



# Indian Manufacturing Industry During the Period of Covid-19

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## Abstract

The COVID-19 pandemic has had a significant impact on various sectors of the Indian economy, including manufacturing. The aim of this study is to analyze the impact of COVID-19 on the manufacturing industry of India and suggest remedial strategies for progressing in the post-COVID era. The first wave of the pandemic resulted in the shutdown of several sectors, including manufacturing, services, retail, and tourism. The manufacturing sector, which contributes approximately 20% to the GDP, was already facing challenges before the pandemic. In optimistic scenarios, India's economy could manage a positive growth of 0.5%, but the subsequent waves could result in negative growth of 3-7% in 2022-23. The manufacturing and MSME sectors have been severely affected. This study explores the impact of COVID-19 on various manufacturing sectors, such as pharma, food and beverage, paint and coating, specialty chemicals, and personal care & cosmetics. It also examines the prospects of the manufacturing sector post-COVID-19 and suggests strategies for thriving in the new era.

**Keywords:** COVID-19, pandemic, manufacturing sector, Indian economy

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## I. Introduction

The COVID-19 pandemic has had a profound impact on the global economy, similar to the Great Depression of the 1930s. The manufacturing industry has been particularly affected, facing challenges such as declining demand, production disruptions, and financial difficulties. The industry's vulnerability arises from the nature of on-site occupations that cannot be conducted remotely, as well as the need to implement social distancing measures in worker-dense workplaces. This section introduces the objectives and methodology of the study, highlighting the importance of assessing the impact of COVID-19 on the Indian manufacturing sector and suggesting strategies for the post-COVID era.

## II. METHODOLOGY

### 2.1 Objectives of the Study: -

The main objective of this study is to analyze how COVID-19 has affected the manufacturing sector in India. It aims to identify the key prospects of the manufacturing sector and provide recommendations for thriving in the post-COVID era.

### 2.2 Methodology of Research: -

This study follows an exploratory methodology, utilizing secondary data collected from various publications available on the internet and other sources. The qualitative research approach helps in understanding the impact of COVID-19 on the manufacturing sector and formulating remedial strategies.

### 2.3 Development of Framework: -

The Indian manufacturing sector has access to competent human resources and can leverage technology to achieve economies of scale and enhance quality. Several programs and practices, such as ISO9000/14000, Lean manufacturing, and TPM, have been implemented to improve quality. The deployment of appropriate technology has made the production process more competitive. However, the sector faces challenges in terms of innovation, competition, and research, with room for further development.

### **III. Impact of Covid-19 on manufacturing sectors in India**

This section focuses on the impact of COVID-19 on various manufacturing sectors in India, including the pre-COVID scenario and challenges faced during the lockdown.

**3.1 The manufacturing sector:** - In pre-COVID times the automotive sector, which accounts for 50% of the manufacturing sector's contribution to the GDP, was already experiencing a decline in sales and production before the pandemic. Factors such as a slowing economy, poor demand, and disruptions in foreign supply lines had contributed to the sector's challenges.

**3.2 Challenges of the manufacturing sector:** - during the lockdown The Purchasing Managers' Index (PMI) reflects the current and future business conditions in the manufacturing sector. During the lockdown, the PMI fell significantly, indicating a decline in manufacturing. The challenges faced during the lockdown include labor exodus, halting of manufacturing operations, disruption in the flow of raw materials, and a decrease in demand. The study examines specific.

**3.2.1 Pharma Manufacturing Industry:** The Indian pharmaceutical industry, which is a crucial part of the global healthcare system, has been significantly impacted by COVID-19. The supply networks in the pharmaceutical industry have been disrupted, leading to a scarcity of raw materials and a rise in their prices. Production plans have been disrupted, facilities have been closed, and shipping costs have increased in most countries. The Indian pharma sector, in particular, relies heavily on raw materials from China, the epicenter of the outbreak. The movement of people and goods has been restricted during lockdowns, affecting the launch of new products and clinical trials. Cash flows from new generic drug launches have been delayed or wiped out. Additionally, international travel bans have hindered the inspection and approval process required for Indian pharmaceutical plants to sell their products in the United States and other foreign markets. The delay in product introductions and clinical trials by global pharma corporations has also impacted Indian drug manufacturers supplying to these companies. Overall, the pharma manufacturing industry has faced production timeline disruptions and reduced sales.

**3.2.2 Food and Beverage Manufacturing Industry:** The food and beverage industry, which includes the processing, packaging, and distribution of prepared and packaged foods, as well as alcoholic and non-alcoholic beverages, has been heavily affected by the pandemic. Prior to COVID-19, the industry was experiencing growth driven by the rise in on-the-go consumers and increased consumption of ready-to-eat food. However, the closure of restaurants and seating spaces has had a significant impact on the industry. The shutdown of these establishments has led to a decline in demand for food and beverages, affecting the overall growth of the sector.

**3.2.3 Paint and Coating Manufacturing Industry:** The global paint and coatings sector has experienced significant disruption due to COVID-19, and India was no exception. During the strict lockdown imposed in India, all paint manufacturers were forced to halt production for more than 30 days. Even after the lockdown was lifted, capacity utilization in the Indian paint and coatings industry remained low. The industry faced challenges such as the unavailability of raw materials, disruption in supply chains, and limited production. These factors have impacted the overall performance and growth of the paint and coating manufacturing industry in India.

**3.2.4 Specialty Chemical Manufacturing Industry:** The Indian chemical industry, including the specialty chemical sector, faced issues during the pandemic, such as manpower shortages, product handling, and transportation difficulties. With the rise of remote work and digital communication, there has been a shift towards automation in warehousing and manufacturing. Global multinational corporations may reconsider their supply chain reliance on China, which could potentially benefit the Indian chemical industry. The sector needs to focus on reducing costs, developing value-added products, and positioning India as a manufacturing hub in the mid-term.

**3.2.5 Personal Care & Cosmetics Manufacturing Industry:** The personal care and cosmetics manufacturing industry, including skincare, haircare, fragrances, and other cosmetics, experienced a decline in sales during the COVID-19 outbreak. The closure of offline stores and lockdown measures in various countries led to reduced demand and the shutdown of production units due to labor shortages. The supply chain of the industry has also been adversely affected, particularly due to the halt in factory activities in China. These trends continue to impact the sector, with e-commerce giants suspending the supply of non-essential products, including cosmetics.

### **IV. PROSPECTS OF THE MANUFACTURING SECTOR POST-COVID-19:**

After the COVID-19 pandemic, manufacturing companies face several challenges and uncertainties as they resume operations. These include severe workforce crunch, uncertainty regarding the return of laborers, piling expenses and low profitability, and the need for prioritizing safety measures. Despite these challenges, manufacturing companies can thrive in the post-COVID era by managing fixed costs, adding new items to their product mix, offering incentives to workers, diversifying manufacturing locations, and leveraging government initiatives such as the Atmanirbhar Bharat Abhiyan.

## **V. HOW CAN THE MANUFACTURING SECTOR THRIVE IN THE POST-COVID ERA?**

5.1 Manage fixed costs: Manufacturing firms can improve their output while lowering fixed expenses such as direct material, inventory keeping, and manufacturing overheads. They can also improve labor efficiency by reducing non-value-adding operations and automating important processes.

5.2 Add new items to the product mix: Due to the pandemic, demand for specific items such as personal hygiene and healthcare products increased dramatically. Businesses can take advantage of this by expanding their product offerings.

5.3 Offer incentives: Experts believe that, in addition to special transportation, workers may require additional incentives to return to work. To entice laborers back to work, companies can offer appealing monetary compensation, incentives, COVID-19 insurance, and affordable housing. Maintaining enough financial reserves in the future can also help companies avoid layoffs while simultaneously providing incentives to workers.

5.4 Distribution of manufacturing units: COVID-19 has taught businesses the importance of distributing their manufacturing units among multiple locations. By doing so, they can ensure continuity of operations even if one unit fails. Companies can consider diversifying their manufacturing locations to mitigate risks.

5.5 The role of Atmanirbhar Bharat Abhiyan: Prime Minister Narendra Modi introduced the "Atmanirbhar Bharat Abhiyan," a massive economic stimulus package aimed at helping India become self-sufficient. Several programs introduced as part of the package promote "Make in India" and the use of domestically produced goods. Taking advantage of government initiatives such as collateral-free loans and the production-linked incentives (PLI) system can support the manufacturing sector.

5.6 Global expansion of "Make in India": Some experts suggest that the potential for self-sufficiency also offers an opportunity to expand "Make in India" on a global scale. Companies like Apple and Lava International have shown interest in relocating their production operations to India to take advantage of incentives and to tap into the growing market.

5.7 Potential demand for processed goods: India has the potential to export processed organic and horticultural products. With trade restrictions on China and the world evaluating imports of processed and agricultural goods, India has an opportunity to seize market share. Government initiatives, including the Atmanirbhar package, support this direction.

By implementing these strategies and leveraging government initiatives, the manufacturing sector can position itself for growth and resilience in the post-COVID era.

## **VI. CONCLUSION AND SUGGESTIONS**

The process manufacturing industry has faced significant challenges during the waves of the COVID-19 pandemic. Reduced demand and disrupted supply chains have posed major issues. However, amidst these challenges, there are opportunities for innovation and adaptation. To stay relevant and thrive in the post-pandemic era, process manufacturers should consider the following suggestions:

1. Introduce worker safety measures and hygiene practices: Implement comprehensive worker safety measures to ensure a safe working environment. Emphasize hygiene and sanitization practices to protect employees and prevent the spread of infections.

2. Revisit sourcing strategies and identify alternate suppliers: Diversify sourcing strategies and identify alternative suppliers to mitigate the risks associated with disruptions in the supply chain. Developing relationships with multiple suppliers can help ensure a consistent flow of materials.

3. Rationalize product ranges: Evaluate and streamline product ranges to focus on high-demand and profitable offerings. By rationalizing product portfolios, manufacturers can optimize resources, reduce complexity, and improve overall efficiency.

4. Enhance supply chain agility and resilience: Assess the agility and resilience of the supply chain to effectively respond to future disruptions. Identify potential vulnerabilities and implement measures to enhance flexibility and adaptability within the supply chain network.

5. Review crisis or emergency response plans: Evaluate and update crisis or emergency response plans to effectively manage future crises. Incorporate lessons learned from the pandemic and develop robust strategies to mitigate risks and minimize business disruptions.

6. Optimize and streamline e-commerce and distribution networks: Leverage e-commerce platforms and optimize distribution networks to reach customers efficiently. Embrace digital transformation to enhance online sales channels and improve customer experience.

7. Revisit pricing and promotion strategies: Review pricing strategies to align with market conditions and customer expectations. Consider promotional activities that effectively communicate the value of products and services while adapting to changing consumer behaviors.

By implementing these suggestions, process manufacturers can navigate the challenges posed by the pandemic and position themselves for long-term success in the evolving business landscape.

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