

## INTENSIFYING PERFORMANCE OF INDIAN MANUFACTURING INDUSTRY

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**Abstract:** Industrialization has major role to play in the economic development of the under developed countries. The gap in per capita income between the developed and under developed countries is largely affected by industries while in the latter production is confined predominantly to agriculture clearly revealing the positive relationship between per capita income and the share of manufacturing output. Undoubtedly, some countries have achieved relatively high per capita income by virtue of their fortunate natural resources endowments.

**Introduction:** The industrial sector significantly to the eventual achievement of a self sustaining economy with continues high levels of investment and rapid rate of increase in income and industrial employment. Besides the process of industrialization is associated with the development of mechanical knowledge, attitude and skills of industrial work, with experience of industrial management and with other attributes of a modern society which in turn, one beneficial to the growth of productivity in agriculture, trade distribution and other related sectors of the economy. As a consequence of these factors, any successful transfer of labour from agriculture to industry contributes to economic development. Industrialization is thus inseparable from substantial, economic development because it is a consequence of higher productivity. With the rise in income levels people tend to spend more on manufactured goods than on food. The differential income elasticity of demand confers advantages on the manufacturing industries in the form of providing expanding market higher productivity making it an attractive occupation to affect population transfer so as to arrest the tenancy of diminishing returns in agriculture. Industrialization absorbs excess labour power and caters for the diversification of the market required at higher stages of economic development. The economic reform process started in 1991; the industrial growth was regulated by the states through the industrial licensing system for the establishment of new industrial and capacity expansion of existing industries. The new economic policy seeks to liberalize the Indian industries from excessive government regulations and control so as to allow flexibility in organizational decisions by responding to market forces. Thus, it is necessary to study the growth of manufacturing industry in terms of structure and performance during post liberalization period.

Manufacturing, in India plays an important role by contributing in its economic development after globalization. The main objective of the present study is to analyze on the growth and structure of secondary sector in India during post liberalization period.

The objectives of the study to analyze the growth performance of Indian manufacturing industry and examine effects of liberalization on the growth performance of Indian industry.

The basic data sources were collected from Economic Survey. The period of the study covers 23 years from 1991-92 to 2013-14. This period has observed the brunt of industrialization in India.

**Tools for analysis:** Growth model to measure the growth performance of variables, the trend growth rates has been calculated by semi log  $\ln y = a + bt$  and compound growth rate.

**Acceleration growth model:** Acceleration test models are used to estimate the growth acceleration of Indian manufacturing industry. For variables included in the study, the following acceleration test models have been built to analyse the acceleration growth of Indian manufacturing industries during the entire study period (1991-92 to 2013-14).

$$\ln(\text{secondary sector}) = \beta_0 + \beta_1 t + \beta_2 t^2 + U \quad \text{-----}$$

- (1)

$$\ln(\text{GDP}) = \beta_0 + \beta_1 t + \beta_2 t^2 + U \quad \text{-----}$$

(2)

Where,  $\beta_1$  is a growth rate of the respective variables,  $\beta_2$  is a acceleration or deceleration co-efficient of the respective variable and  $U$  is a disturbance term.

**Dummy variable model:** To access the brunt of liberalization on growth rate of Indian industry, the following dummy variable model has been built.

$$\ln(\text{secondary sector}) = \beta_0 + \beta_1 t + \beta_2 Dt + U \quad \text{-----}$$

--- (1)

$$\ln(\text{GDP}) = \beta_0 + \beta_1 t + \beta_2 Dt + U \quad \text{-----}$$

--- (2)

where  $D = 0$  for mild-liberalization period and  $D = 1$  for intensive liberalization period.

**Major findings:** To study growth performance of Indian manufacturing industry. This analysis based on during 1991-92 to 2013-14. The study period was divided into two sub-periods namely mild-liberalization period (1991-92 to 2002-03) and intensive liberalization period (2002-03 to 2013-14).

The present study has analyzed growth performance of Indian manufacturing industry is carried out for the entire study period (1991-92 to 2013-14) using semi- log growth model. The size and structure of the

sector are analyzed using two variables there are manufacturing, construction, electricity, gas and water supply (secondary sector) and gross domestic product.

Secondary sector at constant prices in manufacturing sector in India has been increasing over the years. Gross domestic product has been continuously observed to be increasing the entire study period. The growth analysis has pointed out that of has Indian manufacturing industry has found to be 7.25

per cent. The growth rate of secondary sector has been 6.30 per cent per annum during mild-liberalization period and it has been 7.47 per cent during intensive liberalization period. The growth analysis pointed out that of has Indian manufacturing industry has recorded growth rate of secondary sector during intensive liberalization period has been higher than that of mild-liberalization period.

**Table 1 Growth Rate Of Secondary Sector (Per cent)**

period	Growth Rate
Mild-liberalization period (1991-92 to 2001-02)	6.30* (24.45)
Intensive-liberalization period (2001-03 to 2013-14)	7.47* (15.25)
Entire period	7.25* (48.44)

Note:\* indicates significant at 5 per cent level

Source: compiled from Economic Survey

The annual growth rate of gross domestic product has 6.82 per cent during overall study period during 1991-92 to 2013-14. The gross domestic product has been higher growth rate of intensive liberalization period (7.14 per cent).

**Table 2 Testing Of Growth Acceleration (per cent)**

S. No	Industry Groups	Test of Acceleration		Nature of Acceleration
		$\beta_1$	$\beta_2$	
1.	Secondary Sector	0.065	0.000*	Stagnation
2.	Gross Domestic Product	0.059	0.000*	Stagnation

Note:\* indicates significant at 5 per cent level

Further, the result to find whether industrial sector growth is accelerating or decelerating or stagnating, the present study has made use of the quadratic function of secondary sector and GDP. By testing the growth accelerating of manufacturing industry during

the entire study period (secondary sector and GDP) has been found to be stagnating.

The brunt of economic reforms on industrial growth. The dummy model is employed. The growth of secondary sector has shows that there is slow growth after the mild-liberalization period.

**Table 3 Liberalization Effects On Industrial Growth (per cent)**

Variables	Mild liberalization ( $\beta_1$ )	Intensive liberalization ( $\beta_1 + \beta_2$ )	Differential co-efficient ( $\beta_2$ )
Secondary sector	0.066*	0.123	0.057
Gross Domestic Product	0.065*	0.086	0.021

Note:\* indicates significant at 5 per cent level

The growth rates of gross domestic product imply that there is slow change of the intensive liberalization period. It clearly show that, further during mild-liberalization Indian manufacturing industry has been moving upward.

**Conclusion:** Providing more techno-infrastructure facilities, the natural resources and minerals should be used efficiently. The government should take initiative to reduce FDI rather it should support domestic and import substitute industries by providing financial aid.

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