero and one but never become zero because in this index, commodities included must be at least one time be placed in the top ten positions over the period 1987 to 2013. The maximum value of  $I_{RD}$  shall be one provided a commodity has been at top position in all years from 1987 to 2013 for exporting commodity from India.
2. IRD is a measure of continuous dominance.
3. RIRD enables measuring the relative continuous dominance.
4. IRD is a measure that applies to panel data. That is it measures the dominance and amongst 'N' countries over a time periods of 'T' years.

### Mobility and Turnover

This is as a sum of rank changes among the top exporting commodities from India. Mobility is a churning in rank position of the leading exporting commodities from India. It means changes in rank position within leading commodities. The measure of turnover as the number of commodities below the leading commodities exported from India replace the commodities belonging to the leading commodities exported. In mobility and turnover the changes in rank of current year are

with respect to previous year. These measure the competition among commodities exported from India. This mobility and turnover are based on Bodenhorn, et al. (1990). Measure of mobility and turnover over the periods 1987 to 2013 are calculated and the significance of their difference are tested. This is done with a view to understand whether dominance pattern of commodities exported from India has changed, Murthy and Deb (2008).

### **Herfindahl-Hirschman Index of Concentration**

Herfindahl-Hirschman Index (HHI) is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each commodity exported from India and then summing the resulting number (Bhanu Murthy and Deb, 2008). The HHI is expressed as:

$$HHI = \sum_{i=1}^N S_i^2$$

Where 'Si' is the market share of exported commodity 'i' in the market and 'N' is the number of commodities. This index is range from 1/N to one, where 'N' is the number of commodities.

A HHI index below 0.01 indicates a highly competitive.

A HHI index below 0.1 indicates not concentrated.

A HHI index between 0.1 to 0.18 indicates low concentration.

A HHI index above 0.18 to 0.30 indicates moderate concentration.

A HHI index above 0.30 indicates high concentration.

## **RESULTS AND ANALYSIS**

The extent to which global slowdown may impact a country's exports depends largely on the number of trading partners of the country and the composition of its export basket. High dependence on few markets and few exportable products may increase the severity of the impact of slowdown on exports, both in terms of coverage and depth. In order to assess the extent of the impact of global slowdown on India's exports, we examine the trends overtime in composition of India's export basket and its direction. Concentration on few exportable products may worsen the impact of global slowdown on the exports of a country, especially if these products are those whose demand is closely related to incomes of the people, in other words, if these are not necessity products. India's traditional exports have constituted of items such as textile products, gems and jewellery, tea & coffee and leather & leather products. It is important to trace the extent of diversification of the export basket overtime. The trends show that there has been some diversification in composition of India's export basket overtime. However, there still remains large scope for further diversification (UNCTAD, 2009).

As seen in table 1 the share of petroleum products in India's export basket has been increasing since 2000-01. Interestingly, the share of readymade garments, which has been predominant sector in export basket, has been declining continuously and it reached to 4.78% in 2013-14.

Engineering goods, representing a very broad category, continues to be a sector with highest share in India's export basket. Share of chemical and chemical products has remained same overtime while share of gems and jewellery has declined from 16.67% in 1987-88 to around 13.14% in 2013-14. Share of leather has declined from 8% in 1990-1991 to 1.82% in 2013-14. Share of tea and marine products have been continuously declining, while share of electronic goods has been increased to 2.44% in 2013-14.

**Table 1: Change in Composition of India's Export Basket (%)**

Commodity/Year	1987-88	1990-91	1995-96	2000-01	2005-06	2010-11	2013-14
Petroleum Products	4.14	2.88	1.43	4.20	11.29	16.52	20.05
Gems and Jewellery	16.67	16.11	16.59	16.57	15.06	16.12	13.14
Basic Chemicals, Pharmaceuticals & Cosmetics	4.38	6.81	6.82	8.22	8.85	7.69	8.81
Transport Equipment	1.61	2.21	2.91	2.23	4.19	6.39	6.86
Machinery and Instruments	3.28	3.84	2.61	3.55	4.93	4.71	5.19
Readymade Garments	11.61	12.32	11.56	12.50	8.36	4.62	4.78
Manufacture of Metals	1.84	2.51	2.60	3.54	4.11	3.37	3.10
Cotton Yarn, Fabrics, Madeups, etc.	7.30	6.45	8.10	7.77	3.83	2.30	2.85
Rice	2.16	1.42	4.30	1.44	1.36	1.01	2.47
Electronic Goods	1.27	1.28	2.11	2.36	2.11	3.27	2.44
Iron & Steel	0.18	0.89	2.19	2.31	3.44	2.04	2.40
Other Engineering Goods	1.34	1.67	1.39	1.32	2.29	3.38	2.24
Plastic and Linoleum Products	0.42	0.61	1.84	2.05	2.73	1.86	2.16
Other Agriculture and Allied Products	0.25	0.74	1.67	1.80	1.58	1.59	2.16
Leather and Manufactures	7.98	7.98	5.51	4.36	2.62	1.56	1.82
Rubber, Glass, Paints, Enamels and Products	1.44	1.71	2.05	2.10	2.04	1.43	1.73
Manmade Yarn, Fabrics, Madeups, etc.	0.73	1.25	2.36	2.38	1.90	1.70	1.64
Marine Products	3.40	2.95	3.18	3.13	1.54	1.04	1.62
Other Ores and Minerals	1.27	2.01	2.05	1.76	2.27	1.55	1.27
Oil Meals	1.36	1.87	2.21	1.00	1.07	0.97	0.90
Iron Ore	3.54	3.22	1.62	0.80	3.69	1.87	0.51
Carpets	2.63	2.06	1.77	1.31	0.83	0.41	0.33
Tea	3.83	3.29	1.10	0.88	0.38	0.29	0.26
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: RBI and Author's estimation.

This paper has been focusing on the structural changes in the composition of commodities in India's export particularly, after opening and integration of Indian economy to the world economy. Gems and Jewelry is at the top exporting commodities from India. Top five exporting commodities are gems and jewelry; readymade garments; basic chemicals, pharmaceuticals and cosmetics; cotton yarn and fabrics; petroleum products. These five commodities are accounted for more than 63 percent of total export during 1987-88:2013-14. Top ten commodities are accounted for more than 90 percent. These commodities are main sources of earning of foreign exchange currency through exporting from India to other countries.

### **Composition of India's Services Exports**

Composition of India's services exports comprise travel, transportation, insurance, GNIE, and miscellaneous services having annual compound growth rate 11.22%, 13.69%, 14.85%, 14.29%, and 21.51% respectively during 1990-91:2014-15. Overall growth rate of total service is 17.41%. The major drivers of sustained year-on-year growth rates registered by aggregate Indian exportable services have been earnings from Travel, Transportation and Miscellaneous Services which accounts for both Software and Non-Software services.

Travel is represented by Foreign Exchange Earnings, registered year-on-year (YoY) growth rate of 13.46% in 2014-15 as compared to the previous year. Foreign Exchange Earnings (FEE) in US\$ terms during the year 2014-15 were US\$ 20,334 million as compared to US\$ 17,922 million in 2013-14. However, the impact of global financial meltdown is evident in 2008-09 on the travel having negative YoY growth rate. Financial year 2012-13 and 2013-14 registered negative growth rate corresponding to previous year. Export of Transportation services have slowed down in past few years registering 0.55% year-on-year growth in 2014-15 as compared to a growth rate of 46% in 2004-05. Insurance Services registered a higher year-on year growth rate of 107.64% in 2004-05 while in 2014-15 growth rate is 3.77%.

Non-Software services, under miscellaneous receipts, recorded a fall in year-on-year growth rate. Communication, business and financial services were the major contributors to the decline in non software services. Business, Communication and Financial services recorded negative growth rates in 2014-15. This slowdown is the result of the banking financial services and insurance sector being at the core of global economic slowdown. However, services such as Construction, News Agency, Royalties, Copyrights and License Fees and Personal, Cultural Recreational services registered higher year-on-year growth rates in the non-software category (UNCTAD, 2009).

Under miscellaneous services comprises software, business, financial and communication having annual compound growth rate 13.31%, 14.67%, 19.87%, and 1.32% respectively during 2004-05:2014-15. Overall annual compound growth rate of miscellaneous service is 12.31%. However, business, financial and communication services registered negative YoY growth rate in 2014-15. The export of software services has been a major contributor to the growth of exportable service accounting for 47% of total services export in 2014-15.



**Table 2: Composition of India's Exports of Services (US \$ Million)**

Item/Year	CAGR (1990-91:2014-15)	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Travel	11.22	1456	1977	2098	2222	2365	2712	2878	2914	2993	3036	3497	3137
YoY Growth (%)			35.78	6.12	5.91	6.44	14.67	6.12	1.25	2.71	1.44	15.18	-10.29
Transportation	13.69	983	939	982	1433	1696	2011	1953	1836	1925	1707	2046	2161
YoY Growth (%)			-4.48	4.58	45.93	18.35	18.57	-2.88	-5.99	4.85	-11.32	19.86	5.62
Insurance	14.85	111	108	158	124	152	179	217	240	224	231	270	288
YoY Growth (%)			-2.70	46.30	-21.52	22.58	17.76	21.23	10.60	-6.67	3.13	16.88	6.67
G.n.i.e.	14.29	15	17	75	30	10	13	72	276	597	582	651	518
YoY Growth (%)			13.33	341.18	-60.00	-66.67	30.00	453.85	283.33	116.30	-2.51	11.86	-20.43
Miscellaneous	21.51	1986	1981	1417	1455	1912	2430	2354	4163	7447	10153	9804	11036
YoY Growth (%)			-0.25	-28.47	2.68	31.41	27.09	-3.13	76.85	78.89	36.34	-3.44	12.57
Total	17.41	4551	5022	4730	5264	6135	7344	7474	9429	13186	15709	16268	17140
YoY Growth (%)			10.35	-5.81	11.29	16.55	19.71	1.77	26.16	39.85	19.13	3.56	5.36
<b>Item/Year</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
Travel	3312	5037	6666	7853	9123	11349	10894	11859	15793	18462	17999	17922	20334
YoY Growth (%)	5.58	52.08	32.34	17.81	16.17	24.40	-4.01	8.86	33.17	16.89	-2.50	-0.43	13.46
Transportation	2536	3207	4683	6325	7974	10014	11310	11178	14246	18241	17334	17380	17476
YoY Growth (%)	17.35	26.46	46.02	35.06	26.07	25.58	12.95	-1.18	27.45	28.04	-4.97	0.27	0.55
Insurance	369	419	870	1062	1195	1639	1422	1591	1945	2632	2227	2121	2201
YoY Growth (%)	28.13	13.55	107.64	22.07	12.52	37.15	-13.22	11.85	22.25	35.32	-15.37	-4.76	3.77
G.n.i.e.	293	240	401	314	253	330	389	441	535	478	574	488	543
YoY Growth (%)	-43.44	-18.09	67.08	-21.70	-19.43	30.43	17.79	13.39	21.29	-10.59	20.17	-15.01	11.26

Continued...

<b>Miscellaneous</b>	14253	17965	30629	42105	55235	67010	81947	70977	92117	102513	107544	113564	114894
<b>YoY Growth (%)</b>	29.15	26.04	70.49	37.47	31.18	21.32	22.29	-13.39	29.78	11.29	4.91	5.60	1.17
<b>Total</b>	20763	26868	43249	57659	73780	90342	105963	96045	124636	142325	145678	151475	155448
<b>YoY Growth (%)</b>	21.14	29.40	60.97	33.32	27.96	22.45	17.29	-9.36	29.77	14.19	2.36	3.98	2.62

*Source:* RBI and Author's estimation.

G.N.I.E: Government services not included elsewhere

**Table3. Composition of India's Exports of Miscellaneous Services (US \$ Million)**

<b>Item/Year</b>	<b>CAGR (%)</b>	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Software Services	13.31	17700	23600	31300	40300	46300	49705	53100	62212	65867	69439	73108
<b>YoY Growth (%)</b>			33.33	32.63	28.75	14.89	7.36	6.83	17.16	5.88	5.42	5.28
Business Services	14.67	5167	9307	14544	16772	18602	11321	24050	25910	28447	28482	28421.86
<b>YoY Growth (%)</b>			80.12	56.27	15.32	10.91	-39.14	112.43	7.73	9.79	0.12	-0.21
Financial Services	19.87	512	1209	3106	3217	4428	3693	6508	5967	4949	6650	5661
<b>YoY Growth (%)</b>			136.13	156.91	3.57	37.63	-16.60	76.26	-8.32	-17.05	34.35	-14.87
Communication Services	1.32	1384	1575	2262	2408	2298	1228	1562	1600	1686	2410	1997
<b>YoY Growth (%)</b>			13.80	43.62	6.45	-4.56	-46.56	27.19	2.44	5.37	42.97	-17.15
Total Misc Services	12.31	30629	42105	55235	67010	81947	70977	92117	102513	107544	113564	114894
<b>YoY Growth (%)</b>			37.47	31.18	21.32	22.29	-13.39	29.78	11.29	4.91	5.60	1.17

*Source:* RBI and author's estimation.

Table 4 showing that India's export commodities have been structurally changed from traditional export items such as primary items to the manufactured & processed items and industrial items. This is possible because of industrialization of India under five year plan (FYP) since independence of India and liberalization of foreign trade policy (FTP) since 1991. During new regime of foreign trade policy since 1991, there is a very few variations and changes in the composition of commodities exported from India. Some new non-traditional items definitely added to the basket of commodities exported from India during new regime of foreign trade policy.

**Table 4: Rank Dominance of Composition of Commodities in India's Export during 1987-88:2013-14**

Variable	Presence	Score	IRD	RIRD
Gems and Jewellery	27	264	0.978	0.178
Readymade Garments	27	213	0.789	0.143
Basic Chemicals, Pharmaceuticals & Cosmetics	27	202	0.748	0.136
Cotton Yarn, Fabrics, Madeups, etc.	23	137	0.507	0.092
Petroleum Products	17	126	0.467	0.085
Machinery and Instruments	27	121	0.448	0.081
Leather and Manufactures	17	103	0.381	0.069
Manufacture of Metals	23	72	0.267	0.048
Transport Equipment	18	69	0.256	0.046
Marine Products	15	51	0.189	0.034
Iron Ore	9	29	0.107	0.020
Iron & Steel	8	26	0.096	0.018
Electronic Goods	7	14	0.052	0.009
Tea	4	13	0.048	0.009
Rice	3	12	0.044	0.008
Other Engineering Goods	6	10	0.037	0.007
Oil Meals	3	8	0.030	0.005
Other Agriculture and Allied Products	3	6	0.022	0.004
Carpets	2	4	0.015	0.003
Other Ores and Minerals	1	2	0.007	0.001
Plastic and Linoleum Products	1	1	0.004	0.001
Manmade Yarn, Fabrics, Madeups, etc.	1	1	0.004	0.001
Rubber, Glass, Paints, Enamels and Products	1	1	0.004	0.001
			5.5	1

Source: Author's estimation.

Mobility and turnover is a method of measuring the changes in the ranks among the basket of commodities exported from India. This indicates which of Indian commodities has more demanded by other countries during the particular year. If the magnitude of mobility and turnover is low, then there are a few changes in exporting patterns among the basket of

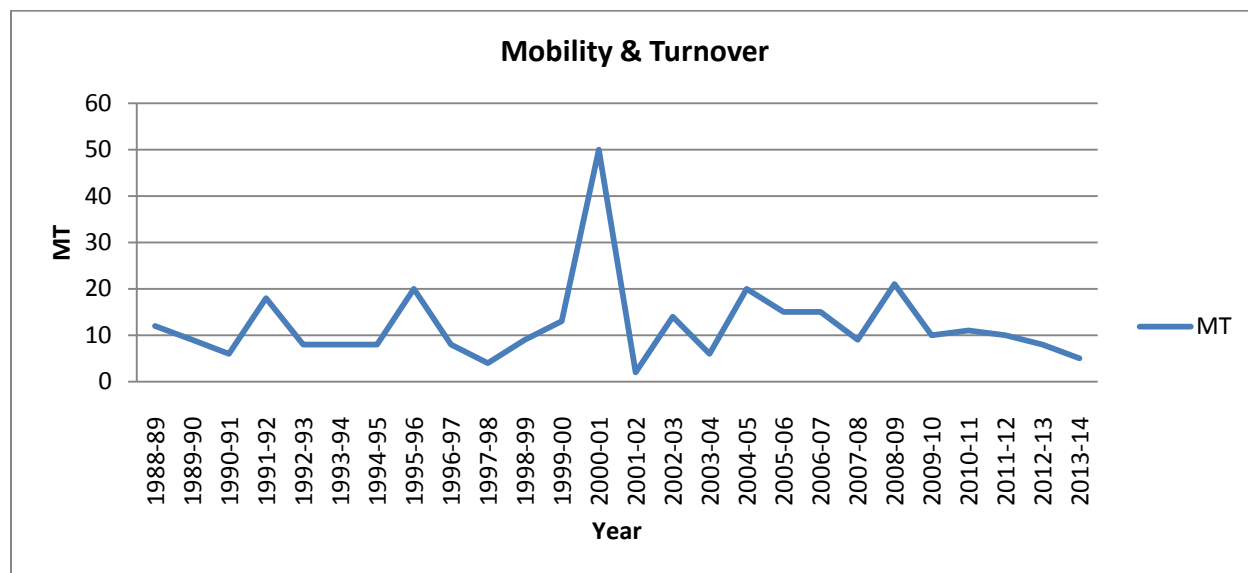
commodities and vice-versa. Table 5 shows the total value of change in ranks among the basket of commodities in a particular year with respect to the corresponding previous year. The maximum mobility and turnover is 50 in year 2000-01 while minimum is 2 in year 2001-02. This indicates that the new items added and/or demand pattern changes among the existing composition of commodities exported from India in 2000-01 corresponding to previous year i.e. 1999-2000. This may be happened due to either change in the direction of export from India or some other countries entered into export of such items at competitive price of India. Overall mobility and turnover is 12.3 per annum on an average basis. This may be because of India has taken a number of initiatives measure of export promotion since 1991.

**Table 5: Mobility & Turnover of Composition of Commodities in India's Export**

Year	Mobility & Turnover
1988-89	12
1989-90	9
1990-91	6
1991-92	18
1992-93	8
1993-94	8
1994-95	8
1995-96	20
1996-97	8
1997-98	4
1998-99	9
1999-00	13
2000-01	<b>50</b>
2001-02	<b>2</b>
2002-03	14
2003-04	6
2004-05	20
2005-06	15
2006-07	15
2007-08	9
2008-09	21
2009-10	10
2010-11	11
2011-12	10
2012-13	8
2013-14	5
<b>Average</b>	<b>12.3</b>

Source: author's estimation.

**Figure 1: Line Graph of Mobility and Turnover of Composition of Commodities of India's Export**



Source: Author's estimation

The line graph clearly figure out that the mobility and turnover have been showing slight variation among the basket of commodities exported during 1988-89: 2013-14, except year 2000-01. However, the mobility and turnover have been consistently decline slightly since 2009-10 (figure 1). Growth rate of mobility and turnover is negative and low but not statistically significant (table 6).

It implies that the composition of commodities exported from India to other countries is more or less same during new foreign trade regime. India should have introduced new manufactured, processed and industrial goods and new services at world competitive price for increasing India's export performance. Indian government is required to make its foreign trade policy world market oriented. India is considered as a most favourable destination for foreign direct investment (FDI). So, there is need to integrate FDI policy with foreign trade policy, so that composition of commodities has been diversified for export from India.

**Table 6: Growth Rate of MT of Commodities Composition in India's Export during 1987-88:2013-14**

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	11.036	29.275	0.377	0.709
LMT	-0.004	0.015	-0.297	0.769

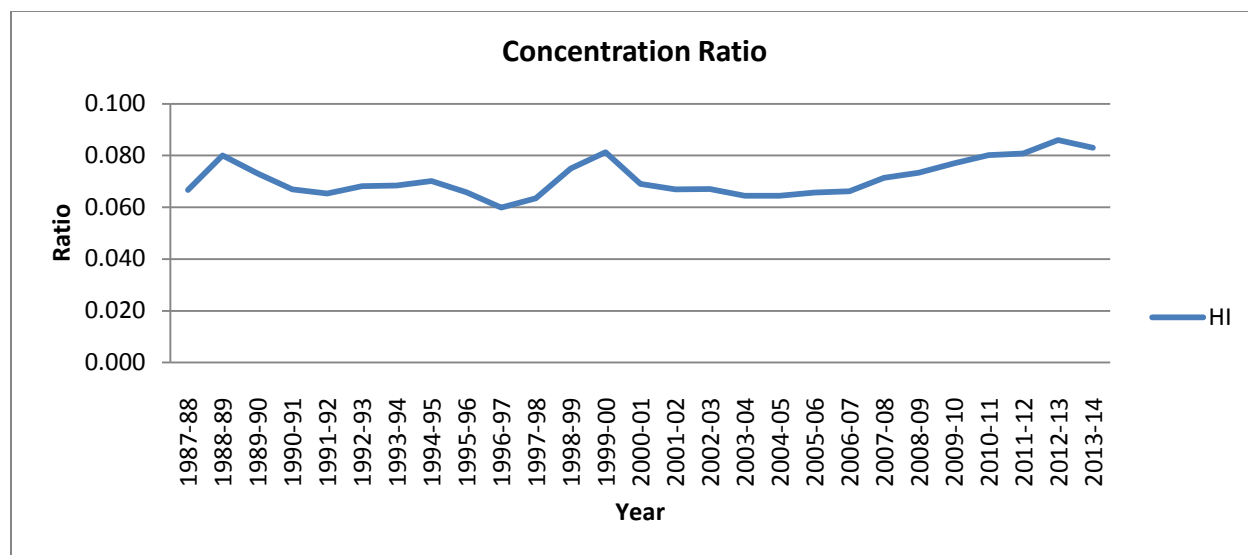
Source: Author's estimation

The maximum value of Herfindal's Index is 0.086 in 2012-13 while minimum is 0.06 in 1996-97. Average value of concentration ratio is 0.071 during 1987-88:2013-14. So, the concentration ratio among commodities composition is low. However, the value of concentration ratio has been continuously increasing since 2004-05 except slight decline in 2013-14 (table 7 and figure 2). The increasing trends of concentration ratio of composition of commodities has been supplemented and complemented to the dominance pattern of composition of commodities.

**Table 7: Herfindal's Index of Concentration Ratio of Commodities Composition in India's Export**

Year	HI
1987-88	0.067
1988-89	0.080
1989-90	0.073
1990-91	0.067
1991-92	0.065
1992-93	0.068
1993-94	0.068
1994-95	0.070
1995-96	0.066
1996-97	<b>0.060</b>
1997-98	0.063
1998-99	0.075
1999-00	0.081
2000-01	0.069
2001-02	0.067
2002-03	0.067
2003-04	0.064
2004-05	0.064
2005-06	0.066
2006-07	0.066
2007-08	0.071
2008-09	0.073
2009-10	0.077
2010-11	0.080
2011-12	0.081
2012-13	<b>0.086</b>
2013-14	0.083
Average	0.071

Source: Author's estimation

**Figure 2: Line Graph of Concentration of Composition of Commodities of India's Export**

Source: Author's estimation

**Table 7: Growth Rate of Concentration of Composition of Commodities**

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-13.199	4.705	-2.805	0.010
LHI	0.005	0.002	2.243	0.034

Source: Author's estimation.

The annual compound growth rate of concentration ratio of composition of commodities is positive and statistically significant but value is low (table 7). It means the concentration of composition of commodities exported from India has been increasing during last more than two decades. This indicates that no new item(s) has been added to the composition of commodities having significant share in among commodities exported from India during last more than two decades. This is also evident from dominance pattern of composition of commodities. Top ten items among composition of commodities exported from India having more than 90 percent dominance during new foreign trade policy since 1991.

## CONCLUDING REMARKS

The changes in India foreign trade strategy from import-substitution to export-promotion have been improving exports performance significantly during the post-reform period. There has been a perceptible change in the value, composition and direction of India's exports as a result of changes in foreign trade policy. Though the volume and value of exports has increased manifold,

India's share in the world exports is still not up-to the expectation. The share of manufactured goods as well as the proportion of high value and differential products, petroleum products has increased in India's export basket reflecting that Indian economy is being diversified and non-traditional items of exports are gaining importance. Earlier we were exporting mainly traditional and primary commodities. Now, we have made structural changes in the composition of commodities exported from India. Now, we have composition of industrial, engineering and manufactured and processed goods in addition to primary goods. This structural change is possible because of Indian government consistent effort towards industrialization of the country under five year plan (FYP) since independence. Gems and Jewellery is at the top among the composition of commodities exported from India. Top five exporting commodities are gems and jewellery; readymade garments; basic chemicals, pharmaceuticals and cosmetics; cotton yarn and fabrics; petroleum products. These five commodities are accounted for more than 63 percent of total export. Top ten commodities are accounted for more than 90 percent. India's foreign trade policy has been consistently liberalized and integrated in line with world trade organization (WTO) policy. However, India has insignificant share in the world trade. India is required to make its commodities and services more competitive at the world market. For increasing India's export, it is also required to add new items and diversify commodities and services at competitive price in its export basket. For this, India needs a comprehensive trade policy measure and integrated efforts. This paper extensively and comprehensively explains India's composition of export of goods and services. However, India's recent trend of export showing proportion of service is increasing in composition of India's export. So, it can further be examined about the role of service sector in increasing India export and its future viability.

### **POLICY IMPLICATIONS:**

The major policy implication for increasing India's export, within the background of post reform period trade policy, has been emerging out of the present study as follows:-

1. India need to make suitable policy changes in its trade policy, so that India can exploit opportunities in global market and increase its export. has rightly shifted its FDI policy to 'Make in India' recently. This would help to increase production of manufactured and industrial goods for export. So, India FDI policy and foreign trade policy must be integrated for export promotion.
2. For achieving 2 per cent of world trade by year 2020, India should be competitive globally and able to exploit opportunities provided by global market and environment.
3. India needs to make proper diversification in composition of goods and services within the background of India foreign trade policy and also to remove bottlenecks operating in the economy and help in improving export competitiveness. The price and income



elasticity, for demand for export, should keep in mind while making diversification in the composition.

4. India's performance on high tech manufacturing trade front is not at par with other leading exporters of high technology products. India should make special efforts to increase the High Technology exports such as aerospace, computers-office machine, scientific instruments, electrical machinery, pharmacy etc. as
5. India needs to re-orient the pattern of its exports to switch to more skill-intensive and more knowledge-intensive goods and services of competitive international quality.

Further, diversification and addition of India's export basket and the development of new export markets should be worked out within the background of India's new foreign trade policy during post reform period and WTO guidelines and a wider effort to enlarge the country's foreign trade and expand commercial and economic relations with other countries.

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