

PATTERN OF INDIA'S FOREIGN TRADE IN PRE AND POST REFORM ERA: AN EMPIRICAL INVESTIGATION

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ABSTRACT:-

The study investigate the pattern of India's foreign trade and share of india's export and import in world's trade during the period 1960-2010. India's share in world's exports has shown a rising trend. Its share was only 0.5% in 1991. During the period from 1991 to 1997 its share was continuously rose from 0.50% to 0.62% and period of 2009- 2010 it is rise 1.25 %. Similarly, India's share in world imports has also shown a rising trend 1990-2010. It was 1.82% in 1960-61. But in 1969-70 It was 0.8%; it has shown the decreasing trend. The imports share in world imports in 2000-2001 is 0.7% and 2009-2010 the relative share is 1.9% show the increasing trend. The composition of India's exports and imports has grown up significantly. But the imports of food grains and consumer goods have decline due to adoption HYM technology in Indian agriculture.

INTRODUCTION:

Foreign Trade has been one of the most significant determinants of economic development in a country. The foreign trade of a country consists of inward and outward movement of goods and services, which result into outflow and inflow of foreign exchange from one country to another country. During present times, International trade is a vital part of development strategy and it can be an effective instrument of economic growth, employment generation and poverty alleviation in an economy. According to Traditional Pattern of development show that resources are transferred form the agricultural to the manufacturing sector and then into services - sector in an economy.

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 main focus of these reforms has been on Liberalization, openness and export promotion activity. India's foreign Trade has export significantly changed in the Post- reforms period. In absolute terms, Trade Volume rose and the composition of exports has undergone several significant changes. In Post- reform Period, the major contributor to exports growth has been the manufacturing sector.

India's major Imports Include Petroleum and Petroleum Products, fertilizers, gold, whereas Precious Stones, Machinery, chemicals and electronic goods, Machinery and software consist of export. This is really a welcome development and the trend needs to be strengthened further for the increased income through exports. The effect of liberalization on india's foreign trade the economy has greatly influenced.

The First important feature of the opening of trade is represented by changes in the structure of trade in goods. The some of agriculture products has declined mainly to the advantage of manufacturing products. This change is especially noticeable for exports, where the share of manufactured good had increased to 75 Percent in 2002. Regarding Imports, no significant change have taken place. The share of food products had declined from 25 percent to about 10 percent of imports in 2002.

The secondly important change has occurred during the 1990s in India's direction of Trade flows. Earlier our exports were confined to OECD and OPEC countries. The U.S.A. Germany Japan accounting for Major share But New East Asian Countries Particularly china has become major trading partner. The most important development regarding direction of trade is the rapid growth of India's trade with ASEAN Group, U.A.E., Brazil, Mexico, Colombia etc.

India's foreign trade continuously increased. It has show the position of export and

Import of Indian economy It was 1.33 billion \$US 1960-61. But in 1980-81 export was increased to 8.58 billion US\$ and after economic reform in 1991-92 export goes up with 17.6 billion US\$ after that at present in 2010-2011 export is 157.2 billion US\$. Indian's Import also increased in time to time. In 1960-61 India's Import is 2.3 billion US\$ but in 1980 It was increased with 14.86 billion US\$. After economic reform in 1991-92 also increased with 20.4 Billion US\$ Now at Present in 2010-2011 import is 245.6 billion US\$.

The main objective of this study is to examine pattern of India's foreign trade in the Post- Reform Era and Pre Reform Era.

- 1) To assess the role of Foreign Trade in India's in terms of their share of exports and imports in World's exports and Imports.
- 2) To analyze the changes that has occurred in the composition of India exports and Imports during the study period i.e. 1970-2010.

The study has been divided into four sections. Section 1 has been devoted to survey of literature. Section II deals with the share of India's Exports and Imports in World's Exports and Imports Since: 1960-2010. Section III deals with the Composition of India's exports and Imports since: 1970-2010. Section IV deals with the main conclusion and policy Implication.

SECTION-I

REVIEW OF LITERATURE:-

Many theoretical and empirical Studies have been under-taken to assess the role of foreign trade and patterns of trade in India's or any other country's economic development. Prominent among them are:

Ahluwalia, M.S (2002), "Economic reforms in India since 1991. Alcala, F., and Ciccone,(2004), " Trade and productivity". Arora.A, Gambardella,(2004) " The globalization of the software industry: perspectives and opportunities for developed and developing country", Dollar, D. and A Kraay. (2002), "Institutions Trade and growth". De long, B. (2004) "India since independence, Kohli, A. (2006 a), "politics of economic growth in India" 1980-2005 part 1: economic and political weekly. Kalpana Kochhar, Utsav Kumar, Raghuram Rajan, Arvind Subramanian, and Ioannis (2006), India's Pattern of Development: Krishnamurthy, K

and Sastry, D.U. (1968), "Inventories in the Organized Manufacturing Sector or the Indian Economy", Mallick, S.K (1996). "Causality between exports and economic growth in India: Evidence from co-integration-based error correction model" Michele Alessandrini, Bassam Fattouh, and Pasquale Scaramozzino;(2007):The changing pattern of foreign trade specialization in Indian manufacturing,Mathur, Vibha, (2006), Foreign Trade of India, 1947 to 2007, Trends, Policies and Prospects, Mihir Pandey (2004), Impact of Trade Liberalization in Manufacturing Industry in India in the 1980s and 1990s,Nandi's and B. Biswas,(1991) "Exports and economic growth".Nidugula, G.K. (2000) ,"Exports and economic growth in India, An empirical Investigation".Nagraj, R. (2003), "Foreign Direct Investment in India in the 1990s: Trends and Issues"Nayyar, D. (1976), India's Export and Export Policies in 1960's,Panagaria, A. (2004), India's Trade Reform, Panchmukhi, V.R. (1979), Trade Policies in India; Raj, K.N., (1966), Food, Fertilizer and Foreign Aid, Mainstream,Rakshit, M., (1994): Issues in Structural Adjustment of Indian Economy"Rodrik, D. (1992a), The Limit of Trade Policy Reform in Developing Countries, Sen, S and R.U. Das (1992), Import Liberalization as a Tool of Economic Policy in India – A Perspective from the Mid 1980s to December 1991, Shafaeddin, S.M. (2005), "Trade Liberalization and Economic Reform in Developing Countries: Structural Change or De-Industrialization",Singh Manmohan, (1964), India's Export Trends,

All these studies analyze the relationship between foreign trade and growth in general and performance of foreign trade in India in pre and post reform era, these studies explain the Patterns of trade and the Performance of exports and Imports. These studies show endogenous growth has argued that the long- term growth potential of an economy can be Positively related to its specialization in technologically advanced Sectors and explain the composition of India's export and export performance and result is based on industrialization and rapid growth in developed economies. all studies focused only on India's external Sector Performance especially export performance during post Reform period.

Our study is in the footsteps of earlier studies on India. It is different from earlier studies in the sense that it covers a period of six decades; and also more comprehensive.

SECTION- II

THE SHARE OF INDIA'S EXPORTS AND IMPORTS IN WORLD TRADE SINCE: 1960-2010

In this section we have analyzed the share of Indian exports and Imports in world exports and Imports. The analysis has been made by applying the linear Regression Equation $X = b_0 + b_1t$

The annexure-1 shows that share of India's exports in world export. India's export Increased from \$1.333b in 1960-1961 to \$21.3b in 1990-91. Which further Increased to 33.107 billion US\$ in 1996 and to 42.379 b\$ in 2000 India's exports are continuously Increased during the period under study 1960-2010; except the year 2009-2010 declined to 157.2b US\$ whereas in 2008-09 India's export were 194.5 billion US\$. The Share of India's exports in world's exports has declined. The share of India's exports in World's exports 1.11 percent in 1960-61 which fall to 0.57 percent in 2005 and further the trend was reversed for some years (1964, 1966, 1976, 1977, 1983, 1984, 1985 1990, 1994, and 2006 to 2010). But for the study period as a whole the share declined. India's ranking among world's trading nations slipped from 16th in 1953 to 20th in 1983 and further to 29th 1991. its ranking among world's trading nation is improved in 2010

The annexure-2 shows the share of India's import in world's imports during the many Period 1960-61 to 2009-10, World's imports Increased. The share of India's imports in world's imports rose from 1.82 percent in 1960-61 to 1.98 in 2009-2010, since 2001-2002 to 2009-2010. The imports of India's have been continuously rising expect the year 2009-2010.

The India's Share in world's exports and imports during the period 1991-92 to 2009-10 shows an Increasing trend. The percentage share of exports was 0.52 Percent in 1991, which Increased to 0.66 percent in 2000 and 1.25 percent in 2009-2010 The percentage share of imports in 1991 was 0.57 percent which increased to 1.98 Percent in 2009-10. The rising share of imports in world imports has significance from the point of view of economic growth.

We have applied regression the data on India's exports (imports) share in world trade.

The results of regression analysis are shown in table 2.1 and 2.2.

TABLE- 2.1
RESULTS OF REGRESSION EQUATIONS INDICATING INDIA'S SHARE OF EXPORTS
IN WORLD'S TRADE
(1960-2010)

Variable	Time Period	Bo	B1	R ²	R ²	F value
Export share's as a % of World Trade	1960-1970	1.234 (26.016)*	-4.58e-02 (-5.994)*	.81	.79	35.925*
	1970-1980	.645 (17.778)*	-1.45e-02 (-2.479)*	.43	.36	6.143*
	1980-1990	.455 (11.726)*	9.939e-03 (1.588)	.24	.14	2.522
	1990-2000	.499 (34.434)*	1.442e-02 (6.180)*	.82	.80	38.196*
	2000-2010	.527 (5.564)*	6.661e-02 (4.336)*	.70	.66	19.061*
	1960-2010	.740 (10.934)*	-1.34e-03 (-5.581)*	.007	-.014	.338

t*- Significant at 5% level of significance

F*= Significant at 5% level of significance

TABLE- 2.2
RESULTS OF REGRESSION EQUATIONS INDICATING INDIA'S SHARE OF IMPORTS
OF WORLD'S TRADE
1960-2010

Variable	Time Period	Bo	B1	R ²	R ²	F value
Import Share's as a % of World Trade	1960-1970	2.033 (16.810)*	-9.29e-02 (-4.767)*	.74	.70	22.725*
	1970-1980	.671 (15051)*	-5.45e-03 (-.759)	.06	-.049	.576
	1980-1990	.843 (25.369)*	-1.52e-02 (-2.835)*	.50	.43	8.040*
	1990-2000	.54.5 (16.828)*	2.212e-02 (4.234)*	.69	.65.	17.926*
	2000-2010	.485 (1.587)	.116 (2.354)*	.40	.33	5.541*
	1960-2010	1.126 (9.081)*	-7.21e-03 (-1.702)	.057	0.037	2.898

t*- Significant at 5% level of significance

F*= Significant at 5% level of significance

On the basis of the above data, we have regressed India's share in world's trade by using

regression equation with the help of annexure-1

In 1960-70 percentage share of Export [$-1.234-458e-02t$] R^2 F value
 t- Statistics (-5.994)* 0.81 5.925*

The value of b_1 shows a Negative trend which is statistically significant and the R^2 value is very high and overall equation result is significant at 5% level of statistically significant. During 1970-1980 period also show the negative trends which is t, F value is statistically significant. R^2 value is not high. But in 1960-2010 overall times Period It is show the Negative trend but it is not statistically significant. R^2 , R^2 is very low. Show in the table 2.1. The time periods: 1980-1990, 1990-2000 and 2000-2010 has shown the positive trend. But 1990-2000, 2000-2010 has shown the value of t and f is statistically significant at 5% level of significant. In both time period R^2 and R^2 is very high that show the better goodness of fit.

In the table 2.2 the growth rates of share of India's import in world trade have shown a negative Trend in whole time period 1960-2010. But it is not statistically significant. In first second, and third sub-period 1960-1970, 1970-1980 and 1980-1990 also take Negative trend in 1960-70, 1980-90 has statistically significance and in sub period 1990-2000, 2000-2010 has take positive trend. It has statistically significant at 5% level of significance in t and F- Value. The Indicator R^2 , R^2 is also high.

SECTION- III

THE COMPOSITION OF INDIA'S EXPORTS AND IMPORTS. SINCE 1970-2010

The composition of foreign trade implies the composition of exports and imports of a country. It indicates through imports what types of goods a country lacks and how much of them it is able to get. Exports bring out the fact about the goods that a country has and how much of these it can and is willing to sell. Seen over a period of time changes in the composition of trade mirror the developments taking place in the domestic structure of the production.

The present section analysis the composition of India's exports and imports.

COMPOSITION OF EXPORTS:-

Composition of exports means goods that we are selling to other countries. At the time of Independence; our exports consisted mainly of agricultural products like Tea, Spices, tobacco and other raw materials etc. We were also exporting cotton textiles and jute products in large quantities. With the industrialization of the economy, composition of exports have under gone a change, Thereby the proportion of raw materials in our exports has declined while that of manufactured goods has increased. we are now exporting large quantities of items such as machinery and transport equipment, chemicals allied products, marine products, handicrafts, fish however export of items such as cotton fabric tea Jute manufactures, spices etc also continues.

COMPOSITION OF INDIA'S EXPORTS

As per the latest classification of RBI, the joining the main category of export.

1) Agriculture and allied Products:-

This commodity group includes Tea, coffee, spices, tobacco, oil meal fruits and vegetables, Marine products and raw material.

2) Ores and Minerals

This commodity group includes Iron ore, processed mineral and other ores and minerals like mica, Jute textile fiber and waste.

3) Manufactured goods.

This group includes leather and leather products, gems , Jewellery, machinery and Transport equipment, electronic goods, drugs, pharmaceuticals, cotton year and fabrics ready made garments and handicrafts etc.

4) Crude and petroleum products:-

This commodity group was at one time an Important part of India's exports. However with setting up of our own oil refineries, their export is very insignificant.

5) Other unclassified items:-

Items that have not been included in any of the above categories are included in this list. It constitutes a very insignificant proportion of total export.

TABLE- 2.3
RESULTS OF LINEAR REGRESSION EQUATION
 $x = (b_0 + b_1t)$ **SHOWING COMPOSITION OF INDIA'S**
EXPORTS: 1970-2010

Commodities	Time period	b0	b1	R ²	R ²	F value
1) Tea	1970-2010	348.772 (9.070)*	3.141 (1.874)	.087	.062	3.513
	1970-1980	103.073 (1.498)	39.490 (3.562)*	.61	.56	12.688*
	1980-90	486.693 (8.884)*	.652 (.074)	.001	-.124	.005
	1990-2000	436.793 (5.630)*	-3.582 (-.286)	.01	-.11	.082
	2000-2010	300.389 (8.622)*	23.820 (3.847)*	.67	.63	14.801*
2.) Coffee	1970-2010	57.465 (2.149)	8.643 (7.416)*	.59	.58	55.001*
	1970-80	-18.987 (-.892)	22.579 (6.581)*	.84	.82	43.308*
	1980-90	205.813 (8.990)*	-.170 (-.046)	.00	-.125	.002
	1990-2000	93.813 (1.625)	36.830 (3.959)*	.66	.62	15.671*
	2000-2010	139.869 (3.448)*	36.868 (5.115)*	.78	.75	26.161*
3.) SPICES	1970-2010	-73.369 (- 1.250)*	17.232 (6.735)*	.551	.539	45.366*
	1970-80	5.200 (.317)	16.782 (6.340)*	.83	.81	40.190*
	1980-90	104.053 (3.491)*	11.930 (2.483)*	.43	.36	6.168*
	1990-2000	58.200 (2.639)*	35.684 (10.039)*	.92	.91	100.785*
	2000-2010	.875 (.006)	119.012 (4.540)*	.74	.71	20.612*
4) Fruit and vegetables	1970-2010	70.721 (1.303)	9.072 (3.836)*	.28	.26	14.713*
	1970-80	64.967 (4.581)*	16.037 (7.016)*	.86	.84	49.223*
	1980-90	360.920 (6.001)*	-20.722 (-2.086)*	.35	.27	4.351
	1990-2000	121.633 (11.100)*	3.263 (1.848)	.29	.21	3.414
	2000-2010	1.608 (.029)	96.278 (9.852)*	.93	.92	97.072*
5.) Tabacco	1970-2010	42.003 (1.332)	7.349 (5.306)*	.432	.41	28.158*
	1970-80	42.540 (8.492)*	11.031 (13.663)*	.959	.95	186.666*

	1980-90	252.427 (10.515)*	-16.708 (-4.319)*	.70	.66.	18.650*
	1990-2000	112.287 (3.289)*	11.206 (2.036)	.34	.25	4.147
	2000-2010	35.467 (.519)	59.433 (4.889)*	.77	.74	23.907*
6) Leather	1970-2010	-366.072 (-3.609)*	78.986 (17.868)*	.89	.89	319.274-
	1970-80	81.060 (.635)	42.731 (5.417)*	.78	.75	29.347*
	1980-90	156.920 (5.706)*	88.569 (5.706)*	.80	.77	32.559*
	1990-2000	1284.749 (14.152)*	42.244 (2.887)*	.51	.44	8.337*
	2000-2010	1387.575 (9.531)*	234.932 (9.081)*	.92	.91	82.465*
7) Iron and Steel	1970-2010	-1068.304 (-2.939)*	102.180 (6.451)*	.52	.51	41.612*
	1970-80	35.920 (.465)	24.847 (1.996)	.33	.29	3.982
	1980-90	71.700 (4.189)*	-2.078 (-.753)	.06	-.05	.568
	1990-2000	125.687 (1.388)	76.617 (5.250)*	.77	.74	27.561*
	2000-2010	-28.597 (-.092)	677.655 (12.257)*	.95	.94	150.245*
8) Petroleum	1970-2010	-4375.447 (-2.376)	359.764 (4.483)*	.35	.33	20.100*
	1970-80	11.800 (6.945)*	1.031 (3.765)*	.63	.59	14.175*
	1980-90	31.080 (.494)	45.302 (4.463)*	.71	.67	19.921*
	1990-2000	596.473 (7.784)*	-42.179 (-3.415)*	..59	.54	11.665*

	2000-2010	-6992.911 (-2.347)*	3695.280 (6.979)*	.87	.85	48.708*
9) Iron and Ore	1970-2010	-637.009 (-1.833)	77.175 (5.096)*	.41	.39	25.969*
	1970-80	97.453 (6.841)*	22.983 (10.010)*	.92	.91	100.201*
	1980-90	347.940 (14.672)*	14.824 (3.879)*	.65	.60	15.043*
	1990-2000	569.427 (10.909)*	-21.243 (-2.525)*	.44	.37	6.377*
	2000-2010	-831.058 (-1.654)	706.072 (7.908)*	.89	.88	62.530*
10) Mica	1970-2010	22.062 (11.178)*	-.230 (-2.675)*	.16	.13	7.153*
	1970-80	18.393 (9.188)*	.467 (1.446)	.20	.10	2.092
	1980-90	27.333 (10.230)*	-1.052 (-2.442)*	.42	.35	5.96.*
	1990-2000	13.940 (5.866)*	-.644 (-1.680)	.26	.16	2.824
	2000-2010	6.586 (2.053)	2.058 (3.610)*	.65	.60	13.033
11) Chemicals	1970-2010	-4405.317 (-3.756)*	426.475 (8.351)*	.65	.64	69.744*
	1970-80	2.093 (.123)	21.138 (7.690)*	.88	.86	59.133*
	1980-90	-15.180 (-.081)	110.731 (3.673)*	.62	.58	13.49*
	1990-2000	812.293 (.676)	515.014 (2.659)*	.46	.40	7.071*
	2000-2010	1551.308 (1.847)	2295.792 (15.380)*	.97	.96	236.549*

t* -Significant at 5% level of significance.

F* - Significant at 5% level of significance.

Table 2.3 we have - estimated composition of export in this study for period 1970-71 to 2009-2010. The growth of India's export goods results are explain by linear regression equation $Y = b_0 + b_1 t$

1)Tea

The growth rates of India's export of Tea have shown a positive trend for the whole period 1970-71 to 2009-2010. Specifically for the first sub-period 1970-1980. T-statistics and F-value is found to be statistically significant at 5% level of significance . In second and third sub time period 1980-90 and 1990-2000 export of tea are decline and it has not statistically significant. Mainly tea export has been decline due to the high international

competition. But last sub-period 2000-2010 the growth rate of exports of tea have shown a improvement and it is statistically significant at 5% level.

2) Coffee:

The growth rate of coffee have shown a positive trend for the whole period 1970-2010. In the first sub period 1970-80 t- statistics and f-value is found to be statistically significant at 5% level of significance. But second sub period 1980-90 have shown negative trend and not statistically significant at 5% level due to increased the international completion. But in third and forth sub-period 1990-2000 and 2000-2010 have shown with positive trend due to liberal policies of government and t and f test are statistically significant at 5% level

3) Spices:-

The growth rate of spices have shown positive trend in whole time period 1970-2010 and statistically significant at 5% level. and all sub period of 1970-80, 1980-90, 1990-2000,2000-2010 have shown positive and rising trend, t-statistic and f-value is found to be statistically significant at 5% due to the diversification of market and liberal polices of the government.

4) Fruits and vegetable:-

The growth rate of export of fruits and vegetable have shown positive trend in whole time period 1970-2010. The first sub period 1970-80 have significant at 5% level of significance in t-test and f- test. But second sub-period 1980-80 it has take negative trend due to less floricultural products. But in last sub period 2000-2010 have been shown with positive trend and high R^2 and R^2 . T and F statistics are statistically significant at 5% level. Due to more productions of fruits it has take rising trend.

5) Tobacco:-

The growth rate of export of Tobacco in 1970-2010 in whole time period have shown a positive trend. In first, and forth sub period 1970-80, 2000-2010 take a positive trend but sub period 1980-1990 take a negative trend but these sub period statistically significant at 5% level. The low growth rate of Tobacco in sub period 1990-2000 is due to Anti-Smoking drive, government restriction and increased completion.

6) Leather:-

The growth rate of leather in whole time period 1970-2010 have shown positive trend and statistically significant at 5% level ,the all sub- period 1970-80, 1980-90, 1990-2000, 2000-2010 have shown positive trend and t-statistical and F- value are significant at 5% level . The reason of increasing trend of leather has rising the demand of this product.

7) Iron and steel:-

The growth rate of Iron and Steel have been show with positive and increasing trend in whole time period 1970-2010 but first sub period 1970-80 not statistically significant and second sub period 1980-90 have been shown a negative trend and not

statistically significant due to negative growth rate of quantum index despite higher export unit value index.

8) Petroleum

The growth rate of petroleum have shown positive and increasing trend in whole period 1970-2010, and sub-period- 1970-80, 1980-90, 2000-2010. t- Statistic and F- value is statistically significant at 5% level of significance. In 2000-2010 the growth rate of export of petroleum are increased due to a rise in petroleum price and increasing in India's refining capacity. But sub- period 1990-2000 has take a negative trend and it has also statistically significance.

9) Iron and ore

The growth rate of Iron and ore have been shown a positive trend in whole period 1970-2010, specifically for the sub period 1970-80, 1980-90, 2000-2010 also have show a positive trend and t- statistics and F- value is statistically significant at 5% level. But in sub period 1990-2000 have shown negative trend.

10) MICA:-

The growth rate of MICA have shown negative trend in whole period 1970-2010 But sub period 1970-80 take a positive trend but it has not statistically significant . The seconds and third sub period have shown negative trend and 1980-90 is statistically significant. Decline growth rate shown by international competition. In last sub period 2000-2010 have shown positive trend t statistic and F- value also significant at 5% level.

11) Chemicals:-

The growth rate of Chemicals have shown positive trend in whole time period 1970-2010 and all sub- period 1970-80, 1980-90, 1990-2000, 2000to2010, t and F-value are statistically significant at 5% level. The main reason of increasing trend due to increasing reliance of industrialized countries on developing countries.

3.2 Composition of Import

Composition of Imports means goods that we are buying from other countries. At the time of independence, Our country was primarily an agricultural economy. Industry was not

so much developed. For economic development required setting up of new industries and also Modernization of agriculture and Industry. After Modernization capital goods like machinery, transport equipment, and raw materials, chemicals and fertilizers, petroleum products etc. are imported.

Composition of India's imports.

As per the latest classification of RBI, the joining the main category of imports

1) Food and allied products:-

This commodity includes cereals pulses, cashew nuts, edible oils etc.

2) Fuel:-

Coal and POL (Petroleum, Oil and Lubricant) are the important sources of energy. After independence with the growth of industry and trade, the requirement of POL has increased very fast. Our domestic production is not sufficient. Now India's imports petroleum goods in such large quantities that their share accounts for over one-fifth of our total imports.

3) Fertilizers:-

Fertilizers are very important input of agriculture. Our domestic production of Fertilizers falls short of our requirements.

4) Paper boards manufactures and News prints:-

This commodity group accounted for 1.3% in our total imports.

5) Capital goods:-

Capital goods include machinery transport equipment, electronic goods etc. with the growing requirement of India's rapidly developing economy, import of capital goods continue to have a very high share of our total imports.

6) Other Bulk items:-

This commodity group includes item like chemicals, Pearls, precious stone iron, steel and non. Porous metals etc.

7) Unclassified items:-

Many other items of imports which have not been covered in above categories

constitute unclassified items.

TABLE- 2.4
RESULTS OF LINEAR REGRESSION EQUATION
 $x = (b_0 + b_1t)$
SHOWING COMPOSITION OF INDIA'S IMPORTS

Commodities	Time period	B0	b1	R ²	R ²	F value
1) Petroleum, Crude and Products	1970-2010	-13149.8 (-2.615*)	1285.287 (5.865*)	.48	.46	34.397*
	1970-1980	-318.273 (-1.555)	247.359 (7.499*)	.87	.86	56.239*
	1980-90	4105.907 (8.390)*	-138.150 (-1.752)	.27	.18	3.068
	1990-2000	4335.940 (3.737)*	554.742 (2.967)*	.52	.46	8.801*
	2000-2010	-9593.353 (-1.262)	10183.752 (7.539)*	.89	.87	56.830*
2.) Fertilizers	1970-2010	-765.805 (-1.201)	100.541 (3.618)*	.26	.24	13.093*
	1970-80	81.320 (.832)	40.436 (2.568)*	.45	.38	6.594*
	1980-90	456.900 (2.213)*	27.467 (.825)	.07	-.03	.681
	1990-2000	892.407 (5.349)*	37.390 (1.391)	.19	.09	1.934
	2000-2010	-2848.164 (-1.380)	1202.028 (3.278)*	.606	.54	10.746*
3.) Paper, Paper Board, Manufactures	1970-2010	-176.317 (-2.293)*	27.184 (8.113)*	.64	.63	65.823*
	1970-80	-.867 (-.048)	14.479 (4.972)*	.75	.72	24.719*
	1980-90	210.340 (7.824)*	-2.389 (-.551)	.03	-.08	.30
	1990-2000	138.733 (2.504)*	38.118 (4.270)*	.69	.65	18.229*
	2000-2010	62.656 (.576)	167.107 (8.648)*	.91	.90	74.791*
4) Textile yarn, Fabrics, Madeup	1970-2010	-501.656 (-3.463)*	49.624 (7.861)*	.62	.61	61.789*
	1970-80	-6.820 (-.694)	5.331 (3.368)*	.58	.53	11.341*
	1980-90	73.433 (4.655)*	10.581 (4.162)*	.68	.64	17.322*
	1990-2000	101.747 (2.802)*	39.892 (6.818)*	.85	.83	46.480*
	2000-2010	247.003 (3.346)*	270.362 (20.608)*	.98	.98	424.706*
5.) Electrical Machinery	1970-2010	-104.00	41.013	.39	.38	24.324*

except electronic		(-.545)	(4.932)*			
	1970-80	77.220 (1.811)	22.347 (3.253)*	.56	.51	10.579*
	1980-90	234.08 (5.360)*	88.062 (12.512)*	.95	.94	156.551*
	1990-2000	741.113 (5.153)*	-47.301 (-2.041)	.34	.26	4.165*
	2000-2010	-385.103 (-1.263)	386.778 (7.137)*	.87	.86	50.932*
6) Manufactures of Metals	1970-2010	-404.61 (-2.401)	40.644 (5.535)*	.45	.43	30.631*
	1970-80	.540 (.071)	6.873 (5.645)*	.79	.77	31.861*
	1980-90	128.353 (10.42)*	1.814 (.914)	.09	-.01	.836
	1990-2000	78.08 (3.94)*	31.88 (9.98)*	.92	.91	99.757*
	2000-2010	-455.60 (-1.48)	349.370 (6.424)*	.85	.83	41.268*
7) Metalliferous ores, metal scrap	1970-2010	-1322.876 (-2.49)*	124.299 (5.37)*	.43	.42	28.841*
	1970-80	-18.84 (-1.39)	10.113 (4.636)*	.72	.69	21.488*
	1980-90	53.113 (1.087)	46.214 (5.870)*	.81	.78	34.461*
	1990-2000	598.88 (6.11)*	21.315 (1.349)	.18	.08	1.821
	2000-2010	-1639.14 (-1.619)	1100.26 (6.114)*	.84	.82	37.37*
8) Cereals and Cereals preparation	1970-2010	543.178 (5.845)*	-14.66 (-3.62)*	.26	.24	13.119*
	1970-80	502.380 (1.38)	.000 .000	.00	.00	0.00
	1980-90	350.90 (2.07)	-11.74 (-.430)	.02	-.10	.185
	1990-2000	74.87 (.979)	15.290 (1.240)	.16	.05	1.538
	2000-2010	11.09 (3.50)*	3.732 (6.62)*	.86	.84	43.915*
9) Crude rubber, Including synthetic and reclaimed	1970-2010	-111.42 (-2.60)*	13.56 (7.28)*	.58	.57	53.127*
	1970-80	-11.220 (-1.182)	4.967 (3.24)*	.56	.51	10.538*
	1980-90	50.08 (5.913)*	5.93 (4.344)*	.70	.66	18.868*
	1990-2000	92.18 (3.70)*	7.938 (1.979)	.32	.24	3.917
	2000-2010	-42.742 (-.800)	94.995 (10.004)*	.93	.92	100.086*
10) Medicinal and pharmaceutical products	1970-2010	-245.159 (-2.771)*	29.847 (7.743)*	.61	.60	59.951*
	1970-80	12.040	7.362	.79	.76	30.121*

		(1.447)	(5.488)*			
	1980-90	73.727 (4.033)*	11.964 (4.061)*	.67	.63	16.492*
	1990-2000	221.553 (8.473)*	17.608 (4.178)*	.68	.64	17.459*
	2000-2010	-5.750 (-.050)	192.597 (9.449)*	.92	.91	89.279*
11) Transport equipment	1970-2010	-1757.807 (-2.390)*	175.397 (5.474)*	.44	.43	29.963*
	1970-80	21.440 (.696)	33.275 (6.698)*	.849	.83	44.865*
	1980-90	401.060 (3.664)*	25.805 (1.463)	.21	.11	2.139
	1990-2000	691.480 (3.086)*	51.058 (1.414)	.20	.10	1.999
	2000-2010	-2002.672 (-1.965)	1535.157 (8.476)*	.91	.89	71.844*

t* -Significant at 5% level of significance.

F* - Significant at 5% level of significance.

Table 2.4 Indicates the growth of India's imports results of linear regression equation ($x = b_0 + b_1t$) showing the growth rate of India's imports commodity wise.

1) Products of petroleum and crude:-

This table 2.4 revealed that the growth rate of petroleum and crude of product have shown a positive trend for the whole period 1970-2010 and t- statistic and F-value is statistically significant. But Sub-period of 1970-80, 1990-2000, 2000-2010 is take positive trend and t- statistic and F-value is take significant value of 5% level. But in 1980-90 is not statistically significant. The Import of petroleum products has rise due to it has used not only as fuel but also as an industrial raw material . The second reason is rapid rise in price in international market.

2) Fertilizers:-

The growth rate of Fertilizers during the whole period 1970-2010; and all sub period has shown a positive trend. But 1970-2010, 1970-80, 2000-2010 are statistically significant at 5% level. But 1980-90, 1990-2000 is not statistically significant. In 2000-2010 sub period take a rising trend due to rising demand of this product.

3) Paper, Paper boards and Manufactures.

The growth rate of Paper, paper boards and manufactures have take positive trend and statistically significant at 5% level of significance in whole and sub period 1970-2010,

1970-80, 1990-2000, 2000-2010 is take positive trend and statistically significant at 5% level of significance. But 1980-90 take negative trend and it is not statistically significant.

4) Textile yarn, Fabrics, Made up:-

The growth rate of textile yarn, Fabrics, made up is shown have whole time period 1970-2010 and sub period 1970-80, 1980-90, 1990-2000, 2000-2010 is take positive trend and statistically significant at 5% level of significance. R^2 , R^2 is take high value.

5) Electrical Machinery except electronic

The growth rate of electrical machinery except electronic shown positive trend and statistically significant in whole time period and sub-period 1970-2010, 1970-1980, 1980-1990 and 2000-2010; but 1990-2000 is take negative trend and not statistically significant at 5% level of significance.

6) Manufactures of metals.

The growth rate of manufactures of metals Shown positive trend 1970-2010 in whole time period and sub period is 1970-80, 1990-2000, and 2000-2010 is also statistical significant but in 1980-1990 is not statistically significant at 5% level of t- statistic and F value. It has due to rising demand in the export- oriented industrial and domestic.

7) Metallic ferrous ores, metal scrap:

The growth rate of metallic ferrous ores, Metal, scrap has shown positive trend in all whole time period and sub timeperiod. But in whole time period 1970-2010 and sub period 1970-1980, 1980-1990, 2000-2010 has also statistically significant at 5% level of t – statistic and F-value . But in 1990-2000 that time period is not statistically significant at 5% level.

8) Cereals and cereal preparation:-

The growth rate of cereals and cereal preparation show that two time period 1970-2010, 2000-2010 has statistically significant. But other sub-period 1970-1980, 1980-1990, 1990-2000 is not statistically significant at 5% level. R^2 , R^2 is take a very low value during the whole period 1970-2010 take Negative trend due to the success of green

revolution.

9) Crude rubber, including synthetic and reclaimed:

The growth rate of crude rubber, including synthetic and reclaimed has shown decline trend in whole time period that 1970-2010, but in sub-time period 1970-80, 1980-1990, 2000-2010 is statistically significant at 5% level of significant. R^2 is very high but 1990-2000 is not significant at 5% level of significance.

10) Medicinal and Pharmaceutical products.

The growth rate of medicines and pharmaceutical products has shown that the increasing trend in whole time period 1970-2010 and sub time period 1970-80, 1980-90, 1990-2000, 2000-2010, it has statistically significant at 5% level of significance of t- statistic and F- value. The R^2 is very high due to increasing reliance of industrialized countries.

11) Transport equipment:-

The growth rate of Transport equipment has shown positive trend or increasing trend in the whole period and sub period is taking. But the time period 1970-2010, 1970-80, 2000-2010 is statistically significant at 5% level of significance but in sub-period 1980-90, 1990-2000 is not statistically significant. Due to rising demand in the export oriented industrial and domestic.

**SECTION- IV
CONCLUSIONS & POLICY IMPLICATIONS.**

This section has been Explained the main conclusions and the policy implications emerging from the study.

India's share in world's exports has shown a rising trend. Its share was only 0.5% in 1991. During the period from 1991 to 1997 its share was continuously rose from 0.50% to 0.62% and period of 2009- 2010 it is rise 1.25 %. This rise in India's exports share in world's exports implies the gain in competitiveness. Similarly, India's share in world imports has also shown a rising trend 1990-2010. It was 1.82% in 1960-61. But in 1969-70 It was 0.8%; it has shown the decreasing trend. In the time period 1960-70, 1970-1980, 1980-90 and whole time period 1960-2010 show that decreasing trend. But in 1990-2000, 2000-2010 show

that rising trend. The imports share in world imports in 2000-2001 is 0.7% and 2009-2010 the relative share is 1.9% show the increasing trend.

The composition of India's exports has grown up significantly the exports of Tea, coffee, spices, tobacco, Leather, Iron and ore, petroleum and chemical have shown a considerable increasing trend. The composition of India's imports has grown up significantly. It also shown a positive and increasing trend during the period under study. The share of imports of petroleum and crude products, fertilizers paper, boards and manufactures, Textile yarn, made up electronic manufactures of metals, crude upper, medicinal and pharmaceutical products, Transport equipment has increased significantly. The imports of food grains and consumer goods have decline due to adoption HYM technology in Indian agriculture.

Policy implication

The study also indicates that post liberalization era has certainly helped India in achieving high growth in the economy. Rapid growth of imports of capital goods, technical raw materials to meet the requirement of industrialization. Growing imports of petroleum products for meeting industrial and consumption requirement. For the exports some commodities have good exports potential (handicrafts, engineering product, readymade)and other items of exports (Sugar, Jute, Iron, and Steel) Fluctuated considerably. Major portion Indian imports consists of fuels, capital goods chemicals etc. Major portion of Indian exports in manufactured goods.

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ANNEXURE-1
RELATIVE SHARE OF INDIA'S EXPORTS IN WORLD
EXPORTS (1960-2010) (Billion US\$)

Year	World's Exports	India's Exports	India's % Share In world's Exports
1960-61	118.8	1.33	1.11
1961-62	123.5	1.38	1.11
1962-63	128.9	1.4	1.08
1963-64	141.4	1.62	1.14
1964-65	157.9	1.7	1.07
1965-66	172.8	1.68	0.97
1966-67	189.5	1.95	1.02
1967-68	198.5	1.61	0.81
1968-69	221	1.76	0.79
1969-70	253	1.83	0.72
1970-71	289.7	2.02	0.69
1971-72	326.3	2.03	0.62
1972-73	388.9	2.44	0.62
1973-74	540.1	2.91	0.53
1974-75	805	3.92	0.48
1975-76	829.5	4.35	0.52
1976-77	942.5	5.54	0.58
1977-78	1068.3	6.37	0.59
1978-79	1235.5	6.67	0.53
1979-80	1576.7	7.8	0.49
1980-1981	1897.6	8.58	0.45
1981-82	1865.1	8.29	0.44
1982-83	1733.5	9.35	0.53
1983-84	1681.9	9.14	0.54
1984-85	1783.5	9.91	0.55
1985-86	1808.1	9.21	0.5
1986-87	1990.6	9.49	0.47
1987-88	2342.1	11.37	0.48
1988-89	2694.1	13.31	0.49
1989-90	3037.5	19.5	0.65
1990-91	3434.7	21.3	0.52
1991-92	3478.1	17.6	0.5
1992-93	3728.5	19.6	0.52
1993-94	3724.1	21.5	0.57
1994-95	4236.8	25	0.59

1995-96	5089.5	30.6	0.6
1996-97	5327.5	33.1	0.62
1997-98	5505.7	35	0.63
1998-99	5426	33.4	0.61
1999-2000	5657.9	35.6	0.62
2000-2001	6373.1	42.3	0.66
2001-2002	6124.2	43.4	0.7
2002-2003	6435.5	50.4	0.78
2003-2004	7474.6	59	0.78
2004-2005	9086.5	75.6	0.83
2005-2006	10240.2	59.2	0.57
2006-2007	11523.4	124	1.07
2007-2008	13774.2	150	1.08
2008-2009	15987.6	194.5	1.21
2009-2010	12562.8	157.2	1.25

Source: Yearbook of International financial statistics, (Various issues) Published by International monetary fund (IMF) Washington D.C. U.S.A.

ANNEXURE-2
RELATIVE SHARE OF INDIA'S IMPORTS IN WORLD'S IMPORTS: (1960-2010)
(BILLION US\$)

Year	World's Imports	India's imports	India's % share in world's Imports.
1960-61	125.8	2.3	1.83
1961-62	130.5	2.28	1.75
1962-63	137.3	2.36	1.72
1963-64	149.3	2.47	1.65
1964-65	166.8	2.87	1.72
1965-66	181.6	2.83	1.56
1966-67	199.6	3.44	1.72
1967-68	209.1	2.77	1.32
1968-69	232.1	2.57	1.11
1969-70	264.2	2.21	0.84
1970-71	303.7	2.12	0.70
1971-72	338.7	2.42	0.71
1972-73	397.1	2.22	0.56
1973-74	547.6	3.21	0.59
1974-75	805.7	5.13	0.64
1975-76	836.6	6.38	0.76
1976-77	946.8	5.66	0.60
1977-78	1083.8	6.64	0.61
1978-79	1259.3	7.86	0.62
1979-80	1582.1	9.82	0.62
1980-1981	1945.1	14.86	0.76
1981-82	1930	15.41	0.80
1982-83	1803.4	14.78	0.82
1983-84	1748.3	14.06	0.80
1984-85	1862.8	14.36	0.77
1985-86	1878.3	16.07	0.86
1986-87	2056.1	15.4	0.75
1987-88	2408	16.72	0.69
1988-89	2787.3	19.16	0.69
1989-90	3154.3	20.53	0.65
1990-91	3563.3	23.29	0.65
1991-92	3540.4	20.4	0.58
1992-93	3763.5	23.5	0.62
1993-94	3973.6	22.7	0.57
1994-95	4430.3	26.8	0.60

1995-96	5267.4	34.5	0.65
1996-97	5532.1	37.3	0.67
1997-98	5654.6	41.4	0.73
1998-99	5586.7	43	0.77
1999-2000	5810.8	47	0.81
2000-2001	6584.2	51.5	0.78
2001-2002	6340.9	50.4	0.79
2002-2003	6577.2	56.5	0.86
2003-2004	7654.6	71.2	0.93
2004-2005	9365.9	99.8	1.07
2005-2006	10638.9	142.8	1.34
2006-2007	122081	172.8	0.14
2007-2008	14057.5	216.3	1.54
2008-2009	16211.1	291.7	1.80
2009-2010	12384.9	245.6	1.98

SOURCE: Yearbook of International financial Statistics, (Various issues) Published by International monetary fund (IMF) Washington D.C. USA.