

IMPACT OF FOREIGN TRADE ON INDIAN ECONOMY – A STUDY

E. Hari Prasad*, G.V. Bhavani Prasad**

Abstract This paper evaluates the trend pattern of India's Foreign Trade during the pre- and post-liberalization periods. Further, the study is mainly based on the secondary data collected from published sources. To study the impact of the foreign trade, data relating to the Gross Domestic Product (GDP), one of the most important economic indicators, has been collected for the period of 54 years that include pre- and post-liberalization periods. For analysis, statistical tools like multiple regression method, ANOVA, and Durbin Waston autocorrelation tests are applied. The results revealed that country's foreign trade increased consistently during pre- and post-liberalization periods, but it increased more during the post-liberalization period compared to pre-liberalization period. During the study period, the growth rate of imports was more than the growth rate of exports. This led to deficit in the balance of payment of the country. The volume of trade and GDP has been increasing year by year. A positive and increasing trend during the period of study has also been observed.

Keywords: Foreign Trade, Exports, Imports, Economic Development, Foreign Trade Policy

INTRODUCTION

Prior to the independence, British rulers followed typical colonial trade, i.e., exported the raw materials to British country and imported the manufactured goods. Because of this practice, the local-made handicrafts were adversely affected and highly suffered. British rulers did not encourage the industrialization in the country. This practice was changed after independence. India opted for the mixed economy system, due to which public and private sectors have coexisted in the economy after independence 1947 with major objectives of rapid economic growth, self-reliance, social justice, etc. The Government of India heavily depended on imports to develop and maintain the productivity in the country. For this, the country imported required machineries, food grains. Higher imports led to greater pressure on the balance of payment (BoP) and economy. During the first and second five-year plans, the government had given high importance to the self-reliance and maintained rigid trade policy. However, foreign trade was committed to fast economic development as it makes an increasingly significant contribution to economic growth and substantially to the economic welfare of the people of the country.

The foreign trade of a nation includes in-and-out movement of goods and services from one country to another. The

foreign trade results in the flow of foreign exchange, which leads to faster economic development and increases living standard of people of the country. In general, no country in the world possesses all the resources to produce all required goods and services that it needs and thus no country is self-reliant in the world. This necessitates the trade to exchange goods and services with the other countries. Economies of scale, comparative costs of production of goods and services, specialization, and progress of science and technology also influence the importance of the foreign trade. Foreign trade is also required to meet needs of the growing population in the developing countries. Foreign trade, as engine for economic growth, makes substantial contribution to the nation's development by earning foreign exchange. Now, all countries are considering foreign trade as a development strategy and an effectual tool for economic growth and generation of employment.

REVIEW OF LITERATURE

Eminent academicians, research scholars, management practitioners, and administrators have studied foreign trade trends in Indian economy earlier. It is relevant to refer briefly to the previous studies to find out and fill up the research gaps. The following are some of the previous research studies conducted in this area.

* Associate Professor, Department of Business Management, Vaageswari College of Engineering, Karimnagar, Telangana.
Email: hariesharma@gmail.com

** Professor of Business Management (Rtd.), Kakatiya University, Warangal, Telangana.

(Anne Krueger, 2008), analysed the role of trade and international economic policy on Indian economic performance and revealed that the economic policy reforms had shown positive impact on the Indian foreign trade sector. Exports have grown rapidly and the performance of the trade in India accelerated after introduction of the liberalized economic policy.

(Devi Prasad Misra: Artta Bandhu Jenu: Nikhil Chandra Shil, 2011) assessed India's foreign trade during liberalization era. They analysed commodity-wise and country-wise, and the size and pattern of foreign trade during the period of liberalization. They inferred that the value of imports increased due to huge imports of unessential goods by a large number of companies and import houses and heavy imports of petroleum oil & lubricants products. If the government had seen the alternative energy sources, it would have been possible to bring down the imports of petroleum oil & lubricants products and thus the country could have saved scarce foreign resources to bridge the BoP gap. The government should encourage necessary inputs and incentives to produce more for export purpose. They also suggested that to boost the export sector, more Free Trade Zones, Export Processing Zones, etc., need to be created with adequate infrastructure facilities; these have to be located in nearby ports so that the goods could be exported to international market at cost-effective/competitive price.

(Kaur, 2012) investigated the pattern of India's foreign trade and share of India's export and imports in world's trade during 1960–2010. The study revealed that the Indian economy recorded the high growth of foreign trade after liberalization. The share of Indian exports recorded a raising trend. The composition of India's imports had shown a positive and increasing trend in the post-liberalization period.

(HariKumar, 2014) examined the changing phases of the India's international trade before and after liberalization periods and found that the new economic policy changed the business environment in the country. Because of liberal economic policy and changes in the science and technology, there had been increase in the foreign trade volume after liberalization.

(Singh, 2014) made an attempt to analyse the trend and composition of foreign trade since 1991. He also analysed the impact of trade on the economic growth of India and revealed that imports of the country had shown a negative influence on economic growth, whereas export and economic openness are positively related to the economic growth of India. He found that foreign trade, exports, and imports had increased after liberalization period. In foreign trade, the

portion of the manufactured goods was high in exports and petroleum products had the major portion in imports.

(Mehta, 2015) conducted a study and examined the trend pattern of India's exports, imports and total trade before and after the new economic policy using time series data from 1971 to 2013. He found that India's export, imports and total trade increased consistently before and after new economic policy but after new economic policy, these increased more than before, and the growth rate of imports was more than the growth rate of export.

(Dr. Bharati and Shruti, 2016) studied the policy matters of new foreign trade policy 2015-20. The Government of India had issued the foreign trade policy (FTP) of India with two major objectives, i.e., double the percentage share of global merchandise trade within the next 5 years and to act as an effective instrument of economic growth by giving a thrust to employment generation. The new policy aimed to maximize the foreign trade from the country and boost the exports to reach the exports target of \$900 billion by year 2020 by encouraging the 'Make in India' and 'Digital India'.

NEED FOR THE STUDY

Right after the independence of India from 1950–1990, India followed protective trade policy to protect the domestic economy from the competition of foreign goods which might threaten the domestic goods. This resulted that the economy caught in the trap of unemployment, poverty, and so on. After 1991, the Government of India had chosen the LPG (Liberalization, Privatization, and Mobilization) model, which allowed most of the protective sectors got free except some. The EXIM policy of the government allowed products, which were earlier in the restricted trade category, to come into the open general category. With the liberalization in the licensing policy, many Indian firms entered into joint ventures with their foreign counterparts to trade for exports and imports. Many of the foreign countries, which were members of the trade blocks like SAARC, BRICKS, G-20, etc., entered into India to do export-and-import business. In this regard, an attempt has been made to analyse the impact of India's Foreign Trade on Indian economy during pre- and post-liberalization periods.

RESEARCH GAP

Prior to this study, many academicians, researchers, practitioners analysed the foreign trade and its impact on economy. However, recently, no study has taken place, extensively, that compared the pre- and post-liberalization periods by taking 54 years' data as a study period, i.e., 1964–2017. Hence, this study has been undertaken.

OBJECTIVES OF THE STUDY

The present study aimed to achieve the following objectives:

- To study the trend of foreign trade in India since 1964 (pre- and post-liberalization periods).
- To examine the impact of foreign trade on economic growth of India.
- To review the impact of FTP 2015.

METHODOLOGY OF THE STUDY

The present paper is mainly based on the secondary data which is collected from the *Statistical Handbook* published by RBI, reports from Directorate General of Commercial Intelligence and Statistics, Ministry of Commerce and Industry, Central Statistics Organization (CSO), Ministry of Statistics and Programme Implementation, *Economic Survey of India*, and the other published annual reports and journals. To study the impact of foreign trade in India, data relating to the foreign trade and GDP have been collected for the period of 54 years (pre-liberalization period from 1964 to 1990 and post-liberalization period from 1991 to 2017). To analyse the impact of foreign trade on economy in India before and after liberalization, statistical tools like averages, percentages, compound annual growth rate (CAGR) are used. The growth rates of selected variables Exports, Imports, and GDP are calculated with the help of the following formula:

$$Gr_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}} \times 100$$

where, Gr_t is the growth rate of variable Y for t^{th} time period compared to its previous year and it is represented as percentage. To calculate CAGR, the following formula has been used:

$$CAGR = [EndValue / BeginningValue]^{1/n} - 1$$

To examine the impact of foreign trade in economic growth of India, the GDP at factor cost and at constant price is taken as a measure of economic growth; and volume of export, import in monetary terms, and economic openness in terms of ratio are taken as variables of the study. Before applying the multiple regression method, the stationarity of the concerned variables are tested by using Augmented Dickey Fuller (ADF) Test. In addition, ANOVA and Durbin Waston autocorrelation tests are applied to examine the relationship between the variables.

FOREIGN TRADE IN INDIA

Foreign trade is considered as a ‘growth engine’ of nation’s economy. It is the most important macroeconomic variable, which measures the economic development of a country. The trend of the foreign trade during the pre-liberalization period (1964–1990) is presented with the help of Table 1.

Table 1 and Figure 1 furnish that in all the years, the exports and imports of the country were increasing. It can be found from the table and graph before the liberalization policy India’s total trade has increased extensively. From Rs. 2016 crores in 1964, total trade rose to Rs. 5478.80 crores in 1974 to Rs. 25602.20 crores in 1984, and further to Rs. 62986.80 in 1990. It also depicts that the total foreign trade of country recorded an average growth rate of 13.60% per annum during the period. The growth rate of the total trade fluctuate in between –0.87% (1968) to 45.79% (1967). An average of 14.06% growth rate was recorded with regard to exports and 13.27% of growth rate was recorded with regard to imports. Except in the year 1977, in all the years, during the study period, the trade balance showed a negative balance. In 1977, the exports of the country were more than the imports of the country.

Table 1: Foreign Trade In India - Pre Liberalization (1964 - 1990) (Rs. In Crores)

Sl. No.	Year	Exports	% of Growth	Imports	% of Growth	Total Trade	% of Growth	Trade Balance
1	1964	793.00	15.77	1223.00	8.10	2016.00	11.01	-430.00
2	1965	816.00	2.90	1349.00	10.30	2165.00	7.39	-533.00
3	1966	810.00	-0.74	1409.00	4.45	2219.00	2.49	-599.00
4	1967	1157.00	42.84	2078.00	47.48	3235.00	45.79	-921.00
5	1968	1199.00	3.63	2008.00	-3.37	3207.00	-0.87	-809.00
6	1969	1358.00	13.26	1909.00	-4.93	3267.00	1.87	-551.00
7	1970	1413.00	4.05	1582.00	-17.13	2995.00	-8.33	-169.00
8	1971	1535.30	8.66	1634.20	3.30	3169.50	5.83	-98.90
9	1972	1608.20	4.75	1824.50	11.64	3432.70	8.30	-216.30
10	1973	1971.50	22.59	1867.40	2.35	3838.90	11.83	104.10
11	1974	2523.40	27.99	2955.40	58.26	5478.80	42.72	-432.00

Sl. No.	Year	Exports	% of Growth	Imports	% of Growth	Total Trade	% of Growth	Trade Balance
12	1975	3328.80	31.92	4518.80	52.90	7847.60	43.24	-1190.00
13	1976	4036.30	21.25	5264.80	16.51	9301.10	18.52	-1228.50
14	1977	5142.70	27.41	5063.80	-3.82	10206.50	9.73	78.90
15	1978	5407.90	5.16	6020.20	18.89	11428.10	11.97	-612.30
16	1979	5726.10	5.88	6810.60	13.13	12536.70	9.70	-1084.50
17	1980	6418.40	12.09	9142.60	34.24	15561.00	24.12	-2724.20
18	1981	6710.70	4.55	12549.20	37.26	19259.90	23.77	-5838.50
19	1982	7805.90	16.32	13607.60	8.43	21413.50	11.18	-5801.70
20	1983	8803.40	12.78	14292.70	5.03	23096.10	7.86	-5489.30
21	1984	9770.70	10.99	15831.50	10.77	25602.20	10.85	-6060.80
22	1985	11743.70	20.19	17134.20	8.23	28877.90	12.79	-5390.50
23	1986	10894.60	-7.23	19657.70	14.73	30552.30	5.80	-8763.10
24	1987	12452.00	14.30	20095.80	2.23	32547.80	6.53	-7643.80
25	1988	15673.70	25.87	22243.70	10.69	37917.40	16.50	-6570.00
26	1989	20231.50	29.08	28235.20	26.94	48466.70	27.82	-8003.70
27	1990	27658.40	36.71	35328.40	25.12	62986.80	29.96	-7670.00
CAGR		14.06		13.27		13.60		11.26

Source: 1. Directorate General of Commercial Intelligence and Statistics, Ministry of Commerce and Industry. 2. Central Statistical Organization (CSO), 3. Ministry of Statistics and Programme Implementation. 4. <http://statisticstimes.com/economy/gdp-of-india.php>.

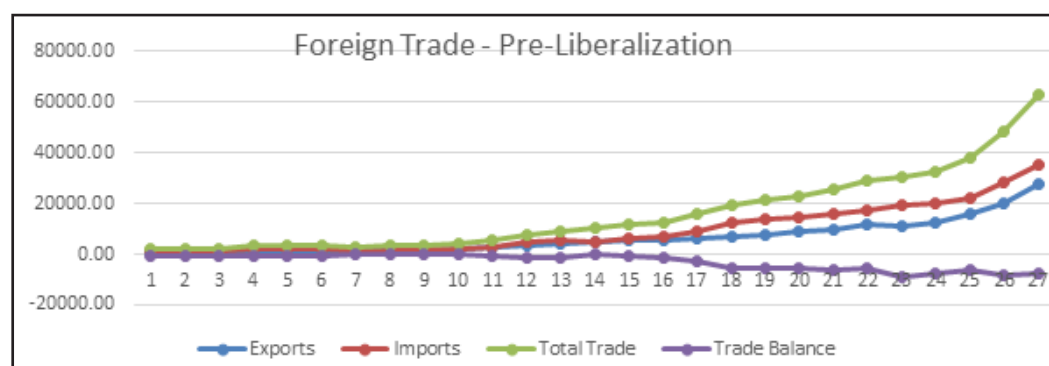


Fig. 1: Foreign Trade – Pre Liberalization

Table 2: Foreign Trade In India - Post Liberalization (1991 - 2017) (Rs. In Crores)

Sl. No.	Year	Exports	% of Growth	Imports	% of Growth	Total Trade	% of Growth	Trade Balance
1	1991	32557.60	17.71	43192.90	22.26	75750.50	20.26	-10635.30
2	1992	44041.80	35.27	47850.80	10.78	91892.60	21.31	-3809.00
3	1993	53688.30	21.90	63374.50	32.44	117062.80	27.39	-9686.20
4	1994	69751.40	29.92	73101.00	15.35	142852.40	22.03	-3349.60
5	1995	82674.10	18.53	89970.70	23.08	172644.80	20.86	-7296.60
6	1996	106353.30	28.64	122678.10	36.35	229031.40	32.66	-16324.80
7	1997	118817.10	11.72	138919.70	13.24	257736.80	12.53	-20102.60
8	1998	130100.60	9.50	154176.30	10.98	284276.90	10.30	-24075.70
9	1999	139753.10	7.42	178331.90	15.67	318085.00	11.89	-38578.80
10	2000	159561.40	14.17	215236.50	20.69	374797.90	17.83	-55675.10

Sl. No.	Year	Exports	% of Growth	Imports	% of Growth	Total Trade	% of Growth	Trade Balance
11	2001	203571.00	27.58	230872.80	7.26	434443.80	15.91	-27301.80
12	2002	209018.00	2.68	245199.70	6.21	454217.70	4.55	-36181.70
13	2003	255137.30	22.06	297205.90	21.21	552343.20	21.60	-42068.60
14	2004	293366.80	14.98	359107.70	20.83	652474.50	18.13	-65740.90
15	2005	375339.50	27.94	501064.50	39.53	876404.00	34.32	-125725.00
16	2006	456417.90	21.60	660408.90	31.80	1116826.80	27.43	-203991.00
17	2007	571779.30	25.28	840506.30	27.27	1412285.60	26.46	-268727.00
18	2008	655863.50	14.71	1012311.70	20.44	1668175.20	18.12	-356448.20
19	2009	840755.10	28.19	1374435.60	35.77	2215190.70	32.79	-533680.50
20	2010	845533.60	0.57	1363735.50	-0.78	2209269.10	-0.27	-518201.90
21	2011	1142921.90	35.17	1683466.90	23.45	2826388.80	27.93	-540545.00
22	2012	1459280.50	27.68	2345972.70	39.35	3805253.20	34.63	-886692.20
23	2013	1635261.00	12.06	2673113.00	13.94	4308374.00	13.22	-1037852.00
24	2014	1905011.00	16.50	2715434.00	1.58	4620445.00	7.24	-810423.00
25	2015	1896348.00	-0.45	2737087.00	0.80	4633435.00	0.28	-840739.00
26	2016	1716377.99	-9.49	2490298.03	-9.02	4206676.02	-9.21	-773920.04
27	2017	1841314.39	7.28	2550926.19	2.43	4392240.58	4.41	-709611.80
		16.12		16.31		16.23		16.83

Source: 1. Directorate General of Commercial Intelligence and Statistics, Ministry of Commerce and Industry. 2. Central Statistical Organization (CSO), 3. Ministry of Statistics and Programme Implementation. 4. <http://statisticstimes.com/economy/gdp-of-india.php>. 5. <http://statisticstimes.com/economy/gdp-of-india.php>

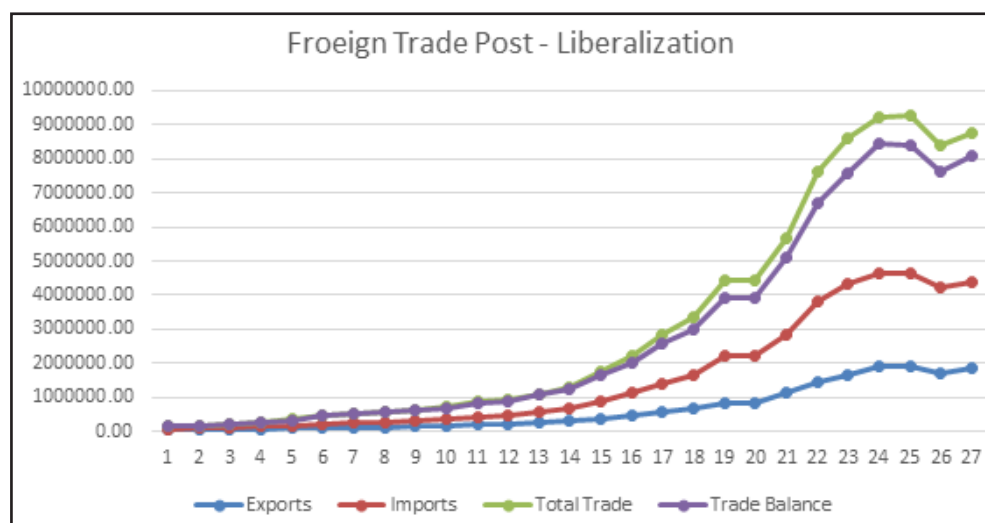


Fig. 2: Foreign Trade (Post-Liberalization)

The data in Table 2 and Figure 2 furnish the details of foreign trade in India during 1991–2017, i.e., post-liberalization period. Foreign trade in India has been increased from Rs. 32,557.60 crores to Rs. 43,92,240.58 crores during the said period. An average of 16.12%, 16.31%, and 16.23% growth rate is recorded in respect of imports, exports, and total

trade, respectively, during 1991–2017. The highest growth rate showing 35.27% in imports was recorded in the year 1992. In the case of exports, the highest growth rate was recorded in the year 2005 indicating 39.53%. The growth rate is high in 2012 in respect of total trade pointing 34.63%.

GDP GROWTH RATE

GDP is the most important indicator of the economic development of a nation. It is the market value of all final goods and services produced in a period (quarterly or yearly)

of time expressed in terms of monetary value. In general, GDP estimates are used to determine the nation's economic performance and make international comparisons. The growth rate of GDP during the study period is presented in Table 3.

Table 3: GDP Growth Rate (Pre- and Post-Liberalization)

Sl. No.	Pre-Liberalization			Post-Liberalization		
	Year	2004-05 Prices	Current Prices	Year	2004-05 Prices	Current Prices
1	1964	5.06	14.29	1991	5.29	16.49
2	1965	7.58	16.83	1992	1.43	15.37
3	1966	-3.65	4.71	1993	5.36	14.7
4	1967	1.02	13.82	1994	5.68	16.23
5	1968	8.14	17.52	1995	6.39	16.8
6	1969	2.61	5.46	1996	7.29	17.08
7	1970	6.52	9.97	1997	7.97	16.38
8	1971	5.01	6.38	1998	4.30	11.2
9	1972	1.01	6.40	1999	6.68	15.28
10	1973	-0.32	10.00	2000	8.00	11.35
11	1974	4.55	22.55	2001	4.15	7.67
12	1975	1.16	17.71	2002	5.39	8.72
13	1976	9.00	6.21	2003	3.88	7.75
14	1977	1.25	7.49	2004	7.97	12.03
15	1978	7.47	14.13	2005	7.05	13.16
16	1979	5.50	7.47	2006	9.48	14.1
17	1980	-5.20	9.12	2007	9.57	16.6
18	1981	7.17	19.51	2008	9.32	15.91
19	1982	5.63	17.08	2009	6.72	15.75
20	1983	2.92	11.72	2010	8.59	15.18
21	1984	7.85	16.97	2011	8.91	18.66
22	1985	3.96	12.30	2012	6.69	15.77
Sl. No.	Pre-Liberalization			Post-Liberalization		
	Year	2004-05 Prices	Current Prices	Year	2004-05 Prices	Current Prices
23	1986	4.16	11.74	2013	4.47	11.88
24	1987	4.31	11.50	2014	4.74	11.54
25	1988	3.53	13.36	2015 (2011-12)	7.30	10.65
26	1989	10.16	19.34	2016 (2011-12)	7.93	9.99
27	1990	6.13	15.2	2017 (2011-12)	7.11	11.52

Source:

1. Central Statistics Organization (CSO), Ministry of Statistics and Programme Implementation,
2. Planning Commission, government of India,
3. [http:// statisticstimes.com/ economy/gdp-growth-of-india.php](http://statisticstimes.com/economy/gdp-growth-of-india.php)

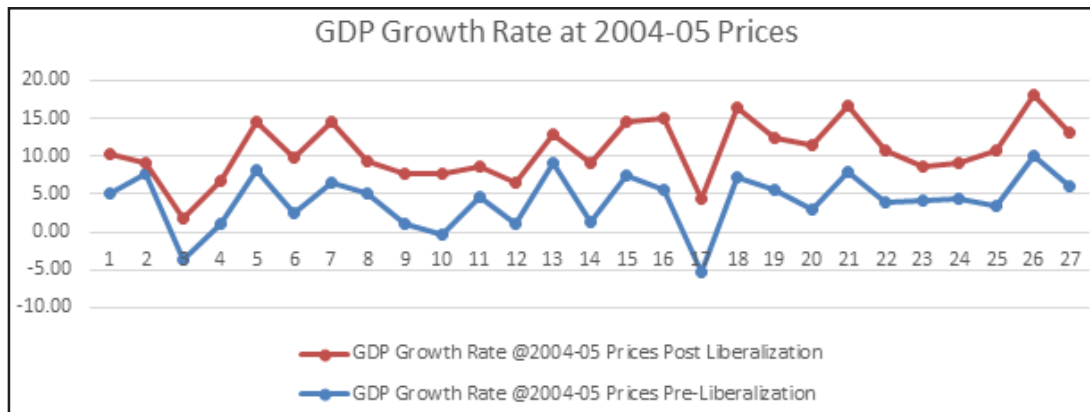


Fig. 3: GDP Growth Rate (Pre- and Post-Liberalization)

IMPACT OF FOREIGN TRADE

Foreign trade of a country has become most significant of its economy in recent years. Exports and imports of goods and services have grown rapidly post-liberalization period. An increasing trend of trade volume has an impact on economy in several ways. The focus of the present paper is, but, limited to study the impact of the foreign trade on Indian's GDP during pre- and post-liberalization periods. To study the impact of foreign trade on economy, the 'economic openness index' is calculated.

The economic openness is the index that is calculated as the ratio of country's total trade, and to the country's GDP.

$$\text{Economic Openness} = \frac{\text{Total Trade}}{\text{Gross Domestic Product}}$$

or

$$\text{Economic Openness} = \frac{\text{Exports} + \text{Imports}}{\text{Gross Domestic Product}}$$

In the first step, to avoid the spurious results, the stationarity of so-collected time series data, i.e., exports, imports, total trade, and GDP for pre- and post-liberalization periods, is tested with the help of ADF test and Pesaran and Shin unit root test. Time series data are non-stationary if the mean and variance are not constant or changing over time. If mean and variance are constant or independent of time, the given time series y_t is stationary.

Table 4: Shows the Results of the ADF Test and Pesaran and Shin Unit Root Test

$E(y_t) = \mu$	constant mean
$Var(y_t) = \sigma^2$	constant variance
$Cov(y_t, y_{t-s}) = Cov(y_t, y_{t+s}) = y_s$	time independent covariance

Table 4: ADF Test and Pesaran and Shin Unit Root Test

Null Hypothesis: Unit root (individual unit root process)		
Sample: 1 27		
Exogenous variables: Individual effects, individual linear trends		
User-specified lags: 4		
Total (balanced) observations: 176		
Cross-sections included: 8		
Method	Statistic	Prob.**
ADF - Fisher Chi-square	8.68192	0.9259
ADF - Choi Z-stat	5.97813	1.0000
Im, Pesaran and Shin W-stat	3.78493	0.9999
** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution.		
All other tests assume asymptotic normality.		

HYPOTHESIS

H_0 – There is unit in the series.

According to Table 4, the calculated probability value is greater than 0.5% for ADF as well as Pesaran and Shin.W.

Therefore, the null hypothesis is accepted and inferred that there is unit root for the series. In other words, all the variables are stationary.

Table 5: GDP Growth and Economic Openness

Sl. No.	Pre-Liberalization				Post-Liberalization			
	Year	Total Trade	GDP (Rate @2004-05 Prices)	Economic Openness	Year	Total Trade	GDP (Rate @2004-05 Prices)	Economic Openness
1	1964	1965.00	453,829	0.0044	1991	1965.00	1,347,889	0.0562
2	1965	1967.00	488,247	0.0044	1992	1967.00	1,367,171	0.0672
3	1966	1969.00	470,402	0.0047	1993	1969.00	1,440,504	0.0813
4	1967	1971.00	475,190	0.0068	1994	1971.01	1,522,344	0.0938
5	1968	1973.00	513,860	0.0062	1995	1973.01	1,619,694	0.1066
6	1969	1975.00	527,270	0.0062	1996	1975.01	1,737,741	0.1318
7	1970	1977.00	561,630	0.0053	1997	1977.01	1,876,319	0.1374
8	1971	1979.00	589,787	0.0054	1998	1979.01	1,957,032	0.1453
9	1972	1981.00	595,741	0.0058	1999	1981.01	2,087,828	0.1524
10	1973	1983.00	593,843	0.0065	2000	1983.01	2,254,942	0.1662
11	1974	1985.00	620,872	0.0088	2001	1985.01	2,348,481	0.1850
12	1975	1987.00	628,079	0.0125	2002	1987.01	2,474,962	0.1835
13	1976	1989.00	684,634	0.0136	2003	1989.01	2,570,935	0.2148
14	1977	1991.00	693,191	0.0147	2004	1991.01	2,775,749	0.2351
15	1978	1993.00	744,972	0.0153	2005	1993.02	2,971,464	0.2949
16	1979	1995.00	785,965	0.0160	2006	1995.02	3,253,073	0.3433
17	1980	1997.00	745,083	0.0209	2007	1997.02	3,564,364	0.3962
18	1981	1999.00	798,506	0.0241	2008	1999.02	3,896,636	0.4281
19	1982	2001.00	843,426	0.0254	2009	2001.03	4,158,676	0.5327
20	1983	2003.00	868,092	0.0266	2010	2003.03	4,516,071	0.4892
21	1984	2005.00	936,270	0.0273	2011	2005.03	4,918,533	0.5746
22	1985	2007.00	973,357	0.0297	2012	2007.03	5,247,530	0.7252
23	1986	2009.00	1,013,866	0.0301	2013	2009.03	5,482,111	0.7859
24	1987	2011.00	1,057,612	0.0308	2014	2011.03	5,741,791	0.8047
25	1988	2013.00	1,094,993	0.0346	2015	2013.03	10,522,686	0.4403
26	1989	2015.00	1,206,243	0.0402	2016	2015.04	11,357,529	0.3704
27	1990	2017.00	1,280,228	0.0492	2017	2017.05	12,165,481	0.3610

The data in Table 5 furnish details of Total trade and GDP at 2004-05 prices and economic openness during the selected study period. Economic openness is the index that shows the relationship between the total trade and GDP of the country. The higher the economic index, the greater the influence of foreign trade on GDP and other activities, and the stronger that country's economy. This index was very low during the pre-liberalization period as compared to the

post-liberalization period. With this, it is inferred that, LPG policy had the greater impact on total trade and GDP.

IMPACT OF FOREIGN TRADE (PRE-LIBERALIZATION)

Multiple regression tests is applied to study the impact of foreign trade on GDP. Multiple regression analyses the

relationship between the one dependent variable ($Y = \text{GDP}$) multiple independent variables (X_1 and $X_2 = \text{exports and imports}$). For this, the following equation is used to find out the relationship between the variables:

$$Y = b_0 + b_1 * X_1 + b_2 * X_2 + \dots + b_n * X_n$$

H_0 – There is no significant impact of exports and imports (Foreign Trade) on GDP.

Table 6: Multiple Regression Analysis

Predictor Term	R-Square	R-Square Adjusted	Coefficient	T	P	Anova	Durbin-Watson Test
						F-Value	(Autocorrelation)
Constant	94.87%	94.44%	517445	33.666	0.0000	221.93	0.468474
Exports			0.419712	0.045	0.9642		
Imports			24.253	3.719	0.0011		

The test results of the multiple regression analysis in Table 6 present the impact of foreign trade on economic growth, i.e., GDP during pre-liberalization. The value of R^2 in the model is 0.95 which shows that 95% of the variation in the dependent variable, i.e., GDP is explained by the independent variables of the model. The 5% variation in the dependent variable remains unexplained by independent variables of the study. According to Table 6, the adjusted R^2 shows that asymptotically, the variables can explain approximately 94% of total variation. The implication is that the model has goodness of fit. F-statistic tests the overall significance of

the model under study. The value for the F-statistic is 221.93 and is significant. The results of regression analysis show that export have the significant positive impact on the GDP and economic openness while import has a negative impact on the GDP. The results confirm the importance of foreign trade on expansion and growth of Indian economy. Although import is negatively related to GDP, overall impact of trade on economic growth represented by economic openness is positive and highly significant. As per Durbin-Watson's Autocorrelation Test, the test value is less than 2 and showing positive autocorrelation.

IMPACT OF FOREIGN TRADE (POST-LIBERALIZATION)

Table 7: Multiple Regression Analysis

Predictor Term	R-Square	R-Square Adjusted	Coefficient	T	P	Anova	Durbin-Watson Test
						F-Value	(Autocorrelation) Test
Constant	82.96%	81.54%	0.161253	6.148	0.0000	58.433	1.300
Exports			-1.1386E-06	-3.558	0.0016		
Imports			9.43326E-07	4.441	0.0002		

Table 7 furnishes the details of test results of the multiple regression analysis to find out the impact of foreign trade on economic growth, i.e., GDP during post-liberalization period of 1991–2017. The value of R^2 in the model is 0.83 which shows that 83% of the variation in the dependent variable, i.e., GDP is explained by the independent variables of the model. The 17% variation in the dependent variable remains unexplained by independent variables of the study. According to Table 7, the adjusted R^2 shows that asymptotically the variables can explain approximately 82% of total variation. The implication is that the model has goodness of fit. F-statistic tests the overall significance of the

model under study. The value for the F-statistic is 58.433 and is significant. The results of regression analysis show that export has the significant positive impact on the GDP and economic openness, whereas import has a negative impact on the GDP. The results confirm the importance of foreign trade on expansion and growth of Indian economy. Although import is negatively related with GDP, overall impact of trade on economic growth represented by economic openness is positive and highly significant. As per Durbin-Watson's Autocorrelation Test, the test value is less than 2 and showing positive autocorrelation.

Table 8: Descriptive Statistics for Exports, Imports, Total Trade and GDP

	Pre-Liberalization			Post-Liberalization		
	CAGR	Average	CV	CAGR	Average	CV
Exports	14.06	6555.16	100.62	16.12	638540.57	104.3
Imports	13.27	9468.01	98.89	16.31	933628.85	107.48
Total Trade	13.6	16023.17	99.21	16.23	1572169.42	106.09
GDP	3.92	749821.8	31.46	8.49	3895464	77.05

The descriptive statistics for India's exports, imports, total trade, and GDP for the overall period of time is presented in Table 8. From the table, it is inferred that exports, imports, and total trade have increased significantly during the overall study period. The result revealed that imports are increased more than exports, therefore India's trade deficit has increased significantly overall period. Co-efficient of variation expresses the fluctuation in data. It is also observed that exports, imports, and total trade fluctuate more during the post-liberalization period. From the result, we conclude that import series is more fluctuating than exports series.

CONCLUSION

This paper examines the impact of foreign trade on economic development of the nation. The macro-economic variable, GDP, has been chosen to study the impact of the trade on economy during the pre- and post-liberalization periods. This study revealed that country's foreign trade increased consistency during pre- and post-liberalization periods but it increased more during the post-liberalization period than pre-liberalization period. During the study period, the growth rate of imports was more than the growth rate of exports. This led to deficit in the BoP of the country. The volume of trade and GDP have been increasing year by year. A positive and increasing trend during the period of study has also been observed. The study also finds that there has been a rapid growth in imports of capital goods and technical knowhow to meet the essential of industrialization and growing imports of petroleum products for meeting industrial and consumption requirement. With this, country achieved a high growth in the economy. Though imports have a negative impact on economic growth, the total trade volume replicated that the economic openness had a positive impact on economic development of India.

In the new FTP (2015–20), the government aimed to double the exports from US\$465.9 billion in 2013-14 to US\$900 billion by 2019-20 and raise India's share in world exports from 2% to 3.5%. To achieve this target, the exports need to grow an average of 14% per annum. For this, the export obligation under the Export Promotion Capital Goods Scheme has also been reduced, apparently to give a boost

to 'Make in India'. All these are efforts towards making exports more competitive. Further, the government should encourage manufacturing and service units in general is to raise the share of manufacturing to promote exports of manufactured goods and MSMEs in particular, which are playing a vital role nation's exports.

REFERENCES

- Anne Krueger, O. (2008). The role of trade and international economic policy in Indian economic performance. *Conference on the New India, Sixth Asian Economic Policy Review*, 3, 266-285. Tokyo: Japan Center for Economic Research.
- Misra, D. P., Jenu, A. B., & Shil, N. C. (2011). India's foreign trade during liberalization era: An assessment. *Journal of International Economic Review*, 4(1), 39-50.
- Bharati, & Shruti, K. (2016, Feb.). The Impact of foreign trade policy 2015-2020 on inclusive growth of India. *International Journal of Science and Research (IJSR)*, 5(2), 1960-1962.
- HariKumar, A. (2014, March). Changing phases of the India's international trade before and after liberalization period. *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*, 3(3), 72-76.
- Kaur, A. (2012, October). Pattern of India's foreign trade in pre and post reforms era: An empirical investigation. *International Journal of Advancements in Research & Technology (IJOART)*, 1(5), 1-30.
- Mehta, S. N. (2015, March-April). Impact of new economic policy on India's foreign trade. *International Journal for Research in*, 4(3), 47-55.
- Singh, A. P. (2014, October). Performance of foreign trade in India in the post liberalisation era. *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 1(10), 11-17.
- <http://www.firstpost.com/business/25-years-of-liberalisation-a-glimpse-of-indias-growth-in-14-charts-2877654.html>
- https://en.wikipedia.org/wiki/Foreign_trade_of_India.