

# A Review of Gujarat's Manufacturing Sector Model

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**ABSTRACT:** India is quickly establishing itself as one of the most profitable manufacturing destinations. This research is being done to look at India's present manufacturing methods for industrial development. A study was carried out on the factors that influence the manufacturing industry in various ways across nations. Andhra Pradesh was in charge of enhancing the performance of states like Gujarat, as well as environmental standards, via efficient infrastructure, adherence to tax and labor regulations, and other factors. With this in mind, India's government is pouring money into building a robust network of roads, rail, and transportation to boost output. Because a variety of industrial corridors, including transportation networks, are rapidly being developed, this study focuses on how they are built. The development of this industry is due to these networks. Land and labor, along with ongoing infrastructural improvements, are assisting India in making progress. As a result of this study, we have discovered how to create new laws. It seems to be the center of contemporary manufacturing.

**KEYWORDS:** Cost-Cutting, Environmental Standards, Industrial Corridors, Infrastructure, Labour Laws, Logistic Sector, Manufacturing Strategy.

## 1. INTRODUCTION

Since independence, the Indian market has been largely reliant on the agriculture sector. It has benefited from more than half of the country's GDP. Over time, India has transitioned from an agriculture-based economy to a service-based one. Many economists think that the Indian economy's failure to expand as quickly as other economies is due to a lack of surpluses[1].

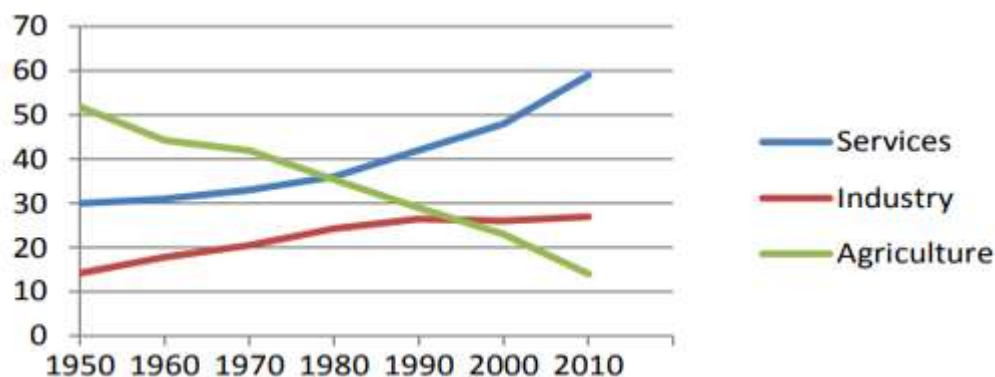


Figure 1: Illustrate the Sector-wise involvement to GDP[2].

The manufacturing sector has been the government of India's main emphasis in recent years. Recognizing the significance of the manufacturing sector and the amount of jobs it may generate, the present administration is taking a variety of steps to promote its development (Figure 1). There is sufficient room for a large educated population and skilled labor to benefit from it. To expand the industrial industry in the area. The current administration is taking one of the most significant measures ever done by any state in order to entice international businesses to invest and cease

manufacturing in India. The government must provide sufficient transportation facilities for products and services, such as power, as well as a robust road and rail network for ease of use. Many regulations that promote labor and land acquisition are enforced to make it simpler for foreign investors to establish businesses in India. The primary goal is to produce products that are defect-free, so that none of the goods exported can be imported. The government returned to India with the "Make in India" program. The government is unwilling to take action. And the world's compromise on norms is obvious[3].

### *1.1. Relationship Between GDP And Industrial Growth*

#### *1.1.1. State-by-State Evaluation:*

All of the above-mentioned nations, excluding Maharashtra, are projected to experience a rise in GDP by 2020. If we look at the graphs, we can see that Bihar, MP, Rajasthan, and Uttar Pradesh (BIMARU) have not been particularly effective in adding to global GDP; there has been no progress in the region's growth. The planning commission and electoral disputes were two major issues that plagued these states: a lack of education and a lack of education. The degree of inequality was also a major influence in these republics' underdevelopment. The agricultural sector provided exclusively for the bulk of the population in those states, and many individuals remained slightly below the poverty line (BPL).

Some efforts have been made to improve the efficiency of these nations. The first step in improving infrastructure was to expand these states. Medical treatment in states like Bihar, MP, has been inadequate due to a lack of educational facilities, paved roads, and other utilities like power. The destiny of several of these states is changing as a result of effective state government governance. Bihar's economic growth was aided by the establishment of public order and excellent infrastructure. Bihar's literacy rate increased by 16.8 percentage points between 2001 and 2011. The government of MP has approved the development of 51 special economic zones. The government is constructing industrial corridors that will run the length and width of the nation. Overall, all of these corridors will see significant industrialization, which will help these states by establishing a manufacturing sector and generating employment. The Delhi-Mumbai Industrial Corridor includes industrial regions in MP such as Peethampur-Dha-Mhow, which may help create a strong bottom-up economy[4].

The destiny of some of these states is changing as a result of excellent administration by state governments. Bihar's economic growth has been aided by improved public order and excellent infrastructure. Bihar's literacy rate increased by 16.8 percentage points between 2001 and 2011. The government of MP has approved the development of 51 special economic zones. The federal government is constructing industrial corridors that will span the country's length and width. There would be significant industrialization along these corridors, assisting these states in establishing manufacturing sectors and creating jobs. The Delhi-Mumbai Industrial Corridor has incorporated industrial areas like Peethampur-Dha-Mhow in MP, which may help build a solid foundation in that region. India's most populated state is Uttar Pradesh. Although UP is home to about 17% of the nation's population, the state's literacy rate is among the lowest in the country. As a result, the government has implemented a number of plans and programs aimed at educating the state's young. The education industry is seeing a lot of investment. This industry has grown from Rs 73.8 billion in FY 2005 to Rs 180.8 billion in FY 10. These kinds of expenditures may quickly enhance manpower quality. If we look at some of the more developed states, we can see that Gujarat and

Andhra Pradesh have done very well in terms of industrial development. Because of the excellent infrastructure given by state governments to build up different businesses in the states, some states have fared better than others. These governments established many software and IT parks, special economic zones (SEZs), and special investment regions (SIRs) in order to make them a desirable location for industrialization. According to Radhicka Kapoor (2014), states with more rigid labor laws have seen slower growth in manufacturing employment and production than those with more flexible labor market regulations[5].

### 1.2. Case Study Of An Industrial Model In Gujarat:

#### 1.2.1. Gujarat is a vibrant state.

Gujarat's government has been very successful in establishing a flourishing state-owned manufacturing sector that can operate independently. It is one of the most well-known automakers in the state-country industry and its components. In addition to being an automobile center, the computer and textile sectors do well here. Gujarat's meteoric growth as a dream manufacturing hub is shown by the following statistics:

- Prior to 2001, nations' average GDP growth rate was 6.34 percent, which was just minor.
- National output is less than 6.35 percent. However, during 2004-05 to 2011-12, the growth rate in states was 9.83 percent, much higher than the national average of 8.48 percent.
- Gujarat's annual average manufacturing industry growth rate of 10.64 percent from 2004-05 to 2011-12 is much greater than the national average (8.25 percent).
- The service sector also grew at a faster pace than the overall economy, at 10.85 percent (9.95 percent).

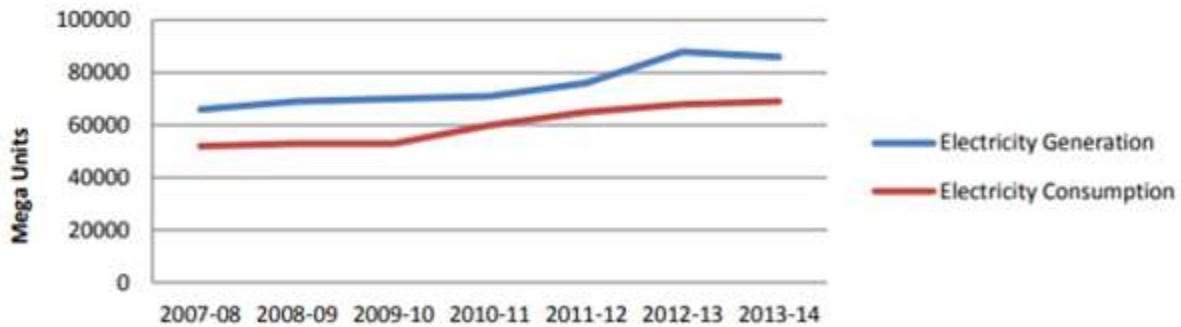
For international investors and other local companies, Gujarat is an appealing location to establish a business. It is one among India's most important business centers. According to a study performed by an international agency such as the World Bank, Gujarat is the most business-friendly state in India (Table 1).

**Table 1: Ranking of Gujrat in Various Factor Affecting Business**

<b>Overall Ranking</b>	<b>1</b>
<b>Land Allotment</b>	<b>2</b>
<b>Complying with Environment Procedures</b>	<b>1</b>
<b>Complying with Labour Regulations</b>	<b>2</b>
<b>Obtaining infrastructure Related Utilities</b>	<b>2</b>
<b>Carrying Out Inspections</b>	<b>2</b>
<b>Enforcing Contracts</b>	<b>3</b>

One of the reasons for its success was the excellent road network, as well as the airport and ports. It boasts the highest percentage of paved roads in the nation, and the state government plans to build 6000 kilometers of state highways to enhance the transportation industry. Gujarat, on the other hand, has a geographic advantage in the western portion of the state since it is closer to European markets than other eastern states and nations. It is home to the country's biggest private port, the port of Mundra, as well as approximately 40% of the Delhi-Mumbai corridor, which is one of India's most passionate environmental & medical projects. Along this corridor, several

large-scale industries sprout up alongside SMART communities. Gujarat has an energy surplus economy, producing more power than it uses, thanks to the government's provision of enough basic utilities such as water and electricity (figure 2).



**Figure 2: Illustrate the Gujarat has a surplus of power[6].**

The Gujarat strategy has become one of the most successful in recent history, opening the door for other states to follow in its footsteps. This shows how Gujarat's agricultural and power output impacted industrialization and how it was able to retain its competitive advantage despite its high per capita income.

**Andhra Pradesh's Rise** The government of Andhra Pradesh was crucial in establishing Hyderabad, the state's capital, as one of the country's top IT destinations. With the 'Make in India' movement gaining traction throughout the nation, plans are in the works to turn Andhra Pradesh into a major electronics manufacturing center. By 2020, the government hopes to attract \$5 billion in investment and 400,000 jobs. AP is quickly becoming India's mobile manufacturing center. Xiaomi and Gionee, two Foxconn partners, have already started operations in Sri City. Micromax, Celkonn, and Karbonn are among the other major contenders, each spending Rs 200 crore. It now houses over 300 electronic hardware companies that produce electronic equipment, as well as a number of major public sector companies including Electronic Cooperation of India, Hindustan Aeronautics Ltd., and Bharat Heavy Electricals Ltd. AP was the first state to adopt the Electronics Hardware Policy, which mandated that all government-funded electronics hardware projects obtain 20% of their needs from small and medium-sized businesses. AP offers worldwide connection to seaports and airports, as well as a large pool of highly trained labor. One of the state's distinguishing characteristics is the presence of industrial parks not far from the major city, as well as urban townships adjacent to the parks[7].

Emerson Networking Power Systems, Cypress Technology, and Renesas Technology are among the major MNCs with a presence in AP. Small-scale companies are also being encouraged by the government to increase their productivity levels in order to achieve greater global competitiveness by obtaining ISO 9000 certification. The government is establishing a technology development center to assist small businesses in gaining access to new and contemporary technologies. Small-scale businesses may find it simpler to set up shop as rules and procedures are being streamlined. The government also intends to enhance the data base that will be used to monitor the industry by highlighting new innovations, productions, exports, and job creation, among other things. Associations are encouraged to organize training camps, seminars, and other events aimed at transferring technology and instilling social duties in areas like as environmental protection and

worker safety. These organizations will also be responsible for the upkeep of industrial estates, marketing estates, and other similar properties.

### *1.3. Sector of Logistics and Transportation.*

The logistics industry is an economy's backbone. In India, the majority of retail, automotive, and pharmaceutical companies outsource their logistics departments to third-party logistics companies (3PL). It is one of the most active industries in the nation. There are 2.2 million heavy duty vehicles and 0.6 million light duty trucks on the road every year, traveling more than 18,00,000 kilometers. [6] Pankaj Chandra et al. (2007) detailed some of the major difficulties that India's logistics industry is experiencing, as well as some of the main efforts that companies are doing to manage their logistics[8].

### *1.4. Challenges.*

India's logistics industry accounts for approximately 14% of the country's overall GDP, which is greater than the United States and several European nations. Such a large proportion of GDP in the logistics industry is considered hazardous for a growing country. When compared to the BRIC countries, other countries' rankings in the logistic sector index are steadily improving. According to the World Bank's 2014 logistics performance report, India ranks 54th, far below South Africa (34), Vietnam (48), and Chile (42). There are many causes for India's low performance in this area. The development of this industry is hampered by poor road networks, insufficient air and sea port capabilities, and underdeveloped railway networks. As a result, the product is delivered to consumers in a sluggish and inefficient manner. Due to severe congestion on docks and sluggish evacuation of goods discharged at berths, turnaround times are also long. The logistic industry is harmed by rising gasoline prices and long wait times.

### *1.5. Corridors for Industry and Freight.*

The Indian market has grown significantly in recent years. The primary architect behind this development has been the successful execution and planning of numerous infrastructure projects. The Indian government is constructing new industrial and freight corridors in order to maintain this development and further expand the industrial sector.

India suggested a master plan connecting all of the main industrial centers through roads and highways in order to move products more quickly and efficiently. The ministry of road, transport, and highways devised a plan to connect four major cities (Delhi, Mumbai, Chennai, and Kolkata) in a quadrilateral spanning various areas. The Golden Quadrilateral was the name given to this project. This project covers more than 5,000 kilometers of road and 13 states. It has been one of the most significant success stories in recent years, since it has been very helpful to the Indian economy's development. It has significantly decreased transit time between large cities, allowing products to arrive in less time. Multi-axle vehicles are being utilized to move products due to improved road condition, which lowers transportation costs. This initiative has benefitted both buyers and suppliers since it has increased the efficiency of commodities transportation. It has also facilitated connection between port towns such as Visakhapatnam on India's eastern coast and Kolkata, and Mumbai on India's western coast and Delhi[9].

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### *1.6.Regulations & Laws:*

India has some of the most severe regulations in the world, according to the World Bank. Strict land, labor, and trade regulations exist, making it impossible for manufacturing to develop as easily as it has in other nations such as China and the United States. Many think that current trade restrictions would be the main stumbling block to the 'Make in India' campaign achieving its full potential. To fully realize the promise of the 'Make in India' campaign, the government is enacting reforms that have the potential to transform the Indian manufacturing sector and provide a significant boost to the Indian economy. Proposing changes to the land acquisition bill was one of the most crucial choices. Land acquisition would be considerably simpler with changes to this legislation, and the cost of purchasing land would be reduced by as much as 40% of the entire cost. Exemptions for social infrastructure projects under PPP were also limited.

### *1.7.Workforce:*

Most of India's labor laws are out-of-date and redundant, thus amendments and fresh innovation were required in the current laws. Some of the legislation that the government has approved for change In addition to these changes, the government intends to propose five new labor law legislation, including the Industrial Relations Code Bill 2016, the Small Factories Bill, the Shops and Establishments (Amendment) Bill, and the Employees Provident Fund and Miscellaneous Provisions (Amendment) Bill.

### *1.8.The impact on the logistics and transportation industries is as follows:*

Currently, each Indian state levies various tariffs on products transported across state boundaries. As a result, the products are taxed several times throughout the freight journey. According to the World Bank, this resulted in a two-to-threelfold increase in overall logistic costs in the nation, compared to worldwide standards. Furthermore, there are numerous time delays at the interstate border crossings.

Following the passage of the GST law, various state and federal taxes will be combined into a single tax. It will replace 15 different state and federal taxes and levies with a single point-of-sale tax. Prior to this, operational and logistical efficiency were sacrificed in the sake of tax optimization and administration. Inventories and warehouses were established at a location that would offer tax advantages. Providers of logistics services will now have to rethink their supply networks, focusing on the best locations. Based on logistical and operational efficiency, new warehouses and inventories will open. Plans will be made to locate warehouses closer to production and consumption centers. Smaller warehouses of 15,000-20,000 square feet will be combined, and bigger warehouses of 2 lakh square feet would be built. The unorganized sector will have to enhance its service standards as well. This may lead to them collaborating with well-established businesses[10].

## **2. DISCUSSION**

India is quickly establishing itself as one of the most profitable manufacturing destinations. This research is being done to look at India's present manufacturing methods for industrial development. A study was carried out on the factors that influence the manufacturing industry in various ways across nations. Andhra Pradesh was in charge of enhancing the performance of states like Gujarat,

as well as environmental standards, via efficient infrastructure, adherence to tax and labor regulations, and other factors. With this in mind, India's government is pouring money into building a robust network of roads, rail, and transportation to boost output. After making significant gains in the service sector, India's manufacturing sector is finally catching up. With the 'Make in India' initiative, India aspires to be the global leader in manufacturing. Gujarat, for example, has created the groundwork for other states to follow in its footsteps and become industrial hubs. Andhra Pradesh has steadily risen to become the country's top electronics producer, with several international companies already making significant investments.

### 3. CONCLUSION

Andhra Pradesh has steadily risen to become the country's top electronics producer, with several international companies already making significant investments. Most backward states are making progress in terms of GDP contribution thanks to excellent facilities and world-class infrastructure provided by the state and national governments. Because India's overall logistics costs are greater than those of other developing countries, different plans and initiatives, such as the LEEP, are being undertaken. New regulations will be established, and the character of the logistic industry will alter as new and larger warehouses and inventories are built to increase the efficiency of product delivery. To enhance the speed and efficiency of freight transportation, the government has successfully launched a number of initiatives that will upgrade the country's road and rail networks. After a lengthy wait, the government has approved the GST bill, which would eliminate the country's current compound tax structure and replace it with a single tax across the board, which will be a huge benefit for the Indian logistics and transportation industry. The Indian manufacturing industry is poised to reclaim its glory days, thanks to a slew of good reforms.

### REFERENCES

- [1] R. Y. Zhong, S. T. Newman, G. Q. Huang, and S. Lan, "Big Data for supply chain management in the service and manufacturing sectors: Challenges, opportunities, and future perspectives," *Comput. Ind. Eng.*, 2016, doi: 10.1016/j.cie.2016.07.013.
- [2] M. L. Meena, G. S. Dangayach, and A. Bhardwaj, "Measuring quality of work life among workers in handicraft industries of Jaipur," vol. 17, no. 3, pp. 376–390, 2014.
- [3] A. D. Rymaszewska, "The challenges of lean manufacturing implementation in SMEs," *Benchmarking*, 2014, doi: 10.1108/BIJ-10-2012-0065.
- [4] G. S. Dangayach and S. G. Deshmukh, "Manufacturing flexibility : a multisector study of Indian companies," vol. 2, no. 2, 2007.
- [5] J. Jaiswal, "HOW SUPPLY CHAIN NETWORK AFFECT THE GROWTH OF MICRO , SMALL," vol. 4, no. 4, pp. 1–15, 2014.
- [6] Y. Mehta and J. R. A, "Manufacturing Sectors in India : Outlook and Challenges," *Procedia Eng.*, vol. 174, pp. 90–104, 2017, doi: 10.1016/j.proeng.2017.01.173.
- [7] P. Sahoo, "Making India an Attractive Investment Destination : Analyzing FDI Policy and Challenges."
- [8] W. P. No, "Economic Growth in Gujarat in Relation to the Nation and Other States in Recent Times - A Statistical Analysis Sebastian Morris Economic Growth in Gujarat in Relation to the Nation and Other States in Recent Times - A Statistical Analysis," 2012.
- [9] R. Kapoor, "Creating jobs in India ' s organised manufacturing sector," *Indian J. Labour Econ.*, vol. 58, no. 3, pp. 349–375, 2016, doi: 10.1007/s41027-016-0032-5.
- [10] A. D. Alene and O. Coulibaly, "The impact of agricultural research on productivity and poverty in sub-Saharan Africa,"

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*Food Policy*, 2009, doi: 10.1016/j.foodpol.2008.10.014.