THE FOREIGN TRADE AND ECONOMIC GROWTH OF INDIA PRE AND POST REFORM PERIOD

LOVELEEN

SECTION-I

INTRODUCTION:-

The process of economic growth in 21st century is greatly determined and affected by expansion of international trade. The gains from trade are ambiguous and uneven. India initiated the process of economic reforms in 1980's though not explicitly. The Government of India introduced economic reforms explicitly since July 1991 especially in trade sector. The main objective of the present chapter is to analyze and asses the contribution of foreign trade to economic growth in India during the post-reform era comparing it with the pre- reform era.

Trade policies' analysis in developing countries has gained key interest for past several decades. Developing economies typically face large fluctuations in the prices of the goods they export. This pattern is attributed to the heavy reliance of LDCs on commodity exports, whose prices are more volatile than those of manufactured goods. Such fluctuations are unwelcomed because they can contribute to increased volatility in the Growth of Output (GDP).

Trade economists through theoretical and empirical research have found that there exists a very strong relationship between trade and economic growth. A high terms of trade increases returns to producers and so raises investment and hence economic growth. High volatility in the terms of trade causes reallocation of both inputs (production processes) and outputs, with a loss in output. Existing investment may no longer be profitable to continue operating and may have to be scrapped that definitely reduces capital stock. Ex-ante uncertainty associated with high relative price volatility

of both inputs and outputs may reduce investment significantly where hedge markets are incomplete.

The relationship between trade reforms and economic growth has been the subject for many studies and research projects.It concludes that although trade offers long-term benefits for developing countries,trade liberalization alone is not sufficient for economic growth,rather,it has become clear that maximizing trade and welfare outcomes depends on the underlying macroeconomic environment,industrial policies for export development,the design and sequencing of trade policies,external constraints and opportunities and complementary policies.The first multicountry study of developing countries trade regimes (Little,Scott,,Scitovisky 1970); and Balassa and associates (1971); and an influential study done by the NBER and summarized in Bhagwati and Krueger (1978) had systematically detailed the inefficiencies of the import substituting development strategies that prevailed throughout the developing world. The studies were influential in promoting export orientation as a path to more rapid economic growth.

Table:1.1

Macro Economic And Trade Indicators:India	2011-12
GDP (At Current Prices US $ bn)	1684.3
GDP Growth (at constant prices, %)	9.3
Agriculture & allied activities	7.9
Industry	9.2
Services	9.8
Exchange Rate (Rs/US$, avg.)	45.6
Exports (US$ bn)	251.1
% change	40.5
Imports (US$ bn)	369.8
% change	28.2
Trade Balance (US $ bn)	-118.7
Services Exports (US$ bn)*	131.7
Services Imports (US$ bn)*	83.0
FDI (US$ bn)	34.8
Population(2011),billion	1.21

***Source**: Economic Survey, Various issues; Union Budget, RBI Monthly Bulletin, Annual Report & Weekly Statistical Supplement; Ministry of Finance; CSO; EIU; NASSCOM; Ministry of Commerce & Industry; Institute of International Finance (IIF); WEO, IMF.*

The Indian economy has remained on the high growth path of recent years, despite some moderation in recent growth projections.(See table 1.1) After independence, India followed the system of a command and control economy to implement the development policies outlined in the Five Year Plans. The principal objectives were to increase aggregate consumption, reduce unemployment, work towards self-reliance and self-sufficiency, and reduce social disparities. The priority among these objectives changed from plan to plan.

Some policy reforms had been initiated in the 1980s, but it was not a sustained andcontinuous process. The trend towards a liberal economic policy gathered steam in the early 1990s when the Government of India announced a series of packages for autonomous structural policy reforms. These policy reforms, guided by the need to raise productivity and economic growth, were in part a response to the process of globalisation. The reforms were aimed at improving internal and external competitiveness through greater private sector participation and provision of more appropriate incentives alongside prudent governmental regulatory structures.

These policy changes were accomplished by structural reforms in the form of industrial deregulation, tariff reduction and de-licensing policies, increasing opportunities for foreign direct investment, public enterprise reforms and social sector policies. The main objective of these reforms was to re-orient the Indian economy so as to make it open to market-driven forces with the role of the State as a facilitator. The reforms were carried out in many segments of economic activity, though their coverage and depth varied from sector to sector.

The economic reforms of the early 1990s led to an initial spurt in output growth to over 7 percent a year during the first phase of reforms (1992-93 to 1996-97), fuelled by growth in the industrial and services sectors. Substantial reforms in key sectors subsequently helped shift the growth rate to an average of 8.94 per cent per annum during the later period 2003-04 to 2007-08.The growth rate in trade has been an integral part of India's success story.

In 1992-93, merchandise exports were US$18.5 billion, with the compound annual growth rate touching around 9.83 per cent per annum during 1992-2000. The acceleration in the growth of exports in recent years has been remarkable. India's export growth in 2010-11 reached an all time high since Independence of 40.5 per cent. Though it decelerated in 2011-12 to 21.3 per cent, it was still above 20 per cent and higher than the compound annual growth rate (CAGR) of 20.3 per cent for the period 2004-5 to 2011-12. After registering very high growth of 56.5 per cent in July 2011, export growth started decelerating with a sudden fall to single digits in November 2011 as a result of the emerging global situation and then to negative figures from March 2012. Monthly export growth rates in 2012-13 (April-December) were negative except for a marginal positive growth in April 2012. For three months in 2012-13, exports declined YOY by double digits with the largest decline recorded in July 2012 at -15.1 per cent.

After recovering in 2010-11 from the previous year's fall, India's merchandise imports increased further to US$ 489.2 billion with a growth of 32.3

pe cent in 2011-12. This was due to the increase in growth of petroleum, oil, and lubricant (POL) imports by 46.2 per cent and non-POL imports by 26.7 per cent. POL imports (with a share of 31.7 per cent in India's total imports) registered a high growth mainly due to increase in import price of the Indian crude oil import basket by 31.5 per cent in 2011-12 as against 22 per cent in 2010-11 .

SECTION- II

SURVEY OF LITERATURE

Many theoretical and empirical studies have been undertaken on the process of economic reforms and economic growth in India to identify the major trends and to venture into a new area of research.The prominent among them are as follows:-

1.RAJESH CHADHA AND SANJIB POHIT(1997) evaluates the comparative static effects of selected trade and domestic policy reform on trade,output, domestic prices, economic welfare and the intersectoral allocation of resources using a computable general equilibrium (CGE) model of the Indian economy.The results indicate that the import liberalization enhances the welfare of the economy and that the effect gets further enlarged if exports are also liberalized simultaneously.

2.C.P. CHANDRASEKHAR, JAYATI GHOSH(1999) presents an overview of the reform policies in India. The authors discuss to what extent the crisis in South-East Asia has an effect on the reform process in India, not only in terms of changes in the international markets (trade and capital) but also in terms

of drawing lessons from the crisis in South-East Asia for the reform process in India. The authors conclude that it is necessary in order to understand the reform processes in India to unbundle the different elements of the economic reform process (liberalization, privatization, fiscal policy, monetary policy) and argue that in order for India to have a stronger and more sustainable development path, the reform process in India should be part of a wider set of economic and social policies including trade policies, industrial policies, and social policies.

3.Ramkishan S.Rajan,Rahul Sen (2001) has empirically analysed the impact of India's economic reforms in the 1990s on its international trade linkages with the rest of the world by using Revealed Comparative Advantage developed by Balassa(1965).The paper summarises recent trade reforms in India and documents the extent to which the country has integrated with the global trading system.The results reveal that reforms initiated in 1991 have shown some positive signs in terms of increasing

the growth in India's merchandise trade and its share of World exports,as well as in infusing greater dynamism into the country's overall export structure.

4.DEB KUSUM DAS(2003) attempts to analyse the study on productivity growth and trade regimes.He has assumed that the linkage between trade liberalization and productivity growth as an indicator of industrial performance.The study seeks to expore the nature and magnitude of total factor productivity (TEP) change under different regimes.The standard growth accounting methodology is applied to data compiled from the Annual Survey of Industries for selected 3-digit use based manufacturing sectors over the period 1980-2000.The analysis focuses on the overall period and four sub periods (1980-85,1986-90,1991-95 and 1996-00) to reflect the shifts in trade policy regime.The results find that there is no evidence of change in total factor productivity growth following liberalization of the regime initiated in the early 1990.

5.CHANDANA CHAKRABORTY,PETER NUNNENKAMP(2006)

has analysed empirically the growth implications of FDI in India by subjecting industry-specific FDI and output data to Granger Causality tests with in a panel cointegration framework.On the other hand,the results clearly suggests that the currently prevailing euphoria about FDI in India rests on weak empirical foundations. FDI is unlikely to work wonders in India if only remaining regulations were relaxed and still more industries opened up to FDI.

6.RAM UPENDRA DAS (2011) explores in his paper the important determinants of productivity improvements across a range of different categories.Over recent years India has witnessed wide-ranging economic reforms in her policies governing international trade and FDI flows.Consequently,both trade and FDI flows have risen dramatically since 1991.This paper finds that significant productivity improvements have taken place in the period since 2000.

7.Michele Alessandrini, Bassam Fattouh, Benno Ferrarini,

and Pasquale Scaramozzin (2009) analysed the effects of reform on India's trading structure from 1990 to 2006. Since the early 1990s, India has embarked on economic reforms that have progressively opened up the country to international trade. The paper computes comparative Advantage indicators on the basis of disaggregated trade flow data, And assesses the effects of trade liberalization on the evolution of India's pattern of trade specialization.By using dynamic panel regression analysis, evidence is found that those industries where import tariffs have been reduced the most have experienced the highest increase in specialization.

SECTION – III
METHODOLOGY

The method of analysis has been mainly "descriptive analytic". We have applied simple and multiple regression analysis for annual absolute time series data from 1970-71 to 2011-12. However, in addition to this, other relevant econometrics techniques have also been applied.

(I) TREND ANALYSIS:-

The trend analysis has been carried out by using the regression equation:-

$$Y = b_o + b_1 t + U$$

That is, to regress Y on time itself, where time is measured chronologically. Such a model is called appropriately, the linear trend model and the time variable 't' is known as the trend time variable. If the slope coefficient in the preceding model is positive, there is an upward trend in Y, whereas if it is negative, there is a downward trend in Y.

(II)GROWTH ANALYSIS:-

In order to calculate the growth rate the following regression equation has

been used:-

$$\mathbf{Y_t = Y_0 (1 + r)^t} \qquad \mathbf{(1)}$$

Where,

Y_0 = the beginning value of Y

Y_t = Y's value at time t

r = the compound rate of growth of Y

Taking the natural log of above equation (1) on both sides we obtain:-

$$\mathbf{In\ Y_t = In\ Y_0 + t\ In\ (1 + r)} \qquad \mathbf{(2)}$$

Let, $bo = In\ Y_0$ **(3)**

$b_1 = In\ (1+ r)$ **(4)**

Therefore, the equation (2) can be written as:-

$$\mathbf{In\ Y_t = bo + b_1\ t} \qquad \mathbf{(5)}$$

Now, If we add the error term U to above equation (5), we obtain:-

$$\mathbf{In\ Y_t = bo + b_1\ t + U} \qquad \mathbf{(6)}$$

The above model is like any other linear regression model in that parameters b_0 and b_1 are linear. The only difference is that the dependent variable is the logarithm of Y and the independent variable or explanatory variable is 'time', which will take values of 1,2,3 etc. The above model is also called a semi-log model because only one variable (in this case the dependent variable) appears in Logarithmic form. In a semi-log model the slope co-efficient measures the proportional or relative change in Y for a given absolute change in the explanatory variable. If we multiply this relative change by 100, we obtain the percentage change or the growth rate also called instantaneous growth rate.

INSTANTANEOUS VERSUS COMPOUND GROWTH RATE:-

We know from the equation (4) that

$b_1 = In\ (1+ r)$

Therefore, $Antilog\ (b_1) = (1+ r)$

$r = (Antilog\ b_1 - 1)$

And since r is the compound rate of growth, once we have obtained b_1 (the slope coefficient) we can easily estimate the compound rate of growth of Y by using the following formula:-

Compound Rate of Growth = (Antilog b_1 – 1). 100

The instantaneous growth rate measures the growth rate at a point in time whereas compound growth rate measures the growth rate over a period of time.

(III) DUMMY VARIABLE APPROACH:-

When we use a regression model involving time series data, it may happen that there is a structural change in the relationship between dependent and independent variables. Sometimes the structural change may be due to external force. It is assumed that the effect of policy reform or economic reforms might influence the India's foreign trade and economic growth from 1992-93. Structural stability test has been performed to verify whether there has been any structural change in foreign trade of India or not between Pre (1970-71 to 1991-92) and Post (1992-93 to 2011-12) economic reforms period. We have therefore, included dummy variable in the regression equation both in intercept and slope form. The equation can be written as:-

$$Y = b_0 + b_1 D + b_2 X + b_3 (D.X) + U \qquad (1)$$

Where,

Y = Dependent variable

X = Independent variable

D = Dummy variable

D= 1 (For Post- Reform Period i.e. for the observations beginning in 1992-93)

D= O (Otherwise i.e., for Pre-Reform Period or for the observations through 1991-92)

(Implication of regression equation (1), assuming E (U) = 0, we obtain :-)

$$E (Y/ D=0, X) = b_0 + b_2 X \qquad (2)$$

$$E (Y/ D=1, X) = b_0 + b_1 + b_2X + b_3X$$

$$= (b_0+ b_1) + (b_2+ b_3) X \qquad (3)$$

Which are respectively the mean functions for the pre-reform and post-reform period. Thus, from the single regression (1), we can obtain the two sub periods regression easily, again showing the flexibility of dummy variable technique.

Regression Equation for

Pre- Reform Period $\quad b_0 + b_2X$

(1970-71 to 1991-92)

Regression Equation for Post-Reform Period:-
(1992-93 to 2011-12)

$$(b_0 + b_1) + (b_2 + b_3) X$$

In the regression equation (1) b_1 is the differential intercept and b_3 is the differential slope coefficient, indicating by how much the slope coefficient of the post-reform period differs from the slope coefficient of the pre-reform period. The introduction of Dummy Variable (D) in the additive form enabled us to distinguish between the intercepts of two periods and the introduction of Dummy variable (D) in the interactive or multiplicative form (D Multiplied by the explanatory variable) enables us to differentiate between the slope coefficients of the two periods i.e. pre-reform period and post-reform period. The statistical significance of differential intercept b_1 and differential slope coefficient b_3 indicates structural changes.

SECTION-IV

EMPIRICAL ESTIMATION OF INDIA'S DIRECTION OF TRADE (1970-71 TO 2011-12)

In this section, we have estimated India's direction of trade for the period 1970-71 to 2011-12. We have taken India's exports ,imports,total trade and unit value indices of exports and imports and quantum indices of exports and imports for the computation of India's trade. The original data was with base year 1978-79=100.The indices have been converted into a common base (1999-2000=100) with the help of base shifting method. We have computed the growth rate of India's trade pre and post economic reforms period by using the following regression equation:-

$$\ln X = b_o + b_1 D + b_2 t + b_3 (D.\ t) + U$$

Where, X = Dependent variable (Terms of Trade)

D = Dummy variable

t = Independent variable (Time)

U = Random Disturbance Term

TABLE:-1.2(A) GROWTH RATE OF INDIA'S EXPORTS PRE AND POST ECONOMIC REFORMS PERIOD

	Coefficients-Intercept / Slope	S.E.	t-statistics			
Constant Term	7.750	0.07	101.734*		**R^2**	0.983
Dummy Variable (D)	-1.195	0.24	-4.830*		**Adjusted R^2**	0.982
Time (t)	0.097	0.00	16.616*		**Standard Error of the Estimate**	0.1730
Interaction of Dummy & Time (D. t)	0.041	0.00	4.450*		**F-value**	717.690*

Regression Equation for Pre-Reform Period (1970-71 to 1991-92)	7.750+0.097 t	**I.G.R**	9.7%
		C.G.R	10.1%
Regression Equation for Post-Reform Period (1992-93to 2011-12)	6.555+0.138 t	**I.G.R**	13.8%
		C.G.R	14.7%

t* & F* Statistically Significant at 5% level of Significance

TABLE:-1.2(B) GROWTH RATE OF INDIA'S IMPORTS PRE AND POST ECONOMIC REFORMS PERIOD

	Coefficients-Intercept / Slope	**S.E.**	**t-statistics**			
Constant Term	7.911	0.10	72.806*		**R^2**	0.968
Dummy Variable (D)	-1.755	0.35	-4.986*		**Adjusted R^2**	0.966
Time (t)	0.110	0.00	13.236*		**Standard Error of the Estimate**	0.2462
Interaction of Dummy & Time (D. t)	0.049	0.01	3.739*		**F-value**	378.208*
Regression Equation for Pre-Reform Period (1970-71 to 1991-92)			7.911+0.110 t		**I.G.R**	11%
					C.G.R	11.6%
Regression Equation for Post-Reform Period (1992-93to 2011-12)			6.156+0.159 t		**I.G.R**	15.9%
					C.G.R	17.2%

t* & F* Statistically Significant at 5% level of Significance

TABLE:-1.2(C) GROWTH RATE OF INDIA'S TOTAL TRADE PRE AND POST ECONOMIC REFORMS PERIOD

	Coefficients-Intercept / Slope	S.E.	t-statistics			
Constant Term	8.539	0.09	93.637*		**R^2**	0.977
Dummy Variable (D)	-1.510	0.29	-5.113*		**Adjusted R^2**	0.975
Time (t)	0.104	0.00	14.956*		**Standard Error of the Estimate**	0.206
Interaction of Dummy & Time (D. t)	0.046	0.01	4.135*		**F-value**	521.017*
Regression Equation for Pre-Reform Period (1970-71 to 1991-92)			8.539+0.104 t		**I.G.R**	10.4%
					C.G.R	10.9%
Regression Equation for Post-Reform Period (1992-93to 2011-12)			7.029+0.15 t		**I.G.R**	15%
					C.G.R	16.1%

t* & F* Statistically Significant at 5% level of Significance.

TABLE:-1.2(D) GROWTH RATE OF INDIA'S UNIT VALUE EXPORTS PRE AND POST ECONOMIC REFORMS PERIOD

	Coefficients-Intercept / Slope	S.E.	t-statistics			
Constant Term	3.501	0.16	20.932*		**R^2**	0.725
Dummy Variable (D)	4.004	0.54	7.391*		**Adjusted R^2**	0.703
Time (t)	0.090	0.01	7.067*		**Standard Error of the Estimate**	0.379
Interaction	-0.164	0.02	-8.052*		**F-value**	32.546*

of Dummy & Time (D. t)						
Regression Equation for Pre-Reform Period (1970-71 to 1991-92)			3.501+0.090 t		I.G.R	9%
					C.G.R	9.4%
Regression Equation for Post-Reform Period (1992-93to 2011-12)			7.505-0.074 t		I.G.R	-7.4%
					C.G.R	-7.6%

t* & F* Statistically Significant at 5% level of Significance

TABLE:-1.2(E) GROWTH RATE OF INDIA'S UNIT VALUE IMPORTS PRE POST ECONOMIC REFORMS PERIOD

	Coefficients-Intercept / Slope	S.E.	t-statistics			
Constant Term	3.199	0.15	21.197*		R^2	0.748
Dummy Variable (D)	2.901	0.48	5.935*		Adjusted R^2	0.727
Time (t)	0.091	0.01	7.956*		Standard Error of the Estimate	0.341
Interaction of Dummy & Time (D. t)	-0.128	0.01	-6.976*		F-value	36.584*
Regression Equation for Pre-Reform Period (1970-71 to 1991-92)			3.199+0.091 t		I.G.R	9.1%
					C.G.R	9.5%
Regression Equation for Post-Reform Period (1992-93to 2011-12)			6.1-0.037 t		I.G.R	-3.7%
					C.G.R	-3.7%

t* & F* Statistically Significant at 5% level of Significance

TABLE:-1.2(F) GROWTH RATE OF INDIA'S QUANTUM EXPORTS PRE AND POST ECONOMIC REFORMS PERIOD

	Coefficients-Intercept / Slope	S.E.	t-statistics			
Constant Term	3.488	0.13	25.584*		R^2	0.717
Dummy Variable (D)	1.712	0.39	4.301*		Adjusted R^2	0.694
Time (t)	0.051	0.01	4.689*		Standard Error of the Estimate	0.301
Interaction of Dummy & Time (D. t)	-0.062	0.01	-3.909*		F-value	31.273*
Regression Equation for Pre-Reform Period (1970-71 to 1991-92)			3.488+0.051 t		I.G.R	5.1%
					C.G.R	5.2%
Regression Equation for Post-Reform Period (1992-93to 2011-12)			5.2-0.011 t		I.G.R	-1.1%
					C.G.R	-1.1%

t* & F* Statistically Significant at 5% level of Significance

TABLE:-1.2(G) GROWTH RATE OF INDIA'S QUANTUM IMPORTS PRE AND POST ECONOMIC REFORMS PERIOD

	Coefficients-Intercept / Slope	S.E.	t-statistics			
Constant Term	3.680	0.20	17.818*		R^2	0.496
Dummy Variable (D)	2.609	0.60	4.325*		Adjusted R^2	0.455
Time (t)	0.069	0.01	4.193*		Standard Error of the Estimate	0.456
Interaction of Dummy & Time (D. t)	-0.111	0.02	-4.607*		F-value	12.149*

Regression Equation for Pre-Reform Period (1970-71 to 1991-92)	3.680+0.069 t	**I.G.R**	6.9%
		C.G.R	7.1%
Regression Equation for Post-Reform Period (1992-93to 2011-12)	6.289-0.042 t	**I.G.R**	-4.2%
		C.G.R	-4.2%

t* & F* Statistically Significant at 5% level of Significance

The table 1.2(A)shows that the differential intercept and differential slope coefficients are statistically significant. The value of R^2 and adjusted R^2 is quite high and F-test is also found to be statistically significant at 5 percent level of significance. From the regression equations for pre-reform period and post-reform period we find that the intercept term is significantly positive for both the periods but it is slightly greater for the pre-reform period as compared to the post-reform period. On the other hand, the slope-coefficient is found to be significantly positive for both the periods but it is slightly greater during the post-reform period as compared to the pre-reform period.

The table further reveals that compound growth rate of India's Exports is found to be 10.1 percent during the pre-reform period
but it is found to be 14.7 percent during the post-reform period. It implies that the India's Exports has consistently improved during the post-reform period as compared to the pre-reform period.

The table 1.2(B)shows that the differential intercept and differential slope coefficients are statistically significant. The value of R^2 and adjusted R^2 is quite high and F-test is also found to be statistically significant at 5 percent level of significance. From the regression equations for pre-reform period and post-reform period we find that the intercept term is significantly positive for both the periods but it is slightly greater for the pre-reform period as compared to the post-reform period. On the other hand, the slope-

coefficient is found to be significantly positive for both the periods but it is slightly greater during the post-reform period as compared to the pre-reform period.

The table further reveals that compound growth rate of India's Imports is found to be 11.6 percent during the pre-reform period but it is found to be 17.2 percent during the post-reform period. It implies that the India's Imports has consistently improved during the post-reform period as compared to the pre-reform period.

The table 1.2(C) shows that the differential intercept and differential slope coefficients are statistically significant. The value of R^2 and adjusted R^2 is quite high and F-test is also found to be statistically significant at 5 percent level of significance. From the regression equations for pre-reform period and post-reform period we find that the intercept term is significantly positive for both the periods but it is slightly greater for the pre-reform period as compared to the post-reform period. On the other hand, the slope-coefficient is found to be significantly positive for both the periods but it is slightly greater during the post-reform period as compared to the pre-reform period.

The table further reveals that compound growth rate of India's Total trade is found to be 10.9 percent during the pre-reform period but it is found to be 16.1 percent during the post-reform period. It implies that the India's Total trade has consistently improved during the post-reform period as compared to the pre-reform period.

The table 1.2(D) shows that the differential intercept and differential slope coefficients are statistically significant. The value of R^2 and adjusted R^2 is quite high and F-test is also found to be statistically significant at 5 percent level of significance. From the regression equations for pre-reform period and post-reform period we find that the intercept term is significantly positive for both the periods but it is slightly greater for the post-reform period as compared to the pre-reform period. On the other hand, the slope-coefficient is found to be negative in post-reform period, whereas

it is significantly positive in pre-reform period.

The table further reveals that compound growth rate of India's Unit value index of exports is found to be 9.4 percent during the pre-reform period and it is found to be 7.6 percent during the post-reform period which shows that Unit value index of exports is higher in the pre reform period as compare to post reform period.

The table 1.2(E) shows that the differential intercept and differential slope coefficients are statistically significant. The value of R^2 and adjusted R^2 is quite high and F-test is also found to be statistically significant at 5 percent level of significance. From the regression equations for pre-reform period and post-reform period we find that the intercept term is significantly positive for both the periods but it is slightly greater for the post-reform period as compared to the pre-reform period. On the other hand, the slope-coefficient is found to be negative in post-reform period, whereas it is significantly positive in pre-reform period.

The table further reveals that compound growth rate of India's Unit value index of exports is found to be 9.5 percent during the pre-reform period and it is found to be 3.7 percent during the post-reform period which shows that Unit value index of exports is higher in the pre reform period as compare to post reform period.

The table 1.2(F) shows that the differential intercept and differential slope coefficients are statistically significant. The value of R^2 and adjusted R^2 is quite high and F-test is also found to be statistically significant at 5 percent level of significance. From the regression equations for pre-reform period and post-reform period we find that the intercept term is significantly positive for both the periods but it is slightly greater for the post-reform period as compared to the pre-reform period. On the other hand, the slope-coefficient is found to be negative in post-reform period, whereas it is significantly positive in pre-reform period.

The table further reveals that compound growth rate of India's Unit value index of exports is found to be 5.2 percent during

the pre-reform period and it is found to be 1.1 percent during the post-reform period which shows that Unit value index of exports is higher in the pre reform period as compare to post reform period.

The table 1.2(G) shows that the differential intercept and differential slope coefficients are statistically significant. The value of R^2 and adjusted R^2 is quite high and F-test is also found to be statistically significant at 5 percent level of significance. From the regression equations for pre-reform period and post-reform period we find that the intercept term is significantly positive for both the periods but it is slightly greater for the post-reform period as compared to the pre-reform period. On the other hand, the slope-coefficient is found to be negative in post-reform period, whereas it is significantly positive in pre-reform period.

The table further reveals that compound growth rate of India's Unit value index of exports is found to be 7.1percent during the pre-reform period and it is found to be 4.2 percent during the post-reform period which shows that Unit value index of exports is higher in the pre reform period as compare to post reform period.

SECTION – V

CONCLUSIONS AND POLICY IMPLICATIONS

The study clearly indicates that India's Exports,Impots and Total trade have been much more favorable during the post-reform period as compared to pre-reform period.With a rise in both export volume and unit value, export's purchasing power of import has increased India's capacity to import based on exports has increased significantly which in turn has a positive impact on economic growth.Gains in terms of trade for India reflect her diversified export base. Lastly, we may safely conclude that India's trade have shown impressive performance during the post-reform period and also have made a positive contribution to India's economic growth.

For India to become a leading exporter in the world trade it will have to achieve at least 2 percent share of world exports by the year 2020.However,while formulating this vision;let us not be guided by undue conservatism or pessimism.What is required is to only formulate a highly focused strategy and its rigorous implementation to achieve the desired export thrust.India's entry into new markets and robust performance in engineering goods,gems and jewellery and textiles segments are the reason behind the growth spurt.

ANNEXURE-I

INDIA'S EXPORTS , IMPORTS & TOTAL TRADE

(1970-71 TO 2011-12)

Year	Exports	Imports	Total Trade
1970-71	2031.3	2162.3	4193.6
1971-72	2151.9	2441.5	4593.4
1972-73	2568.7	2433.1	5001.8
1973-74	3238.3	3792.6	7030.9
1974-75	4192.1	5690.6	9882.7

1975-76	4648.7	6063.7	10712.4
1976-77	5728.4	5651.7	11380.1
1977-78	6298.6	7011.8	13310.4
1978-79	6960.3	8278.7	15239
1979-80	7926.4	11290.6	19217
1980-81	8484.7	15866.5	24351.2
1981-82	8703.9	15172.9	23876.8
1982-83	9107.6	14786.6	23894.2
1983-84	9449.4	15310.9	24760.3
1984-85	9878.1	14412.3	24290.4
1985-86	8904.5	16066.9	24971.4
1986-87	9744.7	15726.7	25471.4
1987-88	12088.5	17155.7	29244.2
1988-89	13970.4	19497.2	33467.6
1989-90	16612.5	21219.2	37831.7
1990-91	18145.2	24072.5	42217.7
1991-92	17865.4	19410.5	37275.9
1992-93	18537.2	21881.6	40418.8
1993-94	22238.3	23306.2	45544.5
1994-95	26330.5	28654.4	54984.9
1995-96	31794.9	36675.3	68470.2
1996-97	33469.7	39132.4	72602.1
1997-98	35006.4	41484.5	76490.9
1998-99	33218.7	42388.7	75607.4
1999-00	36822.4	49670.7	86493.1
2000-01	44560.3	50536.5	95096.8
2001-02	43826.7	51413.3	95240
2002-03	52719.4	61412.1	114131.5
2003-04	63842.6	78149.1	141991.7
2004-05	83535.9	111517.4	195053.3
2005-06	103090.5	149165.7	252256.2
2006-07	126414.1	185735.2	312149.3
2007-08	162904.2	251439.2	414343.4
2008-09	185295	303696.3	488991.3
2009-10	178751.4	288372.9	467124.3
2010-11	251136.2	369769.1	620905.3
2011-12	261234.2	378978.1	640212.3

SOURCE:-ECONOMIC SURVEY(Various Issues)

ANNEXURE-II

INDIA'S UNIT VALUE INDICES & QUANTUM INDICES OF EXPORTS (1970-71TO 2011-12)

Year	Unit Value Index	Quantum Index
	Exports	Exports
1970-71	34.4	33.0
1971-72	35.1	33.1
1972-73	39.1	37.2
1973-74	47.5	38.8
1974-75	59.5	41.2
1975-76	64.0	45.6
1976-77	68.2	54.1
1977-78	76.6	52.1
1978-79	76.3	55.9
1979-80	80.5	59.3
1980-81	82.8	60.4
1981-82	94.7	61.5
1982-83	100.8	65.2
1983-84	115.3	63.1
1984-85	129.6	67.5
1985-86	130.4	62.2
1986-87	136.9	67.8
1987-88	149.2	78.2
1988-89	177.3	85.0
1989-90	211.1	97.7
1990-91	223.3	108.4
1991-92	282.1	116.5
1992-93	321.8	124.5
1993-94	361.9	143.9
1994-95	377.6	163.5
1995-96	369.6	214.7
1996-97	385.3	230.1

1997-98	449.9	215.6
1998-99	466.9	222.9
1999-00	76.3	55.9
2000-01	77.9	69.8
2001-02	78.6	70.4
2002-03	80.9	83.8
2003-04	87.0	89.9
2004-05	100.0	100.0
2005-06	106.1	115.1
2006-07	120.6	126.8
2007-08	126.7	136.9
2008-09	148.1	149.2
2009-10	149.6	147.5
2010-11	170.2	169.8
2011-12	177.8	175.2

SOURCE:-ECONOMIC SURVEY(Various issues)

The original data of Unit value index and volume index of exports was with base year 1978-79=100. We have converted it into the new base year 1999-2000=100 with the help of base shifting method.

ANNEXURE-III

INDIA,S UNIT VALUE INDICES & QUANTUM INDICES OF IMPORTS(1970-71TO 2011-12)

Year	UNIT VALUE INDEX	QUANTUM INDEX
	Imports	Imports
1970-71	22.5	44.8
1971-72	20.9	53.7
1972-73	21.8	51.1
1973-74	31.1	58.1
1974-75	53.8	51.5
1975-76	63.1	50.7
1976-77	61.3	50.7
1977-78	56.1	66.7
1978-79	63.7	66.7
1979-80	72.7	77.6

1980-81	85.5	91.9
1981-82	84.8	100.4
1982-83	86.8	103.1
1983-84	80.1	123.6
1984-85	103.0	104.1
1985-86	101.1	121.5
1986-87	88.8	141.5
1987-88	101.9	136.5
1988-89	118.2	149.5
1989-90	145.5	151.9
1990-91	170.5	158.5
1991-92	196.9	152.0
1992-93	210.8	188.0
1993-94	208.4	219.4
1994-95	206.8	272.2
1995-96	223.6	343.2
1996-97	254.6	341.2
1997-98	257.5	374.7
1998-99	259.7	429.3
1999-00	63.7	55.9
2000-01	69.4	55.3
2001-02	71.3	57.5
2002-03	81.5	60.9
2003-04	84.1	71.5
2004-05	100.0	83.8
2005-06	114.0	97.2
2006-07	131.2	106.7
2007-08	133.8	121.8
2008-09	152.2	146.4
2009-10	136.9	160.9
2010-11	154.8	173.7
2011-12	165.7	180.1

SOURCE :- ECONOMIC SURVEY (Various issues)

The original data of Unit value index and volume index of exports was with base year 1978-79=100.We have converted it into the new base year 1999-2000=100 with the help of base shifting method

REFRENCES

Ahluwalia, M.S., (2002), "Economic Reforms in India Since 1991: Has Gradualism Worked?", Journal of Economic Perspectives, vol. 16, no. 3, Summer.

Athreye, S., S. Kapur, (2006), "Inudstrial Concentration in a Liberalising Economy: A Study of Indian Manufacturing", Journal of Development Studies, vol. 42, no.6.

Bajpai, N., (2002), "A Decade of Economic Reforms in India: the Unfinished Agenda", CID Working Paper No. 89, Center for International Development at Harvard University.

Balasubramanyam, V.N., V. Mahambre, (2001), "India's Economic Reforms and the Manufacturing Sector", Lancaster University Working Paper 2001/010.

Banga, R., (2005), "Liberalization and Wage Inequality in India", ICRIER Working Paper no. 156, Indian Council for Research on International Economic Relations.

Basu, K. (ed.), (2004), India's Emerging Economy, Oxford University Press, Delhi.

Chaudhuri, S. (2002), "Economic Reforms and Industrial Structure in India", Economic and Political Weekly, January, p.155-162.

Das, Deb Kusum, (2003), "Quantifying Trade Barriers: Has Protection DeclinedSubstantially in Indian Manufacturing?", ICRIER Working Paper no. 105,Indian Council for Research on International Economic Relations.

Das, Deb Kusum, (2003a), "Manufacturing Productivity Under Varying Trade Regimes:India in the 1980s and 1990s", ICRIER Working Paper no. 107.

Goldar, B., (2003), "Trade Liberalisation and Real Wages in Organized Manufacturing Industries in India", IEG Discussion Paper 63/2003, Institute of Economic Growth, Delhi.

Goldar, B., (2004), "Productivity Trends in Indian Manufacturing in the Pre- and Post-Reform Periods", ICRIER Working Paper no. 137.

Goldar, B., (2005), "Impact on India of Tariff and Quantitative Restrictions under WTO",ICRIER Working Paper no. 172, Indian Council for Research on International Economic Relations.

Goldar, B., S.C. Aggarwal, (2004), "Trade Liberalization and Price-Cost Margin inIndian Inudstries", ICRIER Working Paper no. 130, Indian Council for Researchon International Economic Relations.

Kambhampati, U.S., A. Parikh, (2003), "Disciplining Firms? The Impact of TradeReforms on Profit Margins in Indian Industry", Applied Economics, 35(4).

KPMG (2005), "Manufacturing in India: Opportunities, Challenges and Myths", PDF

Krishna, P., D. Mitra, (1998), "Trade Liberaliztion, Market Discipline and Productivity Growth: New Evidence from India", Journal of Development Economics, 56(2).

Nambiar, R.G., B.L. Mungekar, G.A. Tadas, (1999), Is Import Liberalisation Hurting Domestic Industry and Employment?", Economic and Political Weekly, February,p. 417-424.

Panagariya, A., (2004), "India in the 1980s and 1990s: A Triumph of Reforms", IMF Working Paper 04/43, International Monetary Fund.

Pandey, M., (2004), "Impact of Trade Liberalisation in Manufacturing Industry in India in the 1980s and 1990s", ICRIER Working Paper no. 140, Indian Council forResearch on International Economic Relations.

Pursell, G., (1988), "Trade Policies and Protection in India", The World Bank,Washington, DC.

Siggel, E., (2007), "Economic Reforms and their Impact on the Manufacturing Sector: Lessons from the Indian Experience", Asia Pacific Development Journal,vol. 14, no.1 (June).

Srinivasan, T.N., (2006), "China, India and the World Economy", Working paper 286,Stanford Center for International Development.

Srinivasan, T.N., S.D.Tendulkar, (2003), Reintegrating India with the World Economy,Institute for International Economics, Washington D.C.

Srivastava, V., P. Gupta , A. Datta, (2001), The Impact of India's Economic Reforms on Industrial Productivity, Efficiency and Competitiveness: A Panel Study of Indian Companies, 1980-97, Report, National Council of Applied Economic Research,New Delhi.

Tewari, M., (2008), "The Role of Price and Cost Competitiveness in Apparel Exports,Post-MFA: A Review", ICRIER Working Paper no. 173, Indian Council for Research on International Economic Relations

Tata Services Limited, (TSL, 2003), Reforms and Productivity Trends in IndianManufacturing Sector, Department of Economics and Statistics, Tata Services Ltd. Mumbai.

Topalova, P., (2009), "Trade Liberalization and Firm Productivity: The Case of India",IMF Working Paper 04/28, International Monetary Fund.Unel, B., (2003), "Productivity trends in India's Manufacturing Sectors in the last two Decades", IMF Wrking Paper no. WP/03/22.

World Bank, (2011), India: Investment Climate and Manufacturing Industry.