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IMPACT OF POST REFORM ON TRADE PERFORMANCE IN INDIA

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Abstract:

Foreign Trade is the engine of economic development of any country. It is exchange of capital, goods, and services across international borders or territories. In most countries, it represents a significant share of gross domestic product (GDP). While international trade has been present throughout much of history, its economic, social, and political importance has been on the rise in recent centuries. The main objective of the present study (i) To analyze the impact of post reform on Trade performance in India during 1991-92 to 2018-19. (ii) To study the trends and growth performance of export and import in India. (iii) To understand the changes in the export and import in India. The present study is based upon the time series secondary data collected from various published sources of Government Agencies. Secondary data and information have been collected from various sources like Handbook of Statistics on Indian economy, Reserve Bank of India (RBI), Govt. of India. The analysis was done by the use of SPSS and Excel. The data were analyzed using descriptive statistics such as tables. Similarly, an attempt is made in this part to present collected data through line graph, bar diagram. Linear Model has been applied to analyze the trends and growth rate of export and import in India. Semi Log Model and Compound Growth Rate has been applied to understand the changes in the export and import in India. The analysis is based on the 28 years starting from 1991-92 to 2018-19.

Keywords: Foreign Trade, export and import, Linear Model, Semi Log Model.

INTRODUCTION:

Foreign Trade is a vital sector of a country's national economy, and contributes substantially to the economic welfare of the people and the development of resources. Economies of scale and international specialization as also the fruits of scientific and technological progress in the world become more easily accessible through the foreign trade (Agarwal 1975). In the context of planned economic development of developing nations, an appropriate trade policy has become very necessary and significant. Today no country in the world is self-sufficient in the sense that it does not possess facilities for economical production of all the goods and services that are consumed by its people.

Probably no country can produce all the goods that it needs. Therefore, there is need to trade with others (Morton & Tulloch 1978). Developing countries need more goods to feed a rapidly growing population. Exports can be a leading sector in growth (Kindleberger Charles 1976). This means that increased earnings from higher marketability of a country's commodities in the international market would stimulate the indigenous industrial activity in the country. This in turn brings many distinct benefits, viz., greater utilization of resources, larger employment opportunities, more foreign exchange, etc. Scholars stated that trade would make the country as a whole better off (Bo Soder 1974). Foreign trade would make an impressive contribution to a country's development. It is considered to be not simply a device for achieving productive efficiency; but it is also an engine of growth (Meier, Gerald 1980). When trade is introduced into a primitive economy, it acts as a dynamic force widening the extent of the market and the scope for "division of labour (Robert Heller 1973). Foreign trade also facilitates the dissemination of technical knowledge, transmission of ideas, and import of know-how/skills, managerial talents, and entrepreneurship. In addition, foreign trade encourages movement of foreign capital. In totality, foreign trade can have a profound impact on the growth of an economy in terms of production, employment, technology, resource utilization, and so on. It is generally agreed that a country's economic position depends in some measure upon the character of its economic dealings with other countries (Lorie Tarshis 1975). This paper has discussed impact of post reform on Trade performance in India during 1991-92 to 2018-19.

STATEMENT OF THE PROBLEM:

The main aim of this study is to measure the post reform trade performance in India. India adopted the new economic reforms in 1991 and opened up its economy to face the balance of payments crisis and also to attain rapid economic development. Reform since 1991 has not been comprehensive enough to remove the bias towards capital and skill- intensive industries. Also input markets such as land and labour are riddled with distortions. Reforms were expected to improve governance at various levels. However, there are new problems in governance and persistence of old problems including corruption there the present study seeks to analyze the impact if India's International trade after the liberalization period.

OBJECTIVES OF THE STUDY:

The main objective of the present study

- To analyze the impact of post reform on Trade performance in India during 1991-92 to 2018-19.
- To study the trends and growth performance of export and import in India.
- To understand the changes in the export and import an India.

RESEARCH METHODOLOGY:

The present study is based upon the time series secondary data collected from various published sources of Government Agencies. Secondary data and information have been collected from various sources like Handbook of Statistics on Indian economy, Reserve Bank of India (RBI), Govt. of India.

TOOLS OF THE STUDY:

The analysis was done by the use of SPSS and Excel. The data were analyzed using descriptive statistics such as tables. Similarly, an attempt is made in this part to present collected data through line graph, bar diagram. Linear Model has been applied to analyze the trends and growth rate of export and import in India. Semi Log Model and Compound Growth Rate has been applied understand the changes in the export and import an India. The analysis is based on the 28 years starting from 1991-92 to 2018-19.

LINEAR MODEL:

Further the researcher has used percentage and the simple linear growth rate model. The linear growth rate model

$$Y = a + b_t$$

Where, Y - Dependent variable, T – Time, 'a' and 'b' are the parameters. The linear growth rate is obtained from the 'b' value.

SEMI LOG MODEL AND COMPOUND GROWTH RATE:

Further the researcher has used the Semi log model, in order to compute the Instantaneous Growth Rate and the Compounded Annual Growth Rate (CAGR) the Semi-log is used and was computed using the following models.

If Y_t = Variable at time t and Y_0 = initial year value of the variable, simple compounding is explained as

$$\log Y = a + b_t$$

$$CGR = (\text{Anti log } b - 1) 100$$

IMPACT OF POST REFORM ON TRADE PERFORMANCE IN INDIA:

Trade post reform measures has introduced in India 1991 as part of the globalization subtlety, so as to advance the performance and also to integrate the exterior sector of the country with the world. The present study to analyze the impact of post reform on trade performance in India during 1991-92 to 2018-19. The Table No.1.1 shows the India's foreign trade.

TABLE NO. 1.1. INDIA'S FOREIGN TRADE FROM 1991-92 TO 2018-19 (US\$ Million)

Year	India's Exports	India's Imports	Trade balance
1991-92	17865	19411	-1546
1992-93	18537	21882	-3345
1993-94	22238	23306	-1068
1994-95	26330	28654	-2324
1995-96	31794	36675	-4881
1996-97	33469	39132	-5663
1997-98	35006	41485	-6479
1998-99	33218	42389	-9171
1999-00	36822	49671	-12849
2000-01	44560	50537	-5977
2001-02	43826	51413	-7587
2002-03	52719	61412	-8693
2003-04	63842	78149	-14307
2004-05	83535	111517	-27982
2005-06	103090	149166	-46076
2006-07	126414	185735	-59321
2007-08	162904	251439	-88535
2008-09	185295	303696	-118401
2009-10	178751	288373	-109622
2010-11	251136	369769	-118633
2011-12	305963	489320	-183357
2012-13	300400	490737	-190337
2013-14	314415	450214	-135799
2014-15	310352	448033	-137681
2015-16	262291	381008	-118717
2016-17	275852	384357	-108505
2017-18	303526	465581	-162055
2018-19	330078	514078	-184000

Source: Hand Book of statistics on Indian Economy (Reserve Bank of India).

Table No.1.1 shows India's total exports, total imports and trade balance of trade since liberalization. The total exports of India show increasing trend it was highest during the year 2013-14, in that year during the year US \$3,14,415 million dollar in the year worth of commodities was exported to the other countries. The total import of India also shows increasing trend, it was highest during 2019-18 in that year US\$3,03,526 million-dollar worth commodities was import from other countries. The trade balance of India was US\$1,546 million dollar in the year 1991-92 it increased up to US \$1, 84,000 million dollars in the year 2018-19. The analysis reveals that the balance of trade is unfavorable for India during the study period.

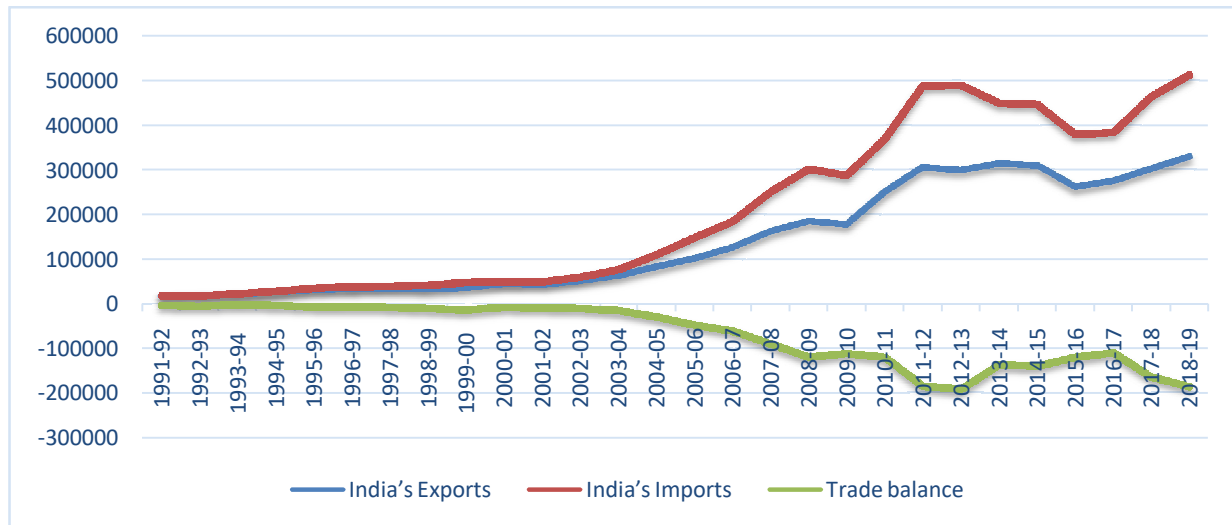
FIGURE NO.1.1, INDIA'S FOREIGN TRADE

Figure No.1.1 shows that the India's total exports and total imports over the period 1991-92 to 2018-19 is showing significantly a rising trend.

TABLE NO.1.2.**GROWTH RATE OF INDIA'S EXPORT FROM 1991-92 TO 2018-19 (US\$ Million)**

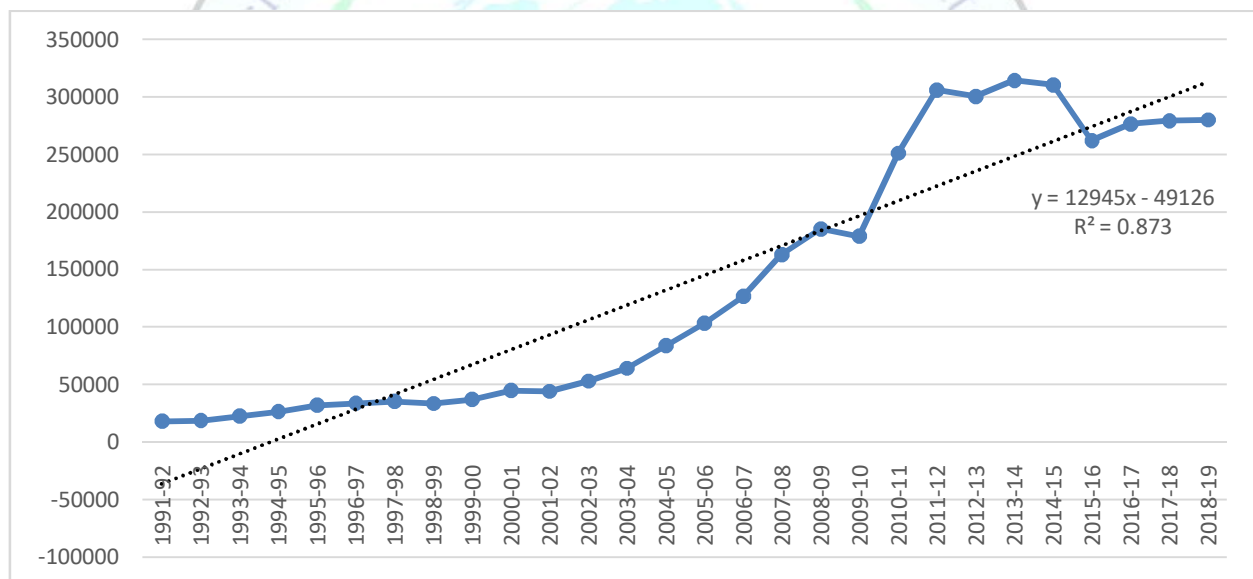
Year	India's Exports	Increase\Decrease	AAGR (%)	Trend
1991-92	17865	-104	-0.6	-27852
1992-93	18537	672	3.8	-15369
1993-94	22238	3701	20	-2887
1994-95	26330	4092	18.4	9596
1995-96	31794	5464	20.8	22078
1996-97	33469	1675	5.3	34561
1997-98	35006	1537	4.6	47043
1998-99	33218	-1788	-5.1	59526
1999-00	36822	3604	10.8	72009
2000-01	44560	7738	21	84491
2001-02	43826	-734	-1.6	96974
2002-03	52719	8893	20.3	109456
2003-04	63842	11123	21.1	121939
2004-05	83535	19693	30.8	134421
2005-06	103090	19555	23.4	146904
2006-07	126414	23324	22.6	159386
2007-08	162904	36490	28.9	171869
2008-09	185295	22391	13.7	184351
2009-10	178751	-6544	-3.5	196834
2010-11	251136	72385	40.5	209316
2011-12	305963	54827	21.8	221799
2012-13	300400	-5563	-1.8	234281

2013-14	314415	14015	4.7	246764
2014-15	310352	-4063	-1.3	259247
2015-16	262003	-48349	-15.6	271729
2016-17	276547	14544	5.6	284212
2017-18	279114	2567	0.9	296694
2018-19	280101	987	0.4	309177

Source: Hand Book of statistics on Indian Economy (Reserve Bank of India)

Table No.1.2 represents that the India's Exports which was the highest in 2013-14 and the lowest in 1991-92. India's Exports has gone up from US \$17,865 million dollar in the year 1991-92 to US \$2,80,101 million dollars in the year 2018-19. But it is growth rate in India's Exports increased from -0.6 per cent to 0.4 per cent during the corresponding year. The trend value increased from US \$-40,334 million dollar in the year 1991-92 to US\$3,09,177 million dollar in the year 2018-19.

FIGURE NO.3.2 INDIA'S EXPORT



The Figure No 1.2 shows that the trend of total export of India is for using linear regression model. The regression equations are fitted and it is $Y=12945x-49126$. The regression equation is plotted for the period from 1991-92 to 2018-19. It denotes that the total export increased at the rate of US\$12,945 million dollar per year from 1991-92 to 2018-19. As the R^2 value calculated is 0.873, the regression equation is reliable to the extent of 87 per cent. Thus, there has been a positive trend in total export during the study period.

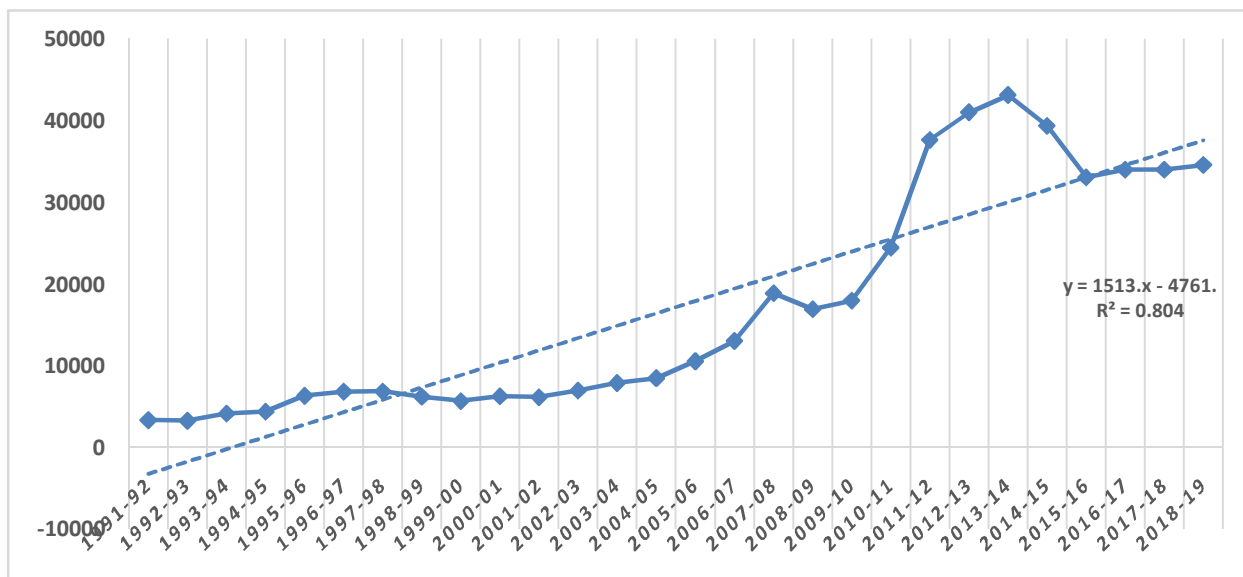
TABLE NO.1.3. TREND AND GROWTH RATE OF AGRICULTURAL AND ALLIED PRODUCTS EXPORT IN INDIA FROM 1991-92 TO 2018-19 (US\$ Million)

Year	Agricultural and allied Products	Increase\Decrease	AAGR (%)	Trend
1991-92	3338	-16	-0.5	-2240
1992-93	3265	-73	-2.2	-782
1993-94	4151	886	27.1	675
1994-95	4367	216	5.2	2133
1995-96	6320	1953	44.7	3591
1996-97	6828	508	8	5049
1997-98	6840	12	0.2	6506
1998-99	6205	-635	-9.3	7964
1999-00	5671	-534	-8.6	9422
2000-01	6256	585	10.3	10880
2001-02	6146	-110	-1.8	12337
2002-03	6962	816	13.3	13795
2003-04	7889	927	13.3	15253
2004-05	8475	586	7.4	16711
2005-06	10549	2074	24.5	18168
2006-07	13030	2481	23.5	19626
2007-08	18879	5849	44.9	21084
2008-09	16914	-1965	-10.4	22542
2009-10	17963	1049	6.2	23999
2010-11	24448	6485	36.1	25457
2011-12	37618	13170	53.9	26915
2012-13	41017	3399	9	28373
2013-14	43133	2116	5.2	29830
2014-15	39356	-3777	-8.8	31288
2015-16	33049	-6307	-16	32746
2016-17	33994	945	2.9	34204
2017-18	34001	7	0	35661
2018-19	34589	588	1.7	37119

Source: Hand Book of statistics on Indian Economy (Reserve Bank of India)

The Table No.1.3 gives an idea about that the India's Agricultural and Allied Products which was the highest in 2013-14 and the lowest in 1992-93. Agricultural and Allied Products has accelerated from US \$3,338 million dollar in the year 1991-92 to US \$34,589 million dollar in the year 2018-19. But it is growth rate in Agricultural and Allied Products increased from -0.5 per cent to 1.7 per cent during the corresponding year. The trend value increased from US \$-3,698 million dollar in the year 1991-92 to US \$37,119 million dollar in the year 2018-19.

FIGURE NO.1.3, AGRICULTURAL AND ALLIED PRODUCTS EXPORT IN INDIA



The Figure No 1.3 shows that the trend of Agricultural and Allied Products of India is for using linear regression model. The regression equations are fitted and it is $Y=1513.7x-47461.4$. The regression equation is plotted for the period from 1991-92 to 2018-19. It denotes that the Agricultural and Allied Products increased at the rate of US \$1513.7 million dollar per year from 1991-91 to 2018-19. As the R^2 value calculated is 0.804, the regression equation is reliable to the extent of 80 per cent. Thus, there has been a positive trend in Agricultural and Allied Products during the study period.

TABLE NO.1.4. TREND AND GROWTH RATE OF ORES AND MINERALS PRODUCTS EXPORT FROM 1991-92 to 2018-19(US\$ Million)

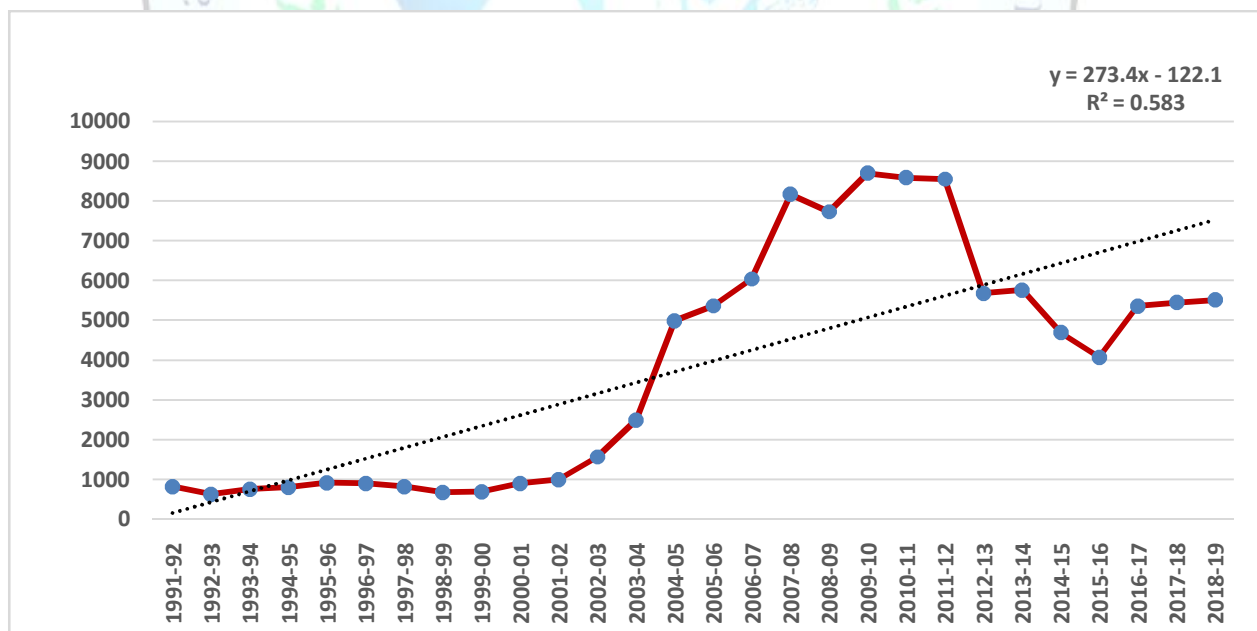
Year	Ores and minerals	Increase\Decrease	AAGR (%)	Trend
1991-92	823	-146	-15.1	287
1992-93	626	-197	-23.9	553
1993-94	756	130	20.8	819
1994-95	808	52	6.9	1084
1995-96	915	107	13.2	1350
1996-97	897	-18	-2	1616
1997-98	824	-73	-8.1	1882
1998-99	672	-152	-18.4	2148
1999-00	687	15	2.2	2414
2000-01	906	219	31.9	2680
2001-02	993	87	9.6	2946
2002-03	1568	575	57.9	3212
2003-04	2496	928	59.2	3478
2004-05	4990	2494	99.9	3744
2005-06	5361	371	7.4	4009

2006-07	6036	675	12.6	4275
2007-08	8169	2133	35.3	4541
2008-09	7726	-443	-5.4	4807
2009-10	8699	973	12.6	5073
2010-11	8581	-118	-1.4	5339
2011-12	8546	-35	-0.4	5605
2012-13	5678	-2868	-33.6	5871
2013-14	5762	84	1.5	6137
2014-15	4691	-1071	-18.6	6403
2015-16	4068	-623	-13.3	6669
2016-17	5360	1292	31.8	6934
2017-18	5445	85	1.6	7200
2018-19	5511	66	1.2	7466

Source: Hand Book of statistics on Indian Economy (Reserve Bank of India)

It is observed from the Table No.1.4 that the India's ores and minerals products export which was the highest in 2009-10 and the lowest in 1992-93. Ores and minerals products export has increased from US \$823 million dollar in the year 1991-92 to US \$5,511 million dollar in the year 2018-19. But its growth rate in ores and minerals products export accelerated from -15.1 per cent to 1.2 per cent during the corresponding year. The trend value increased from US\$287 million dollar in the year 1991-92 to US\$7466 million dollar in the year 2018-19.

FIGURE NO.3.4. ORES AND MINERALS PRODUCTS EXPORT IN INDIA



The Figure No 1.4 shows that the trend of ores and minerals products of India is for using linear regression model. The regression equations are fitted and it is $Y=273.43x-122.13$. The regression equation is plotted for the period from 1991-92 to 2018-19. It denotes that the ores and minerals products increased at the rate of US \$273.43 million dollar per year from 1991-92 to 2018-

19. As the R^2 value calculated is 0.583 the regression equation is reliable to the extent of 58 per cent. Thus, there has been a positive trend in ores and minerals products during the study period.

TABLE NO.1.5. GROWTH RATE OF MANUFACTURED GOODS EXPORT FROM 1991-92 TO 2018-19 (US\$ Million)

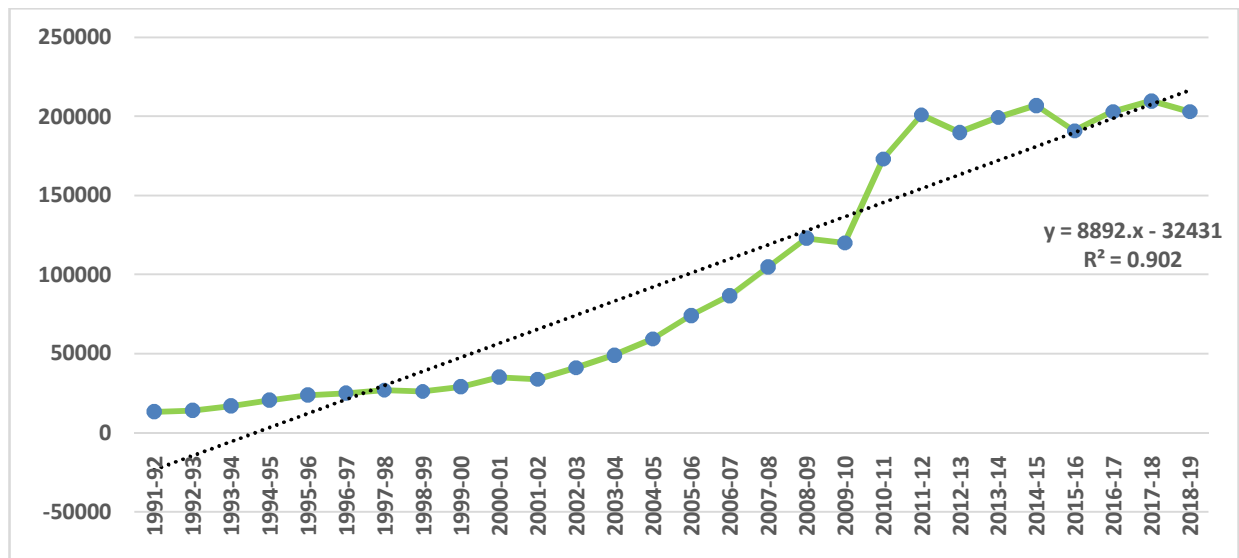
Year	Manufactured goods	Increase\Decrease	AAGR (%)	Trend
1991-92	13262	266	2	-17899
1992-93	14099	837	6.3	-9319
1993-94	16803	2704	19.2	-739
1994-95	20602	3799	22.6	7840
1995-96	23984	3382	16.4	16420
1996-97	24938	954	4	24999
1997-98	26860	1922	7.7	33579
1998-99	26096	-764	-2.8	42158
1999-00	29153	3057	11.7	50738
2000-01	35181	6028	20.7	59318
2001-02	33792	-1389	-3.9	67897
2002-03	41070	7278	21.5	76477
2003-04	49103	8033	19.6	85056
2004-05	59324	10221	20.8	93636
2005-06	74200	14876	25.1	102215
2006-07	86730	12530	16.9	110795
2007-08	104905	18175	21	119375
2008-09	123110	18205	17.4	127954
2009-10	120167	-2943	-2.4	136534
2010-11	173263	53096	44.2	145113
2011-12	201237	27974	16.1	153693
2012-13	190237	-11000	-5.5	162273
2013-14	199648	9411	4.9	170852
2014-15	207076	7428	3.7	179432
2015-16	191107	-15969	-7.7	188011
2016-17	203255	12148	6.4	196591
2017-18	210005	6750	3.3	205170
2018-19	203238	-6767	-3.2	213750

Source: Hand Book of statistics on Indian Economy (Reserve Bank of India)

Table No.1.5 shows that the India's manufactured goods export which was the highest in 2014-15 and the lowest in 1991-92. Manufactured goods export has gone up from US \$13,262 million dollar in the year 1991-92 to US \$2,03,238 million dollars in the year 2018-19. But it is growth rate in manufactured goods exports increased from -0.6 per cent to 0.4 per cent during the corresponding year. The trend value increased from US\$-17,899 million dollar in the year 1991-92

to US\$2,13,750 million dollar in the year 2018-19.

FIGURE NO.1.5, MANUFACTURED GOODS EXPORT IN INDIA



The Figure No 1.5 shows that the trend of manufactured goods exports of India is for using linear regression model. The regression equations are fitted and it is $Y=8892.9x-32431$. The regression equation is plotted for the period from 1991-92 to 2018-19. It denotes that the manufactured goods exports increased at the rate of US \$8892.9 million dollar per year from 1990-91 to 2018-19. As the R^2 value calculated is 0.902, the regression equation is reliable to the extent of 90 per cent. Thus, there has been a positive trend in manufactured goods exports during the study period.

TABLE NO.1.6. GROWTH RATE OF PETROLEUM PRODUCTS EXPORT FROM 1991-92 TO 2018-19(US\$ Million)

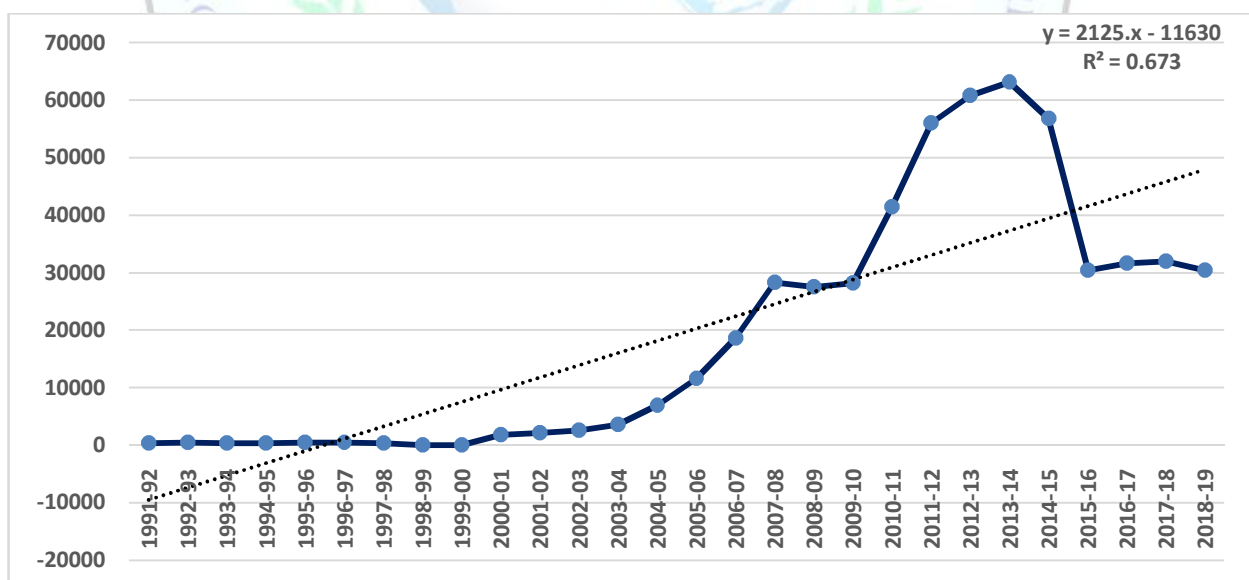
Year	Petroleum	Increase\Decrease	AAGR (%)	Trend
1991-92	415	-107	-20.5	-7995
1992-93	476	61	14.7	-5953
1993-94	398	-78	-16.4	-3911
1994-95	417	19	4.8	-1869
1995-96	454	37	8.9	173
1996-97	482	28	6.2	2215
1997-98	353	-129	-26.8	4257
1998-99	89	-264	-74.8	6299
1999-00	39	-50	-56.2	8341
2000-01	1870	1831	4.9	10383
2001-02	2119	249	13.3	12425
2002-03	2577	458	21.6	14467
2003-04	3568	991	38.5	16509
2004-05	6989	3421	95.9	18551
2005-06	11640	4651	66.5	20593

2006-07	18635	6995	60.1	22635
2007-08	28363	9728	52.2	24677
2008-09	27547	-816	-2.9	26719
2009-10	28192	645	2.3	28761
2010-11	41480	13288	47.1	30804
2011-12	56039	14559	35.1	32846
2012-13	60865	4826	8.6	34888
2013-14	63179	2314	3.8	36930
2014-15	56794	-6385	-10.1	38972
2015-16	30423	-26371	-46.4	41014
2016-17	31622	1199	3.9	43056
2017-18	31988	366	1.2	45098
2018-19	30450	-1538	-4.8	47140

Source: Hand Book of statistics on Indian Economy (Reserve Bank of India)

From the above Table No.1.6 it could be known that the India's petroleum products export which was the highest in 2012-13 and the lowest in 1999-00. Petroleum products export has gone up from US \$ 415 million dollar in the year 1991-92 to US \$30,450 million dollar in the year 2018-19. But its growth rate in petroleum products exports increased from -20.5 per cent to -4.8 per cent during the corresponding year. The trend value increased from US \$-40,334 million dollar in the year in 1991-92 to US \$3,09,177 million dollars in the year 2018-19.

FIGURE NO.1.6 PETROLEUM EXPORT IN INDIA



The Figure No 1.6 shows that the trend of petroleum products exports of India is for using linear regression model. The regression equations are fitted and it is $Y=2125.9x-11630$. The regression equation is plotted for the period from 1991-92 to 2018-19. It denotes that the petroleum products exports increased at the rate of US \$2125.9 million dollar per year from 1991-92 to 2018-

19. As the R^2 value calculated is 0.673 the regression equation is reliable to the extent of 67 per cent. Thus, there has been a positive trend in petroleum products exports during the study period.

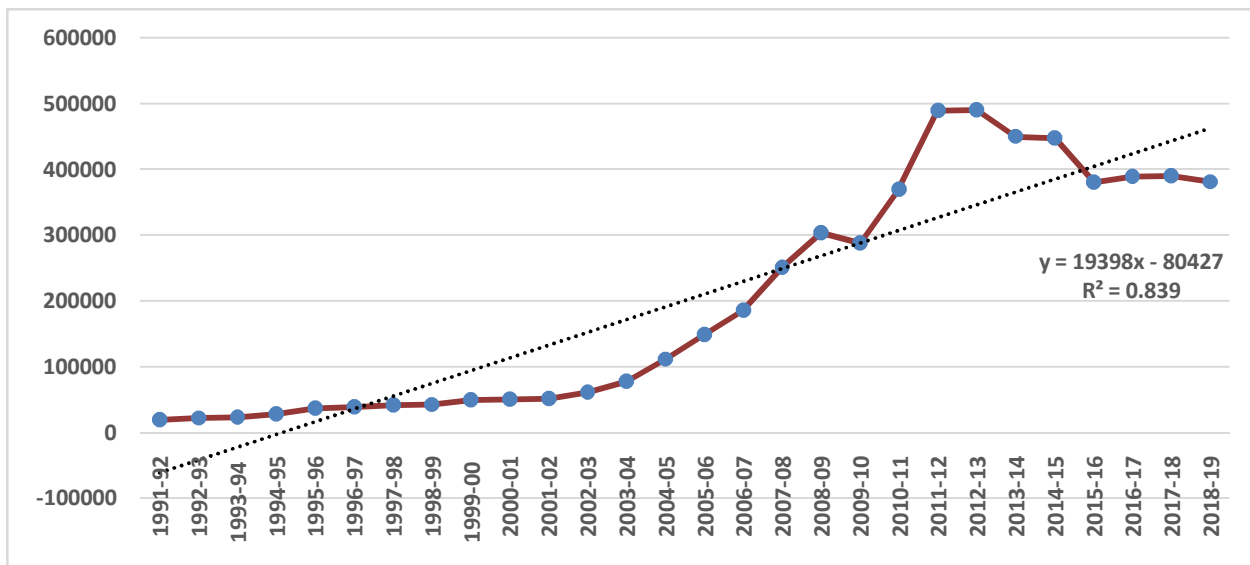
TABLE NO.1.7, GROWTH RATE OF INDIA'S IMPORTS FROM 1991-92 TO 2018-19
(US\$ Million)

Year	India's Imports	Increase\Decrease	AAGR (%)	Trend
1991-92	19411	-4662	-19.4	-48057
1992-93	21882	2471	12.7	-29380
1993-94	23306	1425	6.5	-10703
1994-95	28654	5348	22.9	7974
1995-96	36675	8021	28	26651
1996-97	39132	2457	6.7	45328
1997-98	41485	2352	6	64005
1998-99	42389	904	2.2	82683
1999-00	49671	7282	17.2	101360
2000-01	50537	866	1.7	120037
2001-02	51413	877	1.7	138714
2002-03	61412	9999	19.4	157391
2003-04	78149	16737	27.3	176068
2004-05	111517	33368	42.7	194745
2005-06	149166	37648	33.8	213422
2006-07	185735	36570	24.5	232099
2007-08	251439	65704	35.4	250776
2008-09	303696	52257	20.8	269454
2009-10	288373	-15323	-5	288131
2010-11	369769	81396	28.2	306808
2011-12	489320	119550	32.3	325485
2012-13	490737	1417	0.3	344162
2013-14	450214	-40523	-8.3	362839
2014-15	448033	-2180	-0.5	381516
2015-16	380356	-67677	-15.1	400193
2016-17	389652	9296	2.4	418870
2017-18	390215	563	0.1	437547
2018-19	381199	-9016	-2.3	456225

Source: Hand Book of statistics on Indian Economy (Reserve Bank of India)

Table No.1.7 reveals that the India's import which was the highest in 2012-13 and the lowest in 1991-92. India's import has gone up from US \$19,411 million dollar in the year 1991-92 to \$ 3,81,199 million US dollar in 2018-19. But its growth rate in India's import increased from -0.6 per cent to 0.4 per cent during the corresponding year. The trend value increased from US \$-48,057 million dollar in the year 1991-92 to US \$4,56,225 million dollar in the year 2018-19.

FIGURE NO.1.7. INDIA’S IMPORTS



The Figure No 1.7 shows that the trend of India’s import of India is for using linear regression model. The regression equations are fitted and it is $Y=19398x-80427$. The regression equation is plotted for the period from 1991-92 to 2018-19. It denotes that the India’s import increased at the rate of US \$19,398million dollar per year from 1991-92 to 2018-19. As the R^2 value calculated is 0.839, the regression equation is reliable to the extent of 83 per cent. Thus, there has been a positive trend in India’s import during the study period.

TABLE NO.1.8. TREND AND GROWTH RATE OF FOREIGN TRADE IN INDIA

Variables	Linear Model					
	a	b	t	R ²	Adjusted R ²	significant
India’s exports	-54220.86 (15709.64)	13478.84 (946.46)	14.241	0.886	0.882	0.000
India’s imports	-80427.27 (27622.50)	19397.78 (1664.18)	11.656	0.839	0.833	0.000
Semi log Model						
	a	b	t	R ²	Adjusted R ²	significant
India’s exports	9.628 (0.087)	0.123 (0.005)	23.397	0.955	0.953	0.000
India’s imports	9.741 (0.120)	0.134 (0.007)	18.558	0.930	0.927	0.000
India’s exports CGR = 3.1				India’s imports CGR = 4.3		

Source: Calculated by the researcher (Figures in bracket indicate Standard Error)

Table No.1.8 states that the t values of the trend and growth rate of foreign trade in India simple linear regression model and semi log linear regression model have been fitted respectively to the data on the value of India's exports and India's imports for the periods 1991-92 to 2018-19. The estimated value of the regression co-efficient, their standard errors t value, R^2 , Adjusted R^2 , significant and other important results are analyzed in this section. The results of the trend analysis reveal that the value of India's exports increases by US \$13, 478.84 million dollar per year during 1991-92 to 2018-19. The regression co-efficient of the semi log linear model implies that India's exports have increased at the compound growth rate of 3.1 per cent per year during this period. The trend co-efficient both the models were found to be statistically significant at one per cent level. The R^2 values were also found to be satisfactory. The value of Adjusted R^2 is 0.0.882 in simple linear model and 0.927 in the semi-log linear in this period. The value of R^2 is 0.886 in simple linear model and 0.955 in the semi-log linear in this period. It means that the India's exports have registered a consistently linear trend in this period and more than 88 per cent of variations in the dependent variable are explained by the independent variable.

The results of the trend analysis reveal that of India's imports increases by US \$19,397.78 million dollar per annum during 1991-92 to 2018-19. The regression co-efficient of the semi log linear model implies that the Value has increased at the compound growth rate of 4.3 per cent per year during 1991-92 to 2018-19. The regression co-efficient of both the models are significant at 1 per cent level. The R^2 values were also found to be satisfactory. The value of Adjusted R^2 is 0.833 in simple linear model and 0.927 in the semi-log linear in this period. The value of R^2 exceeds 0.839 in simple linear model and it is 0.930 in the semi log linear model. It means that the India's imports have registered a consistently linear trend in this period and more than 83 per cent of variations in the dependent variable are explained by the independent variable.

MAJOR FINDINGS:

The main findings of the present study were given below.

- The results of the trend analysis reveal that the value of India's exports increases by US \$13, 478.84 million dollar per year during 1991-92 to 2018-19. The regression co-efficient of the semi log linear model implies that India's exports have increased at the compound growth rate of 3.1 per cent per year during this period.
- The results of the trend analysis reveal that of India's imports increases by US \$19,397.78 million dollar per annum during 1991-92 to 2018-19. The regression co-efficient of the semi log linear model implies that the Value has increased at the compound growth rate of 4.3 per cent per year during 1991-92 to 2018-19.
- The growth rate in India's Exports improved from -0.6 per cent to 0.4 per cent during the corresponding year.

- The growth rate in India's import gone up from -0.6 per cent to 0.4 per cent during 1991-92 to 2018-19.
- The trade balance of India was US \$1,546 million dollar in 1991-92 it increased up to US \$1,84,000 million dollars in 2018-19.
- The growth rate in Agricultural and Allied Products increased from -0.5 per cent to 1.7 per cent during 1991-92 to 2018-19.
- The growth rate in ores and minerals products export accelerated from -15.1 per cent to 1.2 per cent during the corresponding year.
- The growth rate in ores and minerals products export accelerated from -15.1 per cent to 1.2 per cent during 1991-92 to 2018-19.
- The growth rate in petroleum products exports increased from -20.5 per cent to -4.8 per cent during the corresponding year.

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