Summary and Conclusions

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Chapter IX
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Introduction

Foreign trade occupies an important place in the economic development of any country. Thus, countries have tried to achieve fastest economic growth by increasing their share of trade in world trade by adopting different trade policy measures. Experience of some of the countries showed that the import substitution policies that prevailed till 1970s were much less successful than the export oriented policies used in some other high growth economies. As a result export promotion policies gained importance. With the introduction of trade liberalisation export promotion measures gained more importance. Trade liberalisation measures, introduced as part of globalisation and liberalisation strategy, aim at reducing barriers of trade and thus to improve export performance.

In developing countries, trade liberalisation occurred much more slowly than the industrialised countries. The infant industry argument was the main hindering factor for the slow adoption of trade openness. But in the early 1980s many developing economies began to dramatically increase manufactured exports and thereby to support export promotion measures but the source and objective of reform were different for various countries. India also adopted liberalisation and globalisation strategies since 1991 and trade liberalisation is one of the important component of these reform measures.

Trade policies in India have undergone significant changes since independence. Till 1970s mainly import substitution policies were prevailed and then export promotion measures gained importance. During 1990s structural adjustment policies were introduced followed by reforms leadings to the removal of high tariff and non tariff barriers. The trade policy measures introduced in the country in the post reform period are expected to have significant impact on the exports. The present study thus selected trade liberalisation and its impact on
exports as it is one of the most important components of reform measures introduced in India since 1991.

The study is mainly with respect to manufactured goods exports which contributes more than 75 per cent of India’s exports. There were studies, which examined the impact of trade reform measures on the exports and imports sectors but most of the studies concentrated at the aggregate level. More clear assessment can be made only when disaggregate level analysis is made. The studies which deal with the various determining factors of exports at the industry and firm level during the reform period is also very few. The significance of the present study is that it examines the impact of the reform as well as the determining factors of exports during the reform period both at the aggregate and disaggregate levels. In the present study, thus, the analysis is done at the aggregate level, industry level (for 15 industries as per ASI) and at the firm level (firms at 7 industries) so as to examine the impact of trade reform.

The main objectives of the study are to examine, the trends in India’s exports, its composition and direction, to analyse the impact of trade reform on aggregate exports, to assess the impact of trade liberalisation on exports of manufacturing industries in India and to analyse the factors that determine the exports of firms under trade liberalisation.

In order to assess the impact of trade reform on the exports of India both at the aggregate and disaggregate level the null hypotheses tested is that trade liberalisation and export performance are unrelated. To test the above hypotheses study has specifically used the following null hypotheses. (a) Trade liberalisation has no impact on aggregate exports (b) Industry level exports and trade liberalisation are unrelated (c) Trade liberalisation has no impact at the firm level.
The period of study is from 1980-2002. For the analysis secondary data have been used and the main data sources used for the study are Director General of Commercial Intelligence and Statistics (DGCI&S), Reserve Bank of India Bulletin, COMTRADE database, database of Annual Survey of Industries, Trade and production Database and PROWESS database of Center for Monitoring Indian Economy (CMIE).

The following methods have been used to assess the impact of trade liberalisation. The study used averages, percentages, intensity, penetration ratios, Cointegration and Error correction models, Granger causality test, multiple regression models and Tobit model.

The Cointegration and Vector Error Correction Model are used for examining the impact of trade reform at the aggregate level. Both demand and supply factors determining export performance are selected for the analysis. The factors considered for the analysis are (a) demand factors – REER and world demand and (b) supply factors- Relative price, capability to export, domestic demand, and foreign direct investment. Three alternative measures of trade policy are used in the analysis, i.e., openness, tariff and trade liberalisation dummy.

The impact of trade policy on the export performance of fifteen manufacturing industries is examined using multiple regression models. Fifteen manufacturing industries in India according to Annual Survey of Industries (ASI) classification are selected for the analysis. The period of study is from 1980 to 2000. Though ASI does not provide data on trade performance, it is matched using the Trade and Production database using the concordance table to match the ASI and Trade and Production database. The variables selected for industry level analysis are output, wage per unit of value added, input output ratio, import
penetration and trade policy variables like openness and dummy for liberalization.

The disaggregate level analysis of impact of trade liberalisation is done at firm level for seven industries. The industries, which have highest export intensity, are selected for the analysis. They are food, textiles, machine, metal, non metallic mineral products, transport and chemical industry. Firm level data are collected from PROWESS database provided by CMIE for the period 1989 to 2002.

The number of firms selected in each industry for the whole period are food industry (5003), textiles (5799), chemicals (9690), non metallic mineral products (2360), metal products (4144), machinery (7457) and transport (2309). The highest number of firms is in chemical industry followed by Machinery.

The firm level analysis examines the impact of trade reform on the export intensity as well as the factors determining exports at the firm level during the pre and post liberalisation periods.

The variables selected for the analysis of firm level exports are sale, (proxy for size), R&D expenditure, total royalty expenditure, foreign promoter share, product differentiation, raw material import, technological payment abroad, profitability and liberalisation dummy. Each of these factors is taken as a percentage to sale, i.e., intensity of each factor is taken as the determining factors of exports at firm level. The exports is also measured as export intensity, ie, exports as a percentage of sale. In order to examine the impact of changes in the size of firm after a threshold non linear form of size is also considered. The method used to examine the impact of liberalisation at firm level is Tobit model.

The trade policy measures introduced in India are documented in chapter four. This chapter examines the major policy changes that occurred in tariff, foreign direct investment and exchange rate. India’s foreign trade policy during
the last five decades may be classified as import substitution policy and export promotion policies. The import substitution policy was followed in the first two decades, export drive policy in third and fourth decades and export acceleration policy in 1990s. Prior to economic reform in 1991 India operated a system of Quantitative Restrictions (QRs) through an import licensing regime. Other export promotion measures like deemed export, duty entitlement passbook scheme, duty free replenishment certificate etc were simplified and rationalised during the reform period.

The most important characteristics of trade policy reform introduced since 1991 were removal of Quantitative Restrictions (QRs) and tariff rationalisation. The average tariff was 150 per cent in 1991-92 and reduced to 50 per cent in 1998-99. The average unweighted tariff was reduced from 100 per cent in 1986 to 33 per cent in 2002, but it is still higher than other countries. The process of removal of QRs has been completed with the removal of restriction of 1429 items in 2001.

Until the reform of 1991, inflow of foreign capital to India was very low. During the post liberalisation period limits on Foreign Direct Investment (FDI) in certain specified section were raised. But even now inflow of FDI in India is very low and constitutes a very small share in GDP (about 0.70 per cent in 2002). Outflow of FDI is also very low. The inward FDI performance index is less than one for India, which shows that India receives less FDI relative to economic size. Foreign Portfolio Investment in India was negligible till 1993, since then it increased. In order to boost export, Export Processing Zone (EPZ), Free Trade Zone (FTZ), Special Economic Zone (SEZ) and Agri Export Zone (AEZ) were established in different policy regime periods. Exchange rate reform was also introduced and rupee was devalued.
Major findings

The analysis of export performance and impact of trade reform at aggregate, industry, and firm level are examined in chapter 5 to chapter 8. The main conclusions emerged from the analyses are summarised in this section.

The export share of India in world exports increased from 0.54 per cent during 1990 to 0.61 per cent in 1998 and 0.8 per cent in 2002. The annual average growth rate of exports of India, in Dollar terms shows an increase in the post liberalisation period, 9.21 per cent, compared to the pre reform period growth rate of 7.26 per cent. The annual average growth rate of imports of India also increased from 4.25 per cent in 1980-90 period to 10.00 per cent in 1991-2002 period.

The share of manufactured exports increased from 53 per cent in 1970 to 76 per cent in 2001-02. The average share during 1970s was 55.69 per cent and in 1980s the average share increased to 60.69 per cent. During 1990s, the average share was about 75 per cent. Thus, exports share of manufactured goods increased during post liberalisation period compared to the pre liberalisation period. Gems and jewellery, handicrafts, engineering goods and readymade goods are the important contributors to manufactured exports in India. The share of primary product declined from 26.4 per cent in 1987-88 to 16.12 in 2001-02. Thus there occurred a structural change in favour of manufactured goods exports.

The total export contributed only 0.52 per cent of GDP in 1970 and it increased to 1.09 per cent in 1981. The share increased to 16 per cent in 2000-01 period. The manufactured export contributes about 12 per cent of GDP in 2001 and it was 3.37 per cent in 1990. Share of both total exports and manufactured exports in GDP shows an increasing trend during post liberalisation period.

The import growth rate also shows an improvement during 1990s than in 1980s. During 1970s and 1980s import growth rate was higher compared to the
export growth rate. Petroleum and petroleum products constitutes the major share of import to India. Non bulk group constitutes 60 per cent of total import and among non bulk group capital goods has highest share. The bulk imports, which mainly include petroleum and consumption goods, contributes about 40 per cent of imports.

India’s export performance by chapters and sections shows textile and textile articles contributes major share in exports. The export share of India in various countries shows that USA has the highest share of exports. Japan, Germany and UK also serve as the good markets for India’s exports.

Manufactured export performance at disaggregate level on the basis of Standard Industrial Trade Classification (SITC) at three digit level is also examined. The analysis for the extended manufactured product covering SITC code 4 to 8 for six broad categories, resource intensive, labour intensive, scale intensive, differentiated, science based and miscellaneous products as per UN ESCAP classification and reclassified by Tendulkar (1999) is used for the analysis.

Among the resource intensive products, the highest export share is shown by leather product (611) followed by lime cement and construction material (661). The growth rate shows a better performance for most of the products in 1990s. Differentiated product uses sophisticated technology than labour and resource intensive products. The important sector which contributes the major share is telecommunication equipment (724). Most of the products in this sector also show better performance during post reform period. Science based industry uses more sophisticated technology. The sector includes arms and ammunitions, pigment paints, medicines, perfumery, soap, cleaners, polish, etc. Perfumery and cosmetics (553), pigments and paints (533) contribute the major share of exports in this group.
Following conclusions are derived from the analysis of the impact of trade liberalisation at aggregate level exports:

The multiple regression analysis for determinants of exports for total exports with demand factors shows that openness has positive relationship in all models and it has significant impact. World demand shows positive relation in all three models for both post reform and pre reform periods. But it has more significant impact during post liberalisation period. REER shows the theoretically expected negative relation in almost all models. The multiple regression analysis with supply factor shows that relative price and FDI have significant impact during post liberalisation period than pre reform period in most of the models. Capability to exports shows positive impact during both periods. Tariff rate also shows favourable impacts on total exports from India.

The multiple regression model for the determinants of manufactured exports for pre and post reform periods shows world demand, exchange rate and openness have the theoretically expected sign among the demand side factors. World demand shows significant impact during post liberalisation period in manufactured exports. Relative price, capability to export and domestic demand show the theoretically expected sign among supply factors in three models. FDI shows positive and significant impact in almost all the models for the post reform period. Capability to export shows significant impact on India’s manufactured exports in the post reform period. Openness shows positive and significant impact during the post reform period. Tariff rate also has favourable influence on the manufactured exports from India.

The Johansen and Juselius cointegation analyses also show that the variables are cointegrated. Vector Error Correction model shows that for total exports openness index and tariff have significant impact among the demand side factors. Thus among the three alternative trade policy measures used tariff and
openness has significant impact. Error term of liberalisation dummy is not significant in most of the models in total and manufactured exports. Error correction models shows world demand, REER, FDI, capability to exports and relative price have significant impact on total and manufactured exports from India in the long run. Among the trade policy variables openness and tariff have significant impact.

Conclusions derived from the analysis of impact of trade liberalisation on export performance at the industry level have been as follows:

The analysis of industrial characteristics like number of factories, output, value added output, number of employees and wages to the workers shows that most of these variables showed an increase in growth rate in majority of industries during post liberalisation.

The export performance of Indian manufacturing industries shows that the wood, paper and non metallic mineral industries have highest export growth rate during post reform period. The export growth rate of beverage and tobacco, leather and rubber product industries declined during the period of post liberalisation.

The import growth rate of tobacco, leather and metal and alloy industries hiked up during the 1990s than other industries compared to 1980s. The food and food products industry shows the highest growth rate in imports during post liberalisation period.

The export intensity (ratio of export to output) of almost all industries increased during the post liberalisation period. The export intensity is highest in textile industry followed by leather industry.
Import intensity of Indian manufacturing industries also increased in majority of industries since 1980 and shows better performance during 1990s. Import intensity is highest in paper, chemical and rubber product industries.

The import penetration ratio (ratio of import to domestic availability) of most of the industries show an increasing trend in 1990s. The ratio is highest in leather and chemical industries. Import penetration ratio of food and food product and textile industry show a decline during the first half of 1990s.

The analysis shows that for most of the industries trade liberalisation has positive impact. Openness index shows positive impact on all industries. Liberalisation dummy has a negative impact on beverage and tobacco, leather and textile products industry only among fifteen industries. Thus it is concluded that trade liberalisation has positive impact on most of the industries as two alternative trade policy measures used (trade liberalisation dummy and openness) show positive impact for most of the industries.

In most of the industries, output and import penetration ratio show favourable impact. Wage per unit of value added shows positive impact for most of the industries.

The export performance of Indian industries as per the International Standard Industrial Classification (ISIC) is examined at the three and four digit levels in the same chapter. Four digit level industries as per (ISIC) are divided into five categories like labour intensive, resource intensive, scale intensive, science based and differentiated products exports.

The three digit level export performance analysis on the basis of ISIC classification shows that most of the industries have higher export performance during the post reform period. The export intensity of majority of industries has also increased during the post reform period. The highest export intensity is shown by textile, wearing apparels and leather products industry.
The import penetration of Indian industries at the three digit level also shows an increase in growth rate during post liberalisation. The highest penetration is shown by fabricated metal product industry.

The trend and growth rates at four digit level are also examined. The result shows that the growth rate of export and import of majority of resource intensive products increased during 1990s. The export growth rate of labour intensive product also shows that for majority of the products exports increased during the post reform period. The exports of majority of scale intensive and science based products show highest annual average growth rate during pre reform period. Differentiated product also shows an increase in exports performance during the post reform period. But the import performance is not impressive during 1990s for this group.

Following conclusions are derived from the analysis of firm level exports performance

The mean export intensity among firms in selected industries shows that the highest intensity is in non metallic mineral products (18.99) and textiles (18.34) industries. The lowest export intensity is shown by transport (5.86) and machine (6.53) industries.

The factors determining the export intensity of firms during pre and post reform period in various industries show that most of the selected variables have positive and significant impact during the post reform period. Advertisement expenditure, technical and professional fees paid abroad and royalty expenditure have negative impact for most of the firms.

Impact of trade liberalisation on firm level exports is analysed with the Tobit model for firms in seven industries selected. Tobit result for food industry gives that trade reform has positive and significant impact on the export intensity of this industry. Import of raw material goods, professional and technical fees
paid abroad, marketing expenses and profit margin show positive impact on export intensity of food industry. R&D intensity has negative impact on the firm’s exports.

The analysis of the impact of trade liberalisation on the export intensity of textile industry shows that trade reform has positive and significant impact. Import of raw material goods, marketing intensity, profit margin, size and R&D intensity have positive impact.

Trade liberalisation has positive and significant impact on the export intensity of metal industry. Import of raw material goods, technical fees paid abroad and total royalty cost also have negative impact. All other variables have positive impact.

Trade reform has positive and significant impact on the firms in the non-metallic industry. R&D intensity, profit margin, size and import of royalty from abroad have positive impact on the firms in this industry, whereas advertisement intensity, import of raw materials goods and marketing cost have negative impact.

Trade reform has positive and significant impact on transport industry. The advertisement expenditure, import of raw materials, royalty expenses abroad, marketing cost, profitability, sales and R&D intensity show positive influence on the firms in this industry. Among these the market intensity and profitability have significant impact.

Trade reform shows positive impact on exports intensity of machine industry. In the case of firms in machine industry also the advertisement expenditure, R&D intensity, import of royalty know how and import of raw materials show negative impact.
Tobit model of the export intensity of chemical industry shows that trade reform has positive and significant impact on the export intensity. Profitability, royalty expenditure of the firm and R&D expenditure also influenced the export favourably since 1989. Advertisement intensity, import of raw materials, import of royalty and sale have negative impact on the firms in chemical industry.

The impact of trade policy for whole sample firms shows that liberalisation has positive and significant impact on the export intensity. Industry specific variable, total royalty know how expenditure and professional and technical fees paid abroad show negative impact. Foreign promoter share also shows positive impact on most of the firms. Firm level analysis show that trade reform has positive impact on firms in all industries. It also shows significant impact for all selected industries except machine industry.

Conclusions

The analysis of impact of trade reform on India’s exports shows that for most of the commodity groups exports show an increasing trend during the post reform period. Disaggregate level analysis at the industry and firm level also shows an improvement in export performance for majority of the commodity groups and industries. Main objective of the present study is to examine the impact of the trade reform on the export performance of India. The three trade policy measures, liberalisation, openness and tariff rates, used to assess the impact of trade reform show that it has favourable impact in most of the cases. At the aggregate level trade reform have positive impact on total exports and manufactured exports. The industry level analysis concludes that trade policy measures have positive impact for most of the industries. The firm level analysis also shows that liberalisation has positively affected all firms. Hence, in most cases the test statistics accepted the alternative hypotheses of significant impact. The analysis done on the basis of three alternative trade policy variables to
capture impact of trade liberalisation show favourable impact on export performance at aggregate and disaggregates levels. Thus, the study concludes trade reform measures introduced in India have favourable impact on exports.

**Suggestions and Policy Implications**

The analysis shows that trade liberalisation measures introduced have positive impact on exports from India. The growth rate of manufactured goods exports increased during post reform period and the major share of India's exports is contributed by this sector. Though the share and growth rate of major manufactured commodities show an improvement, their contribution in world exports share is very low. The share of exports to India’s GDP is also very low. Country can achieve more export performance by increasing the share of items in world exports, especially the items in which India is more competitive. The following suggestions can be made to improve the export performance of India in the liberalisation era.

With the opening up of the economy country can achieve higher exports by more diversification as the barriers for trade is reduced between countries with the introduction of liberalisation measures. Finding of new suitable markets for India’s manufactured products and at the same time more exports to the traditional markets can increase the share of India’s exports in world exports. Various marketing strategies such as advertisement, quality improvements, product diversification, etc can be used.

Improvement in production methods can also increase the share of exports. Better production technology, improvement in quality of products, infrastructural development, increase in Research and Development expenditure etc can improve the production base of the economy and hence more exports.

Advertisement intensity of Indian industry is very low. Product differentiation strategy has an important role in an open economy and Indian
industries can achieve the benefits of openness by increasing its share of advertisement expenditure. Brand building of products and attractive advertisement can be used for improving the marketing strategy and thereby to increase the world demand.

Adoption of modern technology is desirable for increasing the export performance of the country as Indian industries are still lagging behind in modern technology adoption.

Increase in share of foreign direct investment is also desirable as it shows a positive influence on India’s exports. Foreign promoter share has positive impact on most of the firms and favourable policy towards this factor is desirable as it has an important place in the era of globalisation and liberalisation.

The role and importance of various trade blocks and regional trade agreement have also gained world wide importance with the introduction of trade liberalisation measures. India can also make use of these trade agreements to improve the trade performance.

Export-import policies can be framed so as to improve the export base of the country. Sector specific policies may be included in Exim policies. Special emphasis should be given to export intensive industries in EXIM policies.

India can achieve the goal of one per cent share in world exports by increasing diversification, productivity, product differentiation strategy and adoption of modern technology. Thus utilizing the favourable factors of trade liberalisation measures, like reduction of barriers of trade, export promotion measures etc. competitiveness of India’s exports can be increased. As the exports shows better performance during the post reform period, India can adopt more liberalisation strategies to achieve higher share in world exports as globalisation and liberalisation have become a fact than a reality.