

# A Statistical Examine of Trend Concept in India's Export

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## Abstract—

**I**n this paper export performance of India's evaluating in the structure of India's export, followed the sectoral composition and relative competitiveness of India's Exports. India's Exports have played an increasingly important role in India's economic growth. This statistical study shows that India's Export performance improved during the post reform period and there has been changed in the value, composition and direction of India's Export. Those volume and value of export has increased manifold. India's share in the world export is still not up to the expansion economic reform. This paper analyses the performance of India's Exports and the various economic factors which have contributed to its growth.

**Keywords—** Trend Factors, Exports Criteria, Growth Rate

## I. INTRODUCTION

Exporting is one of the vital methods of globalization with financial progression and environment for globalization of Indian exports has been raised. In a genuinely globalized environment the export will also be very much global the sourcing of finance, materials and managerial input will be global, based on simply business thoughts. In fact in the mid 1950s India's economic position was vastly better than those greater part of the country, among the developing countries, India had a relatively broad based industrial structure and most significant export market share for several commodities. However advantage could not be taken of this position due to absence of an effective export development strategy. India has potential for fundamentally increasing the export of numerous products if appropriate measures are taken. As a matter of fact, in case of number of product several other developing countries which started their export later than India have gone much ahead of India while India's progress has been slow.

Broadly, the vital strategies to increase the export earnings are increase the average unit value realization increase the quantity of export to the existing markets export new products and develop new markets. India which had a worldwide offer of 2.40 % in exchange at the season of autonomy, dropped to insignificant 0.7% in 1991 in view of internal looking arrangement of independence and sending out just the overflow [5]. The adjust of installment emergency in 1991 appropriately realized an adjustment in India Economic theory. This shot brought about opening up the economy and another remote exchange approach that brought about India's to be exchange both stock and administrations reach almost \$ one trillion every year from a unimportant \$70-80 billion in 1991. While India's offer in worldwide stock exchange has gone up to 1.7% in 2013-2014 from 0.7% in 1991, China has gone up to whopping 11.80% from 1.80% in same period. The figure represent themselves, while we have gone far in exchanges since the opening up India has not done what's needed to understand its actual potential.

Sends out have procured included criticalness in the wake of advancement wave clearing over the world. The pattern towards market economy in every one of the nations of world has financial improvement of a nation. For a creating nation, it is basic to develop a sizeable fare overflow. of financial development have a tendency to be related with higher fare development [1]. Starting mid 1991, the Government of India acquainted a progression of changes with change and globalization the Indian economy. The real worry of the legislature in the past was limitation of imports with a view to controlling the exchange shortage and assurance of household businesses against outside rivalry [19]. There are distinctive sorts of measures taken by legislature of India in regards to imports and fare. Imports were, in this manner especially confined by preclusion of imports of numerous couple of things; import authorizing, high import obligations and outside trade limitations. The outside exchange approach was portrayed by the suggestion of negativism [4, 17].

A country that tries to promote growth while ignoring its export performance may succeed in the short-run, but it will be hard-pressed to sustain growth over a long period of time. Thus, it can be concluded that exports are a key factor in the growth process, not one of political astrology but of empirical fact. Reform in the external sector of India was intended to integrate the Indian economy with rest of the world. In this context, the Ninth five year plan (1997-2002) observed, "the process of globalization is a reality which cannot be denied and also should not be avoided." Reforms of trade and exchange rate policy were a critical element in the process of structural reforms. Since the initiation of economic reforms, India's outward orientation has increased considerably [15]. The major trade policy changes in the post-1990s period included simplification of procedures, removal of quantitative restrictions and substantial reduction in tariff rates [2]. A significant development in the current account of balance of payments in the 1990s was the remarkable growth in the exports of invisibles to the rest of world. This was made possible by unfrequented growth in information and communication related services like computer software, hardware, internet, e-commerce and telecommunication sector.

## II. RELATED WORK

The literature on role of exports as one of the deterministic factors of economic growth is a very old concept. Adam Smith and David Ricardo argued in favor of international trade as an engine of economic growth. Export sector is considered as a catalyst agent for sustaining and accelerating process of economic growth. Countries devote home resources to exports because they can obtain more goods and services by international exchange than they would from the same resources devoted to direct home production [10]. Depending upon marginal propensity to consume and propensity to import, exports have multiplier effect on Gross National Income [12, 7].

Export, by fostering specialization help to benefit from comparative advantage; utilizing the full capacity of plant size where domestic demand is less than full capacity production; getting benefit of greater economies of scale due to large market expanding aggregate demand; increasing the rate of investment and technological changes; enabling import of essential raw materials and capital goods result industrialization and thus rapid economic growth in developing economies [16]. Trade reforms formed an integral part of the overall structural reform process [13].

The multilateral aspect of India's trade policy refers to India's commitments to the World Trade Organization (WTO) with regard to trade in goods and services, Trade Related Investment Measures (TRIMs), Trade Related Intellectual Property Right (TRIPs). This open trade regime has been viewed as the least vulnerable form of globalization with enormous opportunities for higher growth emanating from higher exports [20]. Trade policy reforms in recent past with their focus on liberalization, openness, transparency and globalization as well as creation of WTO have provided an export friendly environment with simplified procedure for trade facilitation [18]. After systematic review researchers own views put on this research paper.

## III. TREND IN INDIA'S EXPORT

As per Research Scholar, the post change period up to 2014 was set apart by impressive variance and in this way demonstrated an aggregate absence of consistency in modern development execution and development rate of general mechanical creation and its three noteworthy segments Agriculture, industry and administration [11].

The fundamental driver of unsuitable mechanical execution in post change period up to 2014 where presentation to outer rivalry back off in storm cellar framework, imperatives, and troubles in get reserves for development, lazy development in fare, inconsistencies in tax structure and development in customer request. In this area we have registered the development rate of India's fare in term of significant worth, volume and unit records post financial change period [6]. It is evident from literature survey that Indian Export is not a new term; rather it has been in discussion among the industry professionals at various forums, but there is no commonly accepted comprehensive and complete model or framework available to estimating the Trends through given data, that motivate to develop trend model using export data year wise and approach based on its internal scenario factors[8].

## IV. ESTIMATION STEPS

The generic Trends model has been considered as a foundation to develop the Trends Estimation Model for growth rate at different stages of product. Estimation trends are prerequisite for the accurate trends estimation. Proposed model implemented the following steps are shown in figure 1.

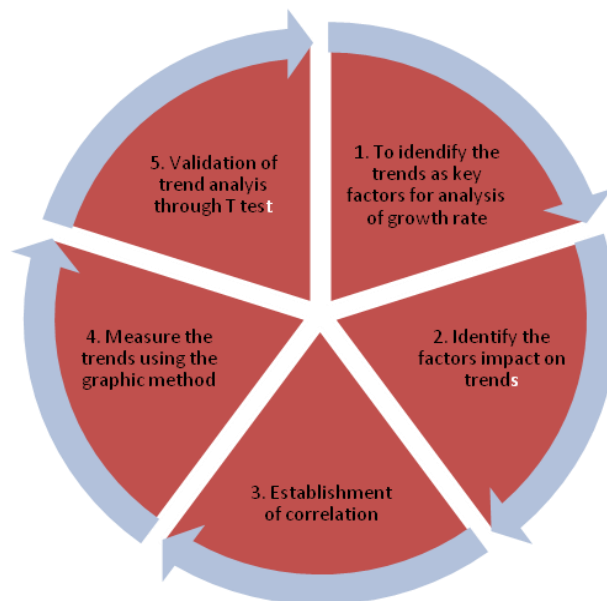


Fig 1. Research Framework for Trends Estimation Process

## V. CORRELATION ESTABLISHMENT

Correlation establishment is most important step. Correlation is a statistical procedure that can explain whether and how strongly pairs of variables are related. In this step the recognized essential factors are to be correlated with the Trend at different level.

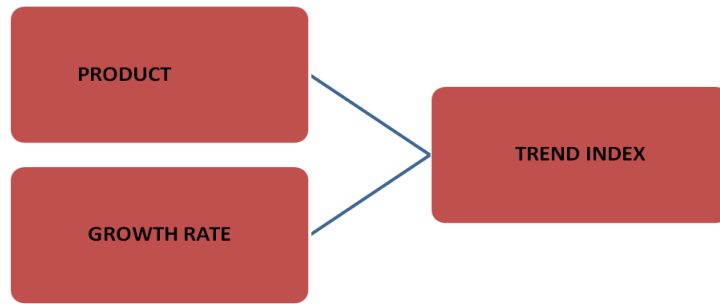


Fig2. Correlation between recognized essential factors and Trends

**VI. MODEL DEVELOPMENT FOR TREND INDEX**

Trends are an assurance that information is changed time to time. Trends are strongly related to growth factors and constantly play a key role to estimates rate of growth. The trends are one of the important factors determining the quality of data. Trends minimization of fault is the only way to maintain the originality and show fault data. The data used for establishing Trend Index is taken from [14] that have been collected through large data in different years with growth rate of exports.

Table I. Trend Computed Index Table

Sr. No.	Variable	Compound Growth Rate between(1980-1992)	Compound Growth Rate For Post Reform Period between (1993-2014)
1	Tea	0.8%	3%
2	Coffee	-2.5%	3.1%
3	Rice	-0.4%	10%
4	Tobacco	-4.4%	10.6%
5	Marine product	5.7%	5.4%
6	Ors & Minerals	2.2%	17.5%
7	Manufactured goods	12.3%	13.6%
8	Leather and manufactured	14.2%	6%
9	Engineering goods	9.4%	19.6%
10	Gems and jewellery	15.4%	13.8%
11	Chemical & related products	20.5%	16%
12	Petroleum product	24.6%	37.7%
13	Manufactured goods	12.3%	37.8%

**6.1 Trends Computations through Graph (1993-2014)**

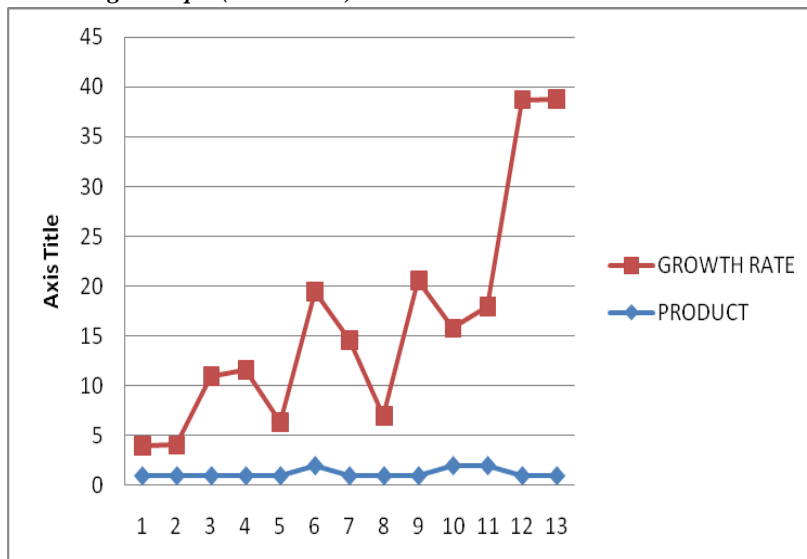


Fig. 3 Trends Analysis In Graphic Method

6.2 Trends Computations through Graph (1980-1992)

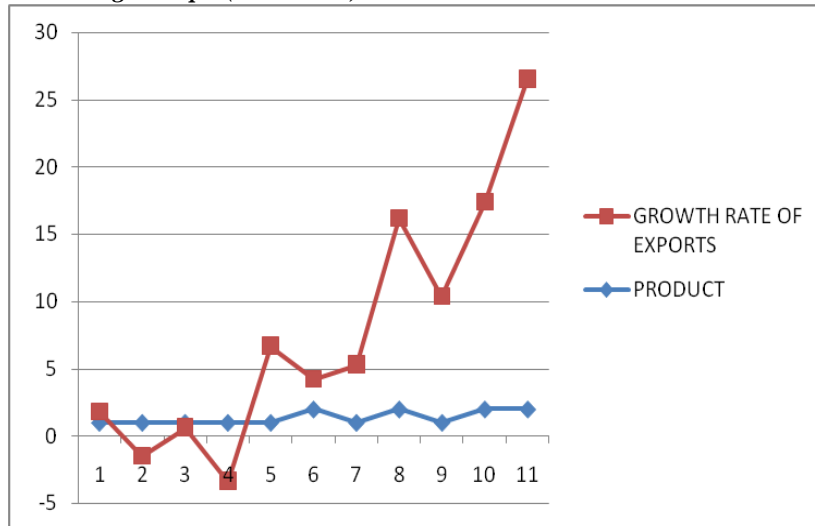


Fig. 4 Trends Analysis In Graphic Method

VII. STATISTICAL ANALYSIS of TRENDS ESTIMATION

Pearson’s coefficient of correlation technique was used for estimating the degree of correlation among variables. It can show a predictive relationship that can be exploited in practice. The Pearson correlation is +1 in the case of a perfect direct linear relationship (correlation), -1 in the case of a perfect decreasing linear relationship (anti correlation), and some assessment in the open interval (-1 and 1) in all additional cases, signifying the measure of linear dependence between the variables. The value of correlation ‘r’ lies between ±1, positive value of ‘r’ in table 2 is a sign of positive correlation between the variables.

Table. Correlation between Independent Variables

Pearson Correlation		Growth Rate 1	Growth Rate 2
	Growth Rate 1	1.000	.594
	Growth Rate 2	.594	1.000

VIII. EMPIRICAL VALIDATION

Empirical validation is a vital phase of proposed research. Empirical validation is the standard approach to justify the model approval. Taking view of this truth, practical validation of the trends analysis has been performed using sample tryouts.

Table III. 2 t- test between growth rate (1980-1992) and (1993- 2014)

Paired Samples Test					
Growth Rate 1 and Growth Rate 2	Mean	Std. Deviation	Std. Error Mean	T Value	P Value
	6.46154	9.47985	2.62924	2.458	0.03

**Null hypothesis (H0):** There is no significant difference between growth rate (1993-2014) and growth rate (1980- 92)

H0:  $\mu_1 - \mu_2 = 0$

**Alternate hypothesis (HA):** There is significant difference between growth rate (1993-2014) and growth rate (1980- 92)

HA:  $\mu_1 - \mu_2 \neq 0$

In the above hypothesis  $\mu_1$  and  $\mu_2$  are treated as sample means of population. Mean value and Standard Deviation value have been calculated for specified two samples and represented in table 3. The hypothesis is tested with zero level of significance and 95% confidence level. The p value is 0.03. Therefore alternate hypothesis is accepted and the null hypothesis directly discards.

IX. CONCLUSION

India’s exports performance enhanced extensively during the post-reform and there has been a perceptible change in the value, composition. In this statically analysis we have focused on the volume and value of exports has more increased manifold, India’s share in the world exports is still not up-to the expectation. The share of manufactured goods as well the share of manufactured goods as well proportion of high value and differential products, petroleum products has increased in India’s exports is gaining importance. The results of the analysis highlighted key role that the most remarkable change in the direction of India’s exports during post-reform era has been the increasing share of developing countries. It is estimated that exports would grow at an average of 25 percent over the next few years. India’s entry into new markets and robust performance in engineering goods, gems and jewelers manufactured goods, chemical related goods and textile segments are the reason behind the growth spurt.

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