THE DETERMINANTS OF COMMODITY EXPORTS IN INDIA

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Introduction

From the late eighties to early nineties, the Indian economy was going through very hard times. The balance of payments deficits were rising at an alarming rate. The external debt ratio was sharply moving up. The economic process, characterized by high and rising inflation rates was inflicting heavy sacrifices on vast masses of the un indexed poor and middle classes. The period up to 1990 was the most momentous period in India's economy since independence. The overall economic situation was difficult. Economists were describing the economic crisis as being acute and deep and observed that they never experienced anything similar in the history of independent India.

In order to place the economy back on the path of high and sustainable growth, the government introduced Economic Reforms including Liberalization, Privatization, Globalization and Marketization from June 21, 1991. Dr. Manmohan Singh, a reputed economist and the present Prime Minister of India, known as the champion of economic reforms in India, observed that we were creating a macroeconomic environment in which industry speeds ahead with growth rates, generate more jobs and higher levels of wages and incomes through increased productivity. All crises were converted into an opportunity to introduce some fundamental changes in the content and approach to economic policy.

The pattern of export during 1950-1960 was marked by two main trends: 1) among commodities which were directly or largely based on agricultural production such as tea, cotton textiles, jute manufactures, hides and skins, spices and tobacco exports did not increase on the whole; and 2) there was a significant increase were in the exports of raw manufactures like iron ore but these were not significant to offset the decline in traditional exports. In 1950-51, basic primary products dominated the Indian export sector. The primary products were: cashew kernels, black pepper, tea, coal, mica, manganese ore, raw and tanned hides and skins, vegetable oils, raw cotton and raw wool. These products constituted 34 per cent of the total exports. The proportion of intermediate products was slightly higher with 41 per cent. However, these products were agriculture-based low value added. This group consisted of commodities such as cotton piece goods, woolen carpets, gums, resins and lac, gunny bag and gunny clothes. By and large, this trend continued with little variations. There has been an overall rise in the exports of cashew kernels, tea, gums and resins, vegetable oil, raw cotton and gunny clothes.

The rise was not consistent and exports did not show much dynamism. The world demand for many agriculture-based products failed to increase or decline due to cyclical down turn in the global economy. The decade of 1950s also witnessed balance of payments crunch. In the mid-1950s the sterling balance that India acquired during the Second World War got exhausted. The export proceeds were not enough to meet the growing import demand. The decline in agriculture production and growing tempo of development activity added pressure.

The external factors such as the closure of Suez Canal added to the strain on the domestic economy. The crucial problem at that juncture was that of foreign exchange shortage. The Second Five Year Plan with its emphasis on the development of industry, mining and transport had a large foreign exchange component. This strain on the balance of payments necessitated the stiffening of import policy at a later stage. India was also at that time negotiating with the International Bank of Reconstruction and Development (IBRD) in respect of loans to cover the foreign exchange needs of several of its development projects. India was also exploring possibilities of deferred payments in respect of imports of capital goods from various countries.

India started undertaking major economic policy reforms from the year 1991. This has resulted in a significant improvement in the export performance of India. However, the question that arises is as to what has been the change in performance of firms that grew up in a highly protective economic environment prior to 1991. Particularly, has there been any significant change in their export performance. What are different firm level variables that influence export performance? Has there been any change in the extent of the influence of such variables with policy changes compared to the protective policy era before.

Methodology

Period of the Study

The period of the study taken up for the analysis is a period of thirty six years, from the year 1980-81 to 2015-16. The main reason for choosing this period is to know about the impact of New Economic Policy on India's export. The whole study period had been divided into two sub-periods; the pre-reform period (1980-81 to 1990-91) and the post-reform period (1991-92 to 2015-16).

Sources of Data

The author had used only the secondary data for analytical purpose. The data were collected from various sources such as the various issues of Monthly Statistics of Foreign Trade of India, Hand Book of Statistics of Indian Economy, Foreign Trade Statistics of India, International Trade Statistics, and UNCTAD.

Statistical Tools

Statistical tools had used to analyze the collected data and to interpret the findings of the study. The study done by multiple regression analysis using Excel and SPSS version 19.

Determinants of India's Commodity Exports

To access the influence of the India's GDP at factor cost at current prices on India's total commodity exports, the world's population, the export profitability, world's gross domestic product, the relative prices of the others, the exchange rates and the export credit, the following type of the multiple regression model had been adopted in this study.

$$\text{Log } Y_t = \text{Log } \beta_0 + \beta_1 \text{Log } X_{1t} + \beta_2 \text{Log } X_{2t} + \beta_3 \text{Log } X_{3t} + \beta_4 \text{Log } X_{4t} + \beta_5 \text{Log } X_{5t} + \beta_6 \text{Log } X_{6t} + \beta_7 \text{Log } X_{7t} + U_t$$

Where,

Y = Total Commodity Exports

X_1 = GDP of factor cost at current prices

X_2 = World Population

X_3 = Export Profitability, which is the ratio of export unit value index to the domestic wholesale price index captures the profitability of exports. The export unit value indices and the domestic wholesale price indices had been taken with base year 1970-71 as 100.

X_4 = World GDP

X_5 = Relative prices, which measure the degree of price competitiveness and represent the competition between the foreign and the domestic markets. This variable is measured by the ratio of India's export unit value index to world's export unit value index. All indices had been expressed with 1970-71 as the base year (100).

X_6 = Exchange rate of rupee in terms of SDRs.

X_7 = Export Credit

U = Stochastic disturbance term.

$\beta_1, \beta_2, \beta_3 \ldots \beta_7$ = Regression co-efficients.

In the Table 1 the partial coefficients of India's GDP had shown that keeping all other independent variables as constant, a one per cent increase in the GDP had made India's total goods and services exports to rise by 0.45 per cent during the pre-reform period. But during the post-reform period it had increased by 0.56 per cent, and during the whole study period it had increased by 0.51 per cent. Similarly the partial coefficients of the world population were found to be positively correlated with the goods and services exports. The total goods and services exports value had increased by 0.08 per cent during the pre-reform period and by 0.91 per cent during the post-reform period and it had increased by one per cent for the whole period of the study, as the world population increased by one per cent.

Table 1 Determinants of India's Commodity Exports

Variables	Pre-Reform Period	Post-Reform Period	Whole Period of the Study
Constant	11.653	9.412	12.536
X_1	0.451	0.563	0.517
X_2	0.081	0.917	1.008
X_3	-0.419	0.203	0.215
X_4	-1.216	1.745	2.368
X_5	0.532	0.624	0.574
X_6	-0.098	-0.124	-0.103
X_7	0.549	0.418	0.324
R^2	0.97	0.97	0.97
D.W	1.238	2.472	1.508

Source: Authors own calculation.

The partial coefficients of export profitability had shown that they were positively correlated with the value of total commodity exports during the post-reform period and the overall study period. During the post-reform period, total commodity exports had increased by 0.20 per cent and during the whole study period the total exports had increased by 0.21 per cent as the exports profitability had increased by one per cent. Similarly the partial coefficients of world income had shown that they were positively correlated with the value of total commodity exports during the post-reform period and during the whole study period. During the post-reform period total commodity exports had increased by 1.74 per cent and during the whole study period total commodity exports had increased by 2.38 per cent as the world income had increased by one per cent.

The partial coefficients of the relative price were found to be positively correlated with the total commodity exports. As the relative prices increased by one per cent the total commodity exports value had increased by 0.53 per cent during the pre-reform period, by 0.62 per cent during the post-reform period and it had increased by 0.57 per cent during the whole period of the study. Any increase in the exchange rate should accelerate the total commodity export growth, but as a result the partial coefficient of exchange rate would become negatively correlated with that of total commodity exports, which had revealed that the exchange rate of rupee had not produced any impact on India's total commodity exports during the three different periods of the study.

The partial coefficients of the export credit were found to be positively correlated with the total commodity exports. If the export credit increased by one per cent, the total commodity exports value had increased by 0.54 per cent during the pre-reform period, by 0.41 per cent during the post-reform period and it had increased by 0.32 per cent during the whole period of the study.

During the three different periods of the study, the R^2 values were found to be 0.97 which meant that 97 per cent of the changes in the total commodity exports had been explained by the independent variables, namely, GDP, world population, export profitability, world GDP, relative price, exchange rate, export credit.

Conclusion

Indian economy has made rapid strides in the process of globalization; Globalization is increasing the integration of national markets and the interdependence of countries for a wide range of worldwide goods and services. Several factors have engendered such a transition including the liberalization of tariffs and other barriers to exports; autonomous unilateral structural reforms; technological innovations in transport and communications; international development cooperation; and the strategic use of policies, experimentation and innovation. India's export reform programme resulted in strong economic growth in the globalization age. This study analyses the determinants of India's exports. During the three different periods of the study, the total commodity exports had been mostly influenced by the India's GDP, world population, relative prices and the export credit.

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