

Trend and Growth Rate of Major Industry Groups of Manufacturing Sector of India

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Abstract—This article is to study the trend and growth rate of major industry groups of manufacturing sectors of India during the period from 2012-13 to 2023-24. The manufacturing sector in India has seen a significant uptick, with the annual average growth rate of major industry groups rising by 2.4% per year. Similarly, the compound growth rate of these major industry groups was 2.5% per annum. India now has the physical and digital infrastructure to increase the manufacturing sector's share of the economy and position itself as a key player in global supply chains. India's biggest chance to spur economic expansion and job creation this decade is through a manufacturing sector that is globally competitive. Several factors contribute to this potential. India has advantages in raw materials, industrial expertise, and entrepreneurship that can benefit these value chains. They can capitalize on four key market opportunities: expanding exports, localizing imports, meeting domestic demand, and contract manufacturing. Additionally, digital transformation is a crucial component for achieving a competitive edge in this dynamic industry. Manufacturing in India is gradually shifting towards more automated, process-driven operations, which is expected to boost efficiency and production. The government's initiatives, such as the National Manufacturing Policy and the PLI scheme for manufacturing, aim to increase the manufacturing sector's share of GDP to 25% by 2025 and develop the core manufacturing sector to global standards. India's mobile phone manufacturing industry, driven by government incentives and increased global demand, anticipates creating 150,000 to 250,000 direct and indirect jobs within the next 12-16 months. Major players like Apple and its contract manufacturers, along with Dixon Technologies, are expanding their workforce to meet growing production needs.

Keywords— Growth, Industry, Manufacturing, Sector, Beverages, Tobacco.

I. INTRODUCTION

After gaining independence, India sought to establish a strong industrial foundation. The government focused on planned economic development during the initial Five-Year Plans, prioritizing the construction of a robust infrastructure to support large-scale industrialization. This period saw the establishment of various heavy industries and manufacturing units across the country. Economic liberalization in the early 1990s marked a significant turning point, as India became an attractive destination for manufacturing. Multinational companies set up operations in the country, drawn by cost-effective labor, abundant raw materials, and a growing domestic market. The government played a facilitating role, introducing policies like 'Make in India' in 2014 to encourage domestic manufacturing. Efforts were made to improve the

ease of doing business, simplify regulations, and provide incentives for the manufacturing sector. Skills development and training programs aimed to equip the workforce with the necessary skills. Today, the manufacturing sector is embracing technologies like Industry 4.0, IoT, and AI, which promise enhanced capabilities and efficiency. This technological transformation has the potential to further propel India's industrial growth and global competitiveness.

The robust performance of important industries including automotive, engineering, chemicals, pharmaceuticals, and consumer durables has made the Indian manufacturing sector a crucial pillar of the nation's economic expansion. Prior to the epidemic, 16–17% of India's GDP came from the manufacturing sector, which is expected to increase at one of the quickest rates in the years to come. The machine tool industry has long been the backbone of India's manufacturing prowess. Today, technological advancements have stimulated innovation, with digital transformation playing a critical role in helping manufacturers gain a competitive edge in this highly competitive market. The Indian manufacturing sector is steadily moving towards more automated and process-driven operations, which is expected to improve efficiency and enhance productivity. In March, India's manufacturing sector reached a 16-year high, with the HSBC Manufacturing Purchasing Managers' Index (PMI) rising to 59.1, driven by robust increases in output, new orders, and job creation across various goods sectors. Looking ahead, India has the capacity to export goods worth US\$ 1 trillion by 2030, positioning the country as a major global manufacturing hub. With 17% of the nation's GDP and over 27.3 million workers, the manufacturing sector plays a pivotal role in the Indian economy. To further strengthen this crucial industry, the Indian government aims to increase the manufacturing sector's contribution to 25% of the economy's output by 2025, through the implementation of various targeted programmes and policies.

II. METHODOLOGY

The objective of this article is to study the trend and growth rate of major industry groups of manufacturing sectors of India during the period from 2012-13 to 2023-24. For this purpose, the secondary data on India's sugar exports have been collected from various issues of National Statistical Office, Government of India. The collected data were analyzed with the help of statistical tools such as Linear Trend

Model, Semi-log Model and Compound Growth Rate. By using SPSS 19 software, the study has been done.

Linear Trend

$$Y = \beta_0 + \beta_1t + U_t$$

Semi-Log

$$\text{Log } Y = \beta_0 + \beta_1t + U_t$$

Compound Growth Rate

$$\text{CGR} = [(\text{Antilog } b-1) \times 100]$$

III. DATA ANALYSIS AND DISCUSSIONS

The following table displays the index value of major industry groups of manufacturing sectors of India during the period from 2012-13 to 2023-24.

TABLE 1. Index Numbers of Major Industry Groups of Manufacturing Sector of India

(Base : 2011-12 = 100)

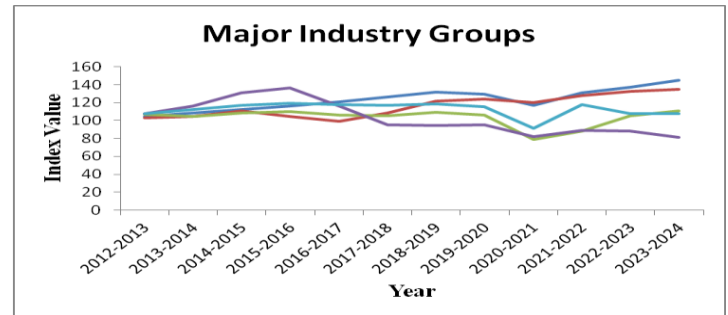
| Year | Food Products | Beverages | Tobacco | Textiles | All Manufacturing |
|-----------|---------------|-----------|---------|----------|-------------------|
| 2012-2013 | 103.3 | 106.7 | 107.5 | 108 | 104.8 |
| 2013-2014 | 104.6 | 104.8 | 116.4 | 112.6 | 108.6 |
| 2014-2015 | 110.9 | 108.2 | 131.1 | 116.9 | 112.7 |
| 2015-2016 | 104.7 | 109.7 | 136.3 | 119.4 | 115.9 |
| 2016-2017 | 98.9 | 106.3 | 115.9 | 117.4 | 121 |
| 2017-2018 | 108.1 | 105.4 | 95.1 | 117.1 | 126.6 |
| 2018-2019 | 121.3 | 109.2 | 94.2 | 118.7 | 131.5 |
| 2019-2020 | 123.7 | 106.4 | 95.4 | 115.7 | 129.6 |
| 2020-2021 | 120.4 | 78.9 | 81.8 | 91.1 | 117.2 |
| 2021-2022 | 127.5 | 88 | 88.9 | 117.8 | 131 |
| 2022-2023 | 132.4 | 105.5 | 88.4 | 107.5 | 137.1 |
| 2023-2024 | 134.5 | 110.9 | 81.1 | 107.6 | 144.7 |

Source: National Statistical Office, Government of India.

The index value of India's food products industry has seen significant growth, rising from 103.3% in 2012-13 to 104.6% in 2013-14. It then expanded further, reaching 108.1% in 2017-18 and 121.3% in 2018-19. The industry continued its upward trajectory, increasing from 132.4% in 2022-23 to 134.5% in 2023-24. In contrast, the index value of India's beverages industry has declined, dropping from 106.37% in 2012-13 to 104.8% in 2013-14. It then saw a slight decrease, going from 106.3% in 2016-17 to 105.4% in 2017-18, before rebounding to 105.5% in 2022-23 and 110.9% in 2023-24. The tobacco industry in India has experienced a more volatile trend. Its index value increased from 107.5% in 2012-13 to 116.4% in 2013-14, but then decelerated to 95.1% in 2017-18 and 94.2% in 2018-19. The industry's index further declined, dropping from 88.4% in 2022-23 to 81.1% in 2023-24.

India's textiles industry index value accelerated from 108% in 2012-13 to 112.6% in 2013-14. It then slightly decreased from 117.4% in 2016-17 to 117.1% in 2017-18, before

increasing again from 107.5% in 2022-23 to 107.6% in 2023-24. Meanwhile, the index value for India's overall manufacturing industry increased from 104.8% in 2012-13 to 108.6% in 2013-14. It continued to rise, going from 126.6% in 2017-18 up to 131.5% in 2018-19, and further to 137.1% in 2022-23 and 144.7% in 2023-24.



Graph 1

TABLE 2. Trend and Growth Rates of Major Industry Groups of Manufacturing Sector of India during 2012-13 to 2023-24

| Variables | Linear Model | | | | | CGR |
|----------------------|----------------|---------|--------|-------|----------------|-------|
| | a | b | F | t | R ² | |
| Manufacturing Sector | 103.830 | 3.009** | 43.423 | 6.590 | 0.813 | |
| Variables | Semi-log Model | | | | | CGR |
| | a | b | F | t | R ² | |
| Manufacturing Sector | 4.652 | 0.024** | 44.033 | 6.639 | 0.815 | 0.025 |

Source: Authors own calculation.

**One per cent level of significant.

The R-squared and F-values for the major industry groups in India's manufacturing sector were found to be satisfactory, and the t-values were statistically significant at the 1% level (Table 2). During the study period, the average value of these major industry groups increased by 3.009% annually. Furthermore, the annual average growth rate of the major manufacturing industry groups rose by 2.4%, and the compound growth rate was 2.5% per year.

IV. CONCLUSION

The manufacturing sector in India has seen a significant uptick, with the annual average growth rate of major industry groups rising by 2.4% per year. Similarly, the compound growth rate of these major industry groups was 2.5% per annum. India now has the physical and digital infrastructure to increase the manufacturing sector's share of the economy and position itself as a key player in global supply chains. India's biggest chance to spur economic expansion and job creation this decade is through a manufacturing sector that is globally competitive. Several factors contribute to this potential. India has advantages in raw materials, industrial expertise, and entrepreneurship that can benefit these value chains. They can capitalize on four key market opportunities: expanding exports, localizing imports, meeting domestic demand, and contract manufacturing. Additionally, digital transformation is a crucial component for achieving a competitive edge in this dynamic industry. Manufacturing in India is gradually shifting towards more automated, process-driven operations, which is

expected to boost efficiency and production. The government's initiatives, such as the National Manufacturing Policy and the PLI scheme for manufacturing, aim to increase the manufacturing sector's share of GDP to 25% by 2025 and develop the core manufacturing sector to global standards. India's mobile phone manufacturing industry, driven by government incentives and increased global demand, anticipates creating 150,000 to 250,000 direct and indirect jobs within the next 12-16 months. Major players like Apple and its contract manufacturers, along with Dixon Technologies, are expanding their workforce to meet growing production needs.

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