CHAPTER 6

<u>CONCLUSION</u>

6.1 CONCLUSION

6.2 AREA FOR FURTHER RESEARCH

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CONCLUSION

The subject of our interest was to examine the role of India's external trade in the overall economic growth of India. In the 1950's and 1960's India's belief was that through domestic production it can fullfill its home requirements. However faced the internal constraints like economic efficiency and technological standards and other compulsions like rapid industrialisation. This was coupled with the external constraint of falling demand for Primary Products which was taken for granted as foreign exchange earner to meet the import requirements. Hence this called for definite attempts to induce larger openness in the structure of the domestic economy to make it internationally competative. This was witnessed in the liberalisation policy initiated since 1980's and more rigorously from 1990's onwards. While the attainment of the national self-sufficiency remains as the chief goal under the new strategy as under the earlier regime, the only difference is that the modalities of functioning has undergone a change.

Hence we devoted our attempt in analysing the trend and structure of India's foreign trade and their degree of responsiveness to changes in the India's trade policy. Further chapter is motivated by the need to explore the nexus between trade regimes and economic growth through an assessment of the import-growth connection in case of India, since an investigation of the import-growth linkage could provide some clue to the mechanism through which exports generate the generally observed positive effect on growth. Finally the supply-side and demand-side factors in case of India can be better understood by concerting detailed analysis of the relationship between Trade, Growth and Productivity. Moreover there is growing literature stating that trade liberalisation improved productivity and thereby entailed growth.

In this chapter we offer the main findings of the study attempted on each of the objective identified by the preceding chapters and area for further research are presented accordingly.

In chapter II, we explore the extensive literature on Trade and Growth. The chapter initiates into the theoretical underpinings of trade theory and growth theory. How far the assumption filled orthodox trade theories can treat the dynamic complexities of an economy, specially while fostering relationship in the external spehere. The chapter bringsforth the importance of the issue relative to economic growth of less-developed countries, and the divergence between the classical, neo-classical and some other points of view in their asses of the relationship between foreign trade regimes and economic performance. The empirical findings available on the relationship between trade and growth with reference to different countries of the world suggests an existence of bi-directional causality between exports and GNP, or uni-directional, or exports and GNP are independent of each other. A similar diverging association between exports and growth is noted in the empirical findings by different authors.

The period from 1950-51 to 1959-60 was Import substitution and Import substitution cum Export promotion oriented policy governing the period 1960-61 to 1978-79 and finally Export promotion oriented trade policy from 1979-80 to 1995-96. The chapter III presents the Structure of India's Trade over the period 1960-61 to 1995-96. The purpose is to examine broadly the emerging trends in Exports and Imports at aggregate and disaggregate level in current and constant price over the period of 36 years. By classifying the commodities of Exports and Imports from section 0 to section 8 as per the S.I.T.C. (Revision 2), it provides an insight into the changes in economic structure of trade. This is possible by examining the trend in the growth of the different categories of goods; changes in the significance of each category of commodity measured by their share in the primary and manufactured goods.

In this chapter we have examined the overall behavior in the trend of exports and imports, how much they are associated with the National Income and measures the self-reliance (i.e. the percentage of imports financed by export earnings). The data corresponding to the purpose highlighted above is reported from Table II.1 to Table II.12. The Table II.1 presents the big leap forward from Rs1763.94 crores in current price and Rs7069.85 crores at constant price (Base: 1978-79 = 100) in 1960-61 to Rs2. 29,031 crores in current price and Rs57, 085.51 crores at constant price (Base: 1978-79 = 100) in 1995-96, achieved by India's foreign trade in the course of 35 years. The impressive

growth of India's foreign trade had to be reflected in GNP$_{MP}$ of the country. This can be observed in Table II.2. whereby the share of exports in GNP$_{MP}$ at current price and constant price during the period 1960-61 to 1994-95, increased from paltry 3.98% to a high of 11.38% and 4.72% to 7.73% respectively. Similarly, the share of imports in GNP$_{MP}$ at current price and constant price during the period 1960-61 to 1994-95, surged upward from 6.95% to 13.12% and 8.78% to 16.88% respectively. It is of significant importance to examine that the growing divergence in the share of exports and imports in the GNP$_{MP}$ is sustainable. Hence the export/import ratio reported in table II.3 and table II.4 narrates that the exports earnings which constituted 57.27% of imports in 1960-61, could finance 95.42% in 1993-94. Similarly in real terms the index of self-reliance rose from 53.69% to 74% in 1991-92. This conclusively qualifies that exports and imports over the years have increasingly grown amenable.

An exercise to understand the trend in exports is presented in table II.5, II.6, II.7, and II.8. Which shows that exports increased from Rs642.32 crores in 1960-61 to Rs1, 06,353 crores 1995-96. Although the rate of growth of exports was positive except a couple of years, reflects a fluctuating trend from 2.81% in 1961-62 to 31.92% in 1974-75. It was only from 1986-87 onwards that a steady robust growth rate was achieved as it turned upward from 14.3 % to 28.64% in 1995-96. Similarly, the exports in real terms provided earnings from Rs2469.95 crores in 1960-61 to Rs21926.97 crores in 1995-96. Whereas the rate of growth fluctuated widely from 1960-61 to 1985-86 and from 1986-87 onwards it presents a general upward rising trend.

With respect to imports, table II.9, II.10, II.11 and II.12, provides the changing trend in value and percentage terms. The value of imports in current price rose from Rs1121.62 crores in 1960-61 to Rs1, 22, 678 crores in 1995-96, whereas the rate of growth defined a general upward trend from 1987-88 onwards. Similarly the value of imports at constant price marked an increase in expenditure from Rs4599.9 crores in 1960-61 to Rs35, 158 crores in 1995-96, but the growth rate experienced an undeterministic trend over the years due to wide fluctuations.

As we read into the behaviour of the trend of exports and imports, a common feature that emerges is that although the liberalisation was initiated in1979-80, but it was

only from the second three-yearly import export policy (1988-91), could bring about tangible gains in the value of exports and imports. In pursuance of the first three-yearly (April 1985-March 1988) import and export policy, the government initiated a series of measures aimed at trade liberalisation.

In order to examine the structural change it is important to examine the developments experienced by the commodities categories as Primary (Section 0 to Section 4) and Secondary (Section 5 to Section 8) in the overall exports/imports. With the industrialisation and the economic growth over the years, it is expected that the significance of manufactured goods to overweigh the primary goods in the trade basket. Such an observation is provided in Table II.13. A very important observation that emerges is that alongwith the share of manufacturer exports becoming sizeable, the share of manufactured imports has also grown in significance over the years this fact can be read from the Table II.18.

At a further disaggregate level within the Primary Products, it can be noted in table II.14 that the combined share of Food and Live Animals (section 0) and Crude Materials, Extd. Fuels (section 3) were 90.40% in 1960-61 and it has relatively remained steady at 87.76% in 1995-96. A similar observation can be done in table II.16 were the combined share of Food and Live Animals (section 0) and Crude Materials, Extd. Fuels (section 3) were 85.99% in 1960-61 and marginally rose to 90.55% in 1995-96 in the Total of Primary exports in real terms. It is interesting to note in table II.19 and table II.21 the imports of primary product performance at disaggregate level. The combined share of Food and Live Animals (section 0) and Crude Materials, Extd. Fuels (section 3) significantly declined from 83.13% (79.28%) in 1960-61 to 27.26% (24.95%) to 1995-96 at current (constant) prices. The commodity of new significance was Mineral Fuels (section 3), which increased from a low of 15.64% (19.86%) in 1960-61 to 66.39% (67.74%) at current (constant) price.

At the disaggregate level within the Export of Manufactured Products, table II.15 and table II.17 shows that Basic Manufactures (section 6) share was 90.68% (94.21%) in 1960-61. which sharply declined to 52.27% (45.76%) in 1995-96. Whereas the share of

Miscellaneous Manufacturers (section 8), shows a rise from 4.35% (3.59%) to 26.55% (21.55%) at current price (constant price) during the same period.

The scenario for the Import of Manufactured goods is reported in table II.20 and table II.22. The combined share of Basic Manufacturers (section 6) and Machinery and Transport equipment (section 7) decreased from 84.60% (91.37%) in 1960-61 to 70.16% (79.83%) in 1995-96 at current (constant) price.

Finally we have examined the impact of trade policy on the trend of exports and imports at aggregate and disaggregate level in current price and constant price for the period 1960-61 to 1995-96. For this objective as explanatory variable we deploy dummy variables to serve as a proxy for liberalisation since 1978-79, the value of which was taken as zero for the years prior to it and one for the rest of the period since 1978-79. Further by using the dummy variables once again we tried to capture the insight into the impact of the broader policy reforms undertaken since 1990-91 as compared to the period of beginning of India's liberal policy initiation i.e. 1979-80 to 1989-90. To achieve this the value of one was assigned for the period 1979-80 to 1989-90 and zero was taken for the remaining years of 1960-61 to 1995-96. In the same equation another explanatory dummy variable was added, were the value of one was assigned for the period 1991-92 to 1995-96 and for the entire rest of the years from 1960-61 to 1995-96 was represented by zero. The results yielded were roboust for the earlier equation, thereby confirming the theoretical belief that the liberalisation phase of 1979-80 to 1995-96 influenced exports positively for all section of commodities classified under S.I.T.C (Revision 2) at current and constant price. The results are statistically significant at 1% level. A similar observation yielded in case of imports for all the sections of commodities classified under S.I.T.C (Revision 2), at current price and constant price. Further test showed that exports and imports at current price and constant price are indeed amenable to policy action initiated since 1979-80 to 1995-96 and broadly from 1992-93 onwards.

In chapter four we have attempted to examine the nexus between Trade and Growth. A trade development model can be composed of namely Import-led Growth and Growth-led Export. By grabbing the developmental stimulant from import of sectoral inputs, basic heavy and infrastructure industries develop with dynamic structural linkage

to industrial, agriculture and infrastructure service sectors. Further the technological flow contributes higher induced income, growth induced employment, efficient allocation of resources, improvement in human capital etc. Equally important is the capital investment, which improves the quality and quantity of the existing physical and human resources and promotes rapid economic development by developing dynamic industrial and non-industrial sectors.

We begin our empirical investigation of the existence of causal relationship between exports and imports at current price for the periods1949-50 to 1995-96, 1960-61 to 1995-96, 1967-66 to 1995-96, 1970-71 to 1995-96 and 1980-81 to 1995-96. The methodology applied is the test of integration, cointegration and , error-correction.

We have summarized our findings Table II.35, Table II.36, Table II.37 and Table II.38. In Table II.35 and Table II.36. From the reading of the Tables it is apparent, almost all of the export and import series under different time periods can be viewed as integrated of order I (0) and have confirmed that the properties of the time series are stationary. The results of the bi-variate Augmented Dickey Fuller test are presented in Table II.37, the null hypothesis of no-cointegration is rejected at 1% level, for the period 1960-61 to 1995-96 and 1970-71 to 1995-96. There appears to be no evidence of a common trend in the movement of the two variable exports and imports incase of other time break-ups.

In order to examining the possible evidence with regard to the bi-directional causality between exports and imports. This requires application of error-correction models to the time series of exports and imports for determining causality. In table II.38 the results of ADF tests are shown in the 10th column. However we fail to reject the null hypothesis of no-causality either from exports to imports or imports to exports.

Further we attempt to examine the causal nexus between exports and imports in real terms (Base: 1978-79) for the following periods 1960-61 to 1995-96, 1967-66 to 1995-96. 1970-71 to 1995-96 and 1980-81 to 1995-96.

The summaries of the findings are presented in Table II.39 and for the imports in the table II.40. In case of exports the null hypothesis of non-stationarity is rejected for the period 1960-61 to 1995-96 at 1% significance level. Whereas for the period. 1967-66 to 1995-96, 1970-71 to 1995-96 at 5% significance level based on Dickey Fuller (DF) test but for the period 1980-81 to 1995-96, we failed to reject the null hypothesis. However in case of imports we failed to reject the null hypothesis for all period breakups analysed. Hence it is essential for the integration and cointegration that the properties of the data on exports and imports are stationary of the same order. Therefore these two series were second-differenced, but the results presented in the table II.41 and table II.42 shows that, non-stationarity cannot be rejected at the 1% and 5% level of significance. Further, we subjected the series of exports and imports to the third order difference, but only for the period 1960-61 to 1995-96 and 1967-68 to 1995-96. The period of 1970-71 to 1995-96 and 1980-81 to 1995-96 was considered since the observation would have becomes too small to derive meaningful results. The results presented in the table II. 43 and table II.44 shows that once again we had to accept the null hypothesis of non-stationarity at 1% and 5% significance level. Therefore, the overall result has to be interpreted that stationarity could not be established at first/second/third order difference. Hence test of cointegration and error-correction cannot be estimated.

Further in the chapter we examine the Causality between Exports/Imports and GNP_{MP}. In this section we try to analyse the type of causality that exist between exports and GNP_{MP}, and imports and GNP_{MP} for the time period 1960-61 to 1994-95, 1967-68 to 1994-95. 1970-71 to 1994-95, 1980-81 to 1994-95. In the Table II.45. Table II.46 and Table II.47 , it is apparent, almost all the three time series of exports , imports and GNP_{MP}, can be viewed as I (0). Given this property it is important to assess whether the variables are also cointegrated. The results are presented in the Table II. 48 and Table II.49 where the ADF test mentioned in the column 8 shows that we fail to reject the null hypothesis of no-cointegration at 1% and 5% significance level. Since exports and imports do not cointegrated with the GNP_{MP}, then we cannot include error-correction model to test the causality.

We extend our purpose to consider the causality issue between exports, imports and GNP_{MP} at constant price (base: 1978-79) for the period 1960-61 to 1994-95, 1967-68

to 1994-95, 1970-71 to 1994-95, 1980-81 to 1994-95 with the aid of cointegration and error-correction modeling. Table II.50, Table II.51 and Table II.52 reports our non-stationary tests for all the time series for the above-mentioned three variables. using the Dickey-Fuller test and its augmented version. The column 8 of the tables shows the asterisks only for exports and GNP_{MP} for the period 1960-61 to 1994-95. showing that the null hypothesis of non-stationarity is rejected at 5% level significance. But in all other category of time, and in case of imports for the entire break up of time periods we fail to reject the hypothesis of non-stationarity at 1% and 5% significance level. Given the stationary properties of the exports and GNP_{MP} for the time period 1960-61 to 1994-95, we run the cointegration equations in both directions. The column 8 of the Table II. 53 show no asterisks, which means that we accept the hypothesis of non-cointegration at 1% and 5% significance level. Therefore we do not test for error-correction, to test for the causality, since the variables do not cointegrated.

In order to find the possibility of stationarity the variables of exports, imports and GNP_{MP} are differenced further and the stationary properties and the order of integration examined. The Table II.54, Table II.55, Table II.56 summarize the results of second order-differenced series tested for stationarity. The absence of asterisk, in case of exports and imports means we fail to reject the hypothesis of non-stationarity. However in case of GNP_{MP} for the period 1960-61 to 1994-95, 1970-71 to 1994-95, 1980-81 to 1994-95 we reject the null hypothesis at 1% significance level and at 5% level significance. But for cointegration test between export and GNP_{MP}, or import and GNP_{MP}, it requires they should be not only stationary but also integrated of same order. Therefore the three variables were third-order differenced but the period considered was only 1960-61 to 1994-95 and 1967-70 to 1994-95 and tested for the properties of stationarity. The Table II.57, Table II.58, Table II.59 summarizes the results, that only exports and GNP_{MP} show the properties of stationarity at 1% level of significance.

Given this property, it is important to ascertain whether the exports and GNP_{MP} are cointegrated. The Table II.60 reports the cointegrating equations relating exports and GNP_{MP} and vice versa. The column 8 of the Table II.60 shows the results of ADF test with no asterisk, means that we fail to reject the null hypothesis of non-cointegration at

1% and 5% significance level. Since we cannot account for cointegration, the error correction model to test the causality becomes invalid in principle

Following were the observations, the results shows that there is no causality between imports and growth neither at current price nor in real terms in case of India. However such a finding is compatible with the findings by Ram Rati (1990), that Import growth nexus is weaker in low-income LDCs than in middle-income group countries a period 1974-85. In another paper by Wall David (1968) also supports our results, were he finds the argument of UNCTAD that there is a "close" or "positive" relationship between import capacity and growth is untenable. He further has shown that there is no evidence of a close association between imports of investment goods and growth. However with reference to India (Krishna Kala, et.al., 1998), shows there is unidirectional relationship from imports to growth in real terms for the period 1960-61 to 1995-96. The results differ on account of choice of methodology. All the variables are in natural logs and in 1990 prices in National currency. Moreover they use ex-ante predictive ability model and marginal predictive ability models to examine the causation.

Our judgment on exports and growth also finds no causality at current price or in real terms. The result finds some resemblance to the findings by Mukherji Smirti (1987), she states, it is evident that in whatever way we might choose to represent export growth and income growth variables, the outcome happens to be same; that is, the case of the Indian economy a higher growth rate in exports has led to a fall in the growth of income over the period 1950-51 to 1980-81. An explanation of this inverse relationship forwarded by her is: (1) "it might be that imports being quite substantial (in fact in most of the years imports have exceeded exports), the desired relationship between growth rate of export and income gets distorted." (2) "In the face of inflated import requirements to make import substitution a success, export growth fails to show the desired effect upon income growth" (Nayyar, 1976). One of the reasons for no link between exports and growth in India is, there has been little demarcation between the sectors catering to domestic demand and exports. In another paper by Jung and Marshall (1985) shows using Granger test of causality could not establish the direction of causality between export and domestic output in India. Sangeeta Prasad, (1995) in her paper shows, no significant link between export and economic growth covering a period of 1960-80. Sukumar Nandi

(1991) in his study finds that causality runs one way i.e. export growth causes growth of national income covering the period of 1960-61 to 1985

Further in a study by Sakiya Khan (1994) examines causal relationship between exports and GDP in real terms for the period 1980-81 to 1992-93, the results shows that in the case of India, export coefficient though positive is found not to be statistically significant. However in another paper using modified Sims test of which Granger and Sims test are special cases, by and large supported the bi-directional causation between income growth and exports growth of India for the period 1950-51 to 1991-92. A similar view in contradiction to our findings is shown by S.K. Mallick (1994), the empirical findings in his paper shows bi-directional causality between exports and economic growth in India 1950-51 to 1993-94.

In chapter five we have been motivated to examine the nexus between Trade, Productivity, and Growth. There has been significant amount of research focusing on quantitative analysis of economic growth in different countries and also on various possible refinements in the methodology for measuring the sources of economic growth. There is a widely held view, in the studies of Bhagwati and Desai (1970) and Bhagwati and Srinivasan (1975) that the inward looking development strategy based on the policies of import control and domestic licensing have led to considerable inefficiency in the industrial sector. Further studies by Goldar (1986.b) and Ahluwalia (1991) have investigated the impact of trade orientation on the productivity growth for the Indian Industry during the 1970s and 1980s. Their studies concluded that the prevailing trade policies did play a role in the observed TFP growth rates for Indian manufacturing sector.

In this chapter we attempt to examine the probable relationship between Trade, Growth and Productivity. The empirical findings are given below:

(i) The TFP calculated by Isher .Ahluwalia (1991) for the manufacturing sector for the period 1960-61 to 1985-86, and exports were found to be integrated of order I(2). Further by taking these stationary properties we tested for cointegration but couldn't reject the null hypothesis of no-cointegration. A point has to be added that in case of imports and GDP_{MP}, we could not find stationary properties.

(ii) The TFP for the manufacturing calculated by P. Balakrishnan and K. Pushpangadan (1994, 1995), and the recalculated series of Dholakia. B and R. Dholakia (1994) by the above mentioned authors, for the period 1970-71 to 1988-89 and imports were found to be integrated of order I (2). Further by taking these stationary properties we tested for cointegration but couldn't reject the null hypothesis of no-cointegration. Further, the results of DF test shows that in case of exports and GDP$_{MP}$, were found to be of non-stationary properties.

(iii) TFP calculated by J.M. Rao (1996) for the period 1973-74 to 1992-93, exports and GDP$_{MP}$, were found to be of non-stationary properties. Only the imports were found to be integrated of order I (2). For cointegration test two variables has to be integrated of same order.

(iv) TFP calculated for the Manufacturing sector and the Indian Economy by Hajra, S. and Vasudeva, V. (1993) for the period 1970-71 to 1987-88, the exports of manufacturers /Total exports and GDP$_{MP}$, shows that the results of DF test to be of non-stationary properties and imports of Manufacturers and Total imports were found to be integrated of order I(2). For cointegration test two variables has to be integrated of same order.

(v) The TFP calculated for the Agriculture sector by Dholakia. B and R. Dholakia (1993) for the period 1950-51 to 1988-89 and exports of agriculture were found to be integrated of order I(2). Further by taking these stationary properties we tested for cointegration but couldn't reject the null hypothesis of no-cointegration. However we could not find, the imports of agriculture to be non-stationary.

(vi) The TFP calculated by Singh, Tarlok (2000) for the Chemical sector and Machinery and Transport equipment sectors for the period 1974-75 to 1993-94, exports and imports were found to be non-stationary.

The above mentioned results shows that when longer duration period is considered Total Factor Productivity and Exports do test stationary but for short period duration TFP and Imports test stationary. Moreover in some of the cases of short period duration only

Imports tested stationary. But in none of the above cases examined none of the variables were found to have steady state long run equilibrium. Moreover the study failed to establish any causal relationship between Productivity, Output, and Trade Performance in case of India

Our results are consistence with the findings of Ahluwalia (1991). Her study covers the period 1959-60 till 1985-86. She by computing the Chenery measures of the contribution of import substitution to growth for 62 industry groups of manufacturing of India. Using this measures as an explanatory variable in an equation explaining growth in productivity. The study established a negative relationship between Total Factor Productivity Growth and a Chenery measure of import substitution. In another study, Goldar (1986) found that there was a significant negative relationship between TFP growth and import substitution.

The finding summarized in our study above has incorporated the export/import variables are from the period when import substitution was pursued hence the link between productivity and trade performance was difficult to be ascertained.

Further evidence can be sighted from the study of Fujita (1994). Productivity growth rates of manufacturing industries in India were computed for the period 1981-82 to 1987-88. It was observed that productivity growth rates of most labour-intensive industries were higher than those of capital-intensive ones. Further the share of public sector was used as a trade policy, as the increase in the share usually reflects restrictions in attempts at liberalisation. Therefore a negative relationship was obtained between liberalization policies and TFP growth.

It is obvious that in our study we have considered manufacturing exports and imports and even when the Total exports and imports were considered, the period of study above are of 70's and 80's, were the share of Manufactured exports (section 5 to 8) was greater than primary exports (section 0 to 4). Moreover the privatization of public sector was initiated from 1990 onwards and till the end of the decade the reforms has to not been substantially and far reaching. Thereby it is rather difficult to establish a causal relationship between Trade performance and Total Factor Productivity.

6.2   <u>AREA FOR FURTHER RESEARCH</u>

Building up human capital and other complementarities may be important in the link between exports of manufacturers and economic growth. On the other hand, managerial strategies that push for export promotion may be important, too. Though both may yield non-linearities in the link between exports and growth. Such a study can provide a better insight into the causal relationship between exports, imports and growth.