

# Analysis of factors affecting the performance of exports in India

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## Abstract

Exports is the engine of economic growth of the country that introduce new technologies, stimulate demand, encourage savings and accumulates capital. Further the performance of this sector it depends on factors both in domestic and international. Hence both domestic and international economic policies have a bearing on the overall export performance of India. In this regard, present study has carried out to determine the factors which influence the export performance of India. The outcomes of the study are the Inflation Rate, Real Effective Exchange Rate (REER) and Foreign Direct Investment (FDI) were negative related with value of Export.

## Highlights

- The performance of exports depends on factors both in domestic and international.
- The inflation rate, REER and FDI were negative related with value of Export.

**Keywords:** Export, REER, inflation GDP and economic growth

Export and export policy is the engine of economic growth of the country that introduce new technologies, stimulate demand, encourage savings and accumulates capital. In view of this many developing countries of the world had initiated the process of economic reforms in their economies during 1980s. India like other developing countries during 1990s has launched economic reforms in its economy such as in financial sector, fiscal sector, social sector, public sector, trade sector, etc. On the other hand, establishment of WTO in 1995 has helped the country for greater integration with the world economy was reflected by the trade openness indicator, merchandise trade to gross domestic product (GDP), which increased from 13.90 per cent in 1991-92, to 27 per cent in 2004-5 and further to 41 per cent in 2013-14. However, it moderated to 37.10 per cent in 2014-15 as a result of

subdued exports and imports. The decline owed to sluggish global demand and low global commodity prices, particularly from POL (Petroleum, Oil and Lubricants) exports which contributed about 55 per cent and engineering goods by 24 per cent (Economic survey 2015-16).

The Financial crisis of 2008 it slows down the inflow of capital into the country it affects the economic growth of the country it more pronounced in the export sector it was evident as India's exports which had previously grown at nearly 20 per cent between 2002 and 2008 declined negative 20.30 per cent in 2009-10 further it declined to negative 17.10 per cent in 2014-15. The export is significant contributor of foreign Exchange and National Income. Further the performance of this sector it depends on several factors both in domestic and international. As a consequence of this, domestic



as well as international economic policies have a bearing on the overall export performance of India. In this regard, present study has been taken up with the objective of determining factors which influence the export performance of India.

### Materials and Methods

The primary source of data for this study from Hand book of statistics on Indian economy which was released by RBI in 2012-13 (Reserve Bank of India) covering the 24 year period from 1990-91 to 2014-15. For the present study the various factors were considered based on theoretical knowledge and from literature to analyse the performance of value of exports in India. The factors are Value of exports is taken as a dependent variable while inflation rate, Exchange rate, FDI inflows and USA GDP and Indian GDP were taken as Explanatory variables.

1. **Domestic GDP:** It is important to know whether exports will accelerate the domestic growth and employment. The empirical studies indicated that there existence positive relationship between Export and economic Growth of Country (Nidugala (2000), Thurayia. S, 2004) reveals the contribution of exports in the acceleration of GDP growth Mukherjee, S. and Mukherjee. S. 2012) found that the liberalization of trade policies is helpful in sustaining economic growth and exports cause growth in India.
2. **Real Effective Exchange Rate:** Real exchange rate is commonly known as a measure of international competitiveness. It is also known as index of competitiveness of currency of any country and an inverse relationship between this index and competitiveness exists. Lower the value of this index in any country, higher the competitiveness of currency of that country will be. The studies indicated that the exchange rate has significant negative impact on real exports implying that higher exchange rate fluctuation tends to reduce real exports in India. (Jayachandran, 2013 and John Romali, 2003).
3. **Inflation rate:** Increases in domestic inflation lead to higher prices for exported goods and a decrease in exports as foreign consumers substitute in favour of lower-

priced alternatives produced within their own country or imported from elsewhere. It reveals from empirical estimates that high inflation rate and an abundance of natural resources tended to be associated with a low exports and slow growth (Thorvaldor.G, 1997).

4. **Foreign direct investment:** FDI a potential non-debt creating source of finance and a bundle of assets, viz., capital, technology, market access (foreign), employment, skills, management techniques, and environment (cleaner practices), which could solve the problems of low income growth, shortfall in savings, investments and exports and unemployment. The evidence from the FDI promotes the manufactured exports of recipient countries (Athukorala and Menon 1995; Zhang and Song 2001). Aitken et al. (1997) showed the spill over effect of FDI on export in Bangladesh the entry of single Korean Multinational in apparel industry exports led to the establishment of a number of domestic export firms, creating the country's largest export industry.
5. **USA GDP:** The performance of export sector is highly depends on other countries economic activity. It evident from that the financial crisis of 2008 had a dampening effect on global demand and slowed down capital inflows which affected India's export sector. The impact of this crisis on the export sector was evident as India's exports which had previously grown at nearly 20 percent between 2002 and 2008 plummeted to a negative 20.3 percent in 2009-10.(Economic survey, 2008). Since USA is top destination for our exports it accounts about 13.5% of our total exports. Hence it has taken as proxy variable for global demand.

The implicit model of the regression was as indicated in the equation below:

$$Y = \beta_1 + \beta_2 \text{Inf} + \beta_3 \text{Exch\_rat} + \beta_4 \text{Fdi} + \beta_5 \text{Cou\_GDP} + \beta_6 \text{USA\_GDP}$$

Where,

Y---- Value of Exports (InMillion \$)

- ◆ Inf ---- Inflation rate (in %)
- ◆ Exch\_rat ---- Exchange rate (USA \$/ Rs)

- ♦ Fdi----- Foreign direct investment (in Million Dollars)
- ♦ Cou\_ GDP ---- Country GDP (In Million \$)
- ♦ USA\_ GDP ---- USA GDP (in Million Dollars)

Three production functions namely linear, Cobb-Douglas and semi-log (linlog and loglin) were tried which are depicted as follows:

- ♦ Linear:  $Y = a + \sum b_i X_i + \mu$
- ♦ Cobb Douglas:  $Y = a X_i^b e^{\mu}$
- ♦ Semi log (lin log):  $Y = \ln a + \sum b_i \ln X_i + \mu$
- ♦ Semi log (log lin):  $\ln Y = a + \sum b_i X_i + \mu$

Where,

Y = Value of Exports

X<sub>i</sub> = value of ith explanatory used,

a = intercept term,

$\beta_i$  = partial regression coefficient of the ith explanatory to be estimated

$\mu$  = Random error distributed normally with zero mean and constant variance

e = base of natural log.

The best function was selected on the following economic and statistical and econometric criteria i.e. the value of coefficient of multiple determinations (R<sup>2</sup>), significance level of individual regression coefficients, and the ability of the function to provide economically meaningful results. The Lin log production function was found best fit for taken data keeping in the view of the significance, sign of explanatory variable and value of R<sup>2</sup>.

## Results and Discussion

**Table 1:** Factors Affecting the Performance of Exports in India

Lin log Production function				
Variables	Coefficient	SE	t value	R square
Intercept	14042.38	680143.37	2.06	
Inflation rate	-611.59	73469.85	-0.83	
Real Effective Exchange rate	-2823.80	176307.50	-1.60	0.56
Domestic GDP	6597.23	269899.14	2.44*	
FDI	-611.22	52130.00	-1.17	
USA GDP	932.24	60048.48	1.55	

\* Indicates that significant at 5% LOS

In the empirical analysis, attempts have been made to determine the factors influencing the value of exports in India. The results are displayed in the table 1. The multiple determination model has yielded an R square value of 0.56 which implies that 56 percent of the total variation in value of exports is caused by the repressors involved in the model. The corresponding 'F' statistic is 4.96 and the corresponding P value is 0.004. Hence it is significant at 5% LOS and implies that the model is a good fit for the data.

The regression coefficient of Inflation rate and Exchange rate is equal to -611.59 and -2823 respectively which means if one percent in inflation rate and exchange rate would decrease 611 and 2823 million dollars of value of exports. The results were justified with A priori information since inflation and exchange rate (appreciation of Rupee) makes the goods expensive so it results into lower the exports.

The regression coefficient of FDI (-611) which means that if one percent increase in FDI would decrease 611 million dollars of value of exports. The reason for this is probably because FDI inflows are not leading to spill over into the Indian manufacturing sector since it maximum contributor to total value of exports. This is further supported by Gorg and Greenaway (2004). We cannot entirely blame it on FDI because the Indian macroeconomic policy framework in India has not been concentrating on the manufacturing sector for the past decade or so. The much needed investments to enrich manufactures in India are currently being diverted to other activities such as services (Papola 2005), the reason being 'quick returns' in the service sector as compared to manufacturing. But, developing other areas at the expense of core areas like manufacturing may not be right for the Indian economy in the long-run.

The regression coefficient of USA GDP 932 it indicates that if one percent change in USA GDP would increase the 932 million dollars of value of exports. It is evident from the fact that US still remains the most important destination country for India with US accounting for 13.5% in 2014 of total Indian exports (UAE and China being the second and third most important with shares of 9% and 7% respectively) (Dept. of Commerce, 2015). While if 1% increase domestic GDP then value of export were increase to the extent of 6597 million dollars it is evident from the literature that India's export performance and economic growth are closely inter-



linked. Over time, the export sector has grown to be a significant earner of foreign exchange and a major contributor to India's national income (Shameek Mukherjee 2012).

## Conclusion

To build the resilience of the economy to trade shocks and improve competitiveness of exports, it would be useful for the Government to consider mitigating strategies. The empirical evidence from the study were inflation rate, REER and FDI were adversely affecting the value of exports so GOI should take appropriate measures to keep the inflation under control since in India the inflation is mainly due to fuel and food prices because both are highly volatile in nature it can be better addressed by correcting the supply side constraint.

Most of the studies shows that FDI will accelerate the Volume of exports but our studies indicated that it negatively affecting the exports it mainly because the FDI are currently being diverted to other activities such as services (Papola 2005), the reason being 'quick returns' in the service sector as compared to manufacturing. But, developing other areas at the cost of core areas like manufacturing may not be right for the Indian economy in the long-run. To overcome this Government should reconsider the policy frame work on FDI especially with regard to manufacturing sector since it is highest contributor to total value exports as compare to other sectors.

The export share of EU and USA in India's total exports about 15.7 and 13.5 respectively in 2014-15 while for other countries like Africa and CIS and Baltics it only about 6.7 and 1.2% respectively. Given such heavy reliance on the markets advanced countries the impact of slowdown in these countries is adversely affecting our trade so Government should adopt some strategies like diversification of exports to new geographical destinations and new products.

Our results were justified that there existence of positive relationship between the value of exports and economic growth of the country. Given this fact our value of export were less than 2% of the world share. It evident from the studies conducted by Policy Research Institute show that complex tariff policies and Inverted duty and export credit (3.7% in 2013) is lower when compare to Japan, Canada, USA and China structure is making manufactural products uncompetitive in the international market

and losing its export potential. To build the resilience of the economy to trade shocks and improve competitiveness of exports, it would be useful for the Government to consider mitigating strategies need to strengthen export credit facilities in India and also make it less costly and it simplification in tax structure and custom duties it enables to accelerate our exports.

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