



# Supportive Ecosystem and Government framework driving automobile manufacturing in India

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**Abstract:** India's Auto sector is slated for growth and expansion considering the FDI and friendly labor-market ecosystem. India's Auto sector contributes 8 % of the country's GDP and provides employment for 1.36 million people. The world's leading Auto manufacturers use India as a satellite manufacturing hub to export their vehicles to many 3<sup>rd</sup> world countries. This industry is expected to grow quickly with the rollout of EV vehicles and with path-breaking and cutting-edge technologies in the fray.

**Key Words:** FDI, Make in India, Skill India, Socio-economic conditions, Technology.

## 1. INTRODUCTION:

India enjoys a preeminent position in the global heavy vehicles market as it is the largest tractor producer, second-largest bus manufacturer, and third-largest heavy truck manufacturer in the world. The country's automobile sector is split into four segments: two-wheelers, three-wheelers, passenger vehicles, and commercial vehicles. In 2021, India's passenger car market was valued at US\$ 32.70 billion, with a compound annual growth rate of over 9%. The electric vehicle (EV) market is estimated to reach a turnover of Rs. 50,000 crores (US\$ 7.09 billion) by 2025 (if, 2022a). The automobile industry in India is globally competitive, with significant manufacturing sector investment receiving a cumulative equity FDI inflow of about US\$ 32.84 billion between April 2000 and March 2022 (ibef 2022 b). Government intervention is a significant factor in shaping and molding the regulatory environment of market economies such as India, paving the way for manufacturing excellence. It is simultaneously maneuvering through challenges such as climate change, emission norms, and quality and international safety standards. Currently, the automobile sector contributes finished products and automotive parts for domestic and international markets. Demand and government intervention have significantly impacted the industry's development. The finished products are getting exemptions for exports, and Indian-made products are encouraged, while imported components and cars are taxed heavily.

Government regulation considerably influences the domestic component design of the car's safety features and overall functionality. The government has imposed regulations to adopt evolving technologies, digitalization, new business models, new scrappage policy, fair trade, and carbon emission standards to propel the sector. The list of Indian and international business partners is bringing new generation practices, resulting in competitiveness in the marketplace. Another important area of government regulation is labor since the Indian automotive sector plays a large role in the domestic labor market, employing over 1.36 million people in the 2018 fiscal year. The employment figures were relatively small compared to the EU and United States automotive industry (Statista, 2022). The sector has introduced new modes of work organization drawn from Japan, Germany, and Sweden, which has impacted work attitudes and career trajectories. These changes brought competitive wages but with these recurrent employment relations challenges. This article will examine the regulatory and legislative ecosystem of automobile manufacturing in India. In particular, the government has created a tax and financial environment that is friendly to manufacturing, promoted labor initiatives to increase productivity, and supported a closer relationship with automotive manufacturers. This article will also consider the adverse effects of these pro-industrial policies, specifically the impact on green manufacturing and labor relations. Initiatives taken by India's Government to enhance the automobile manufacturing landscape

## 2. INDUSTRIAL TAX AND FINANCE POLICIES:

The government has established transparent and investor-friendly foreign direct investment (FDI) policies. (FDI India, 2022) this policy framework is now being tested on the ground. India attracted the most significant amount of FDI, totaling \$67.5 billion. Compared to \$55.14 billion over the same period in 2019, the total FDI flow increased by



22% across sectors. For the auto sector in particular, FDI increased by 25.5% from 2018 to 2019, accounting for 4.88 percent of all FDI flows.

The Indian automobile industry constitutes almost 6.5 percent of India's GDP and 35 percent of manufacturing GDP (2021-22) and is a leading employment provider. The industry attracted Foreign Direct Investment (FDI) equity inflow worth USD 32.84 billion between April 2000 and March 2022, accounting for 6 percent of the total equity FDI ( Business World, 2022). FDI has positively impacted economic growth and improved the scope for employment possibilities. This is substantiated by the number of manufacturing units set up and labor employed over the last decade. In addition to FDI-friendly regulations, the Government of India has made significant investments in auto innovation. The largest and most significant of these investments is (NATRIp, 2022), which promoted research and development for testing electric vehicles, vehicle evaluation, a power train laboratory fatigue lab, and other areas (Miglani, 2019). Indian businesses have also invested heavily: M&M and Ashok Leyland have significantly invested in R&D, technological development, testing facilities, and international business initiatives (Springer, 2022).

The Indian Government has also created a tax environment that supports manufacturing and industrial activities. As of July 1, 2017, India adopted the Goods and Services Tax (GST). Since its implementation, the government has received increased tax revenue, which is used to subsidize manufacturing activities in the automobile sector. The government developed several initiatives and incentives to attract investors and boost domestic vehicle production. GST has been introduced to subsume the current indirect tax regime, which is used to attract several duties and taxes on the sale of vehicles, spares, and accessories.

Many now expect the government to implement the seamless input tax credit (ITC) across the supply chain to reduce product costs. The ITC would allow all supply chain elements, from manufacturer to supplier to agent to final buyer, to claim credit for tax paid on purchases, such as lease rentals, IT services, and freight charges. The consumer in India is price conscious, and hence, post-GST rollout, Maruti Suzuki, Tata Motors, Toyota, Nissan, and Renault India have also announced the necessary discounts to pass on the GST benefit to the end buyer (Masterindia. co, 2022).

### 3. IMPROVING PRODUCTIVITY OF THE AUTO-SECTOR:

The Government of India has implemented various schemes to boost production and improve the productivity of the sector, as listed in Table 1: The Production Linked Incentive (PLI) Scheme for India's automobile and auto component industry has successfully attracted the proposed investment of ₹ 74,8500 million INR, topping the target estimate of ₹ 42,5000 million over five years. 115 companies have filed applications under the (PLI) Scheme (Pib.gov.in. 2022 a). The "Zero Defect, Zero Effect" campaign was used to promote the Make in India initiative, which aims to make India a significant manufacturing powerhouse. The government of India hopes to increase the GDP to 25% by 2022 through the Make in India (MII) project (Vikram, 2022). The national program aims to promote innovation through simplifying the bureaucratic process, implementing deregulation, and creating public-private partnerships.

Production-linked incentive (PLI)	Increasing domestic manufacturing capacity
Make in India Program	The transformation of India into a global hub for design and manufacturing
Atmanirbhar Bharat Campaign	To reduce import necessity
Special Economic Zone (SEZ)	The purpose is to generate additional economic activity and increase exports
Change in State of EV Policy	To reduce the usage of petrol and diesel
Reduction in Emission Norms	To reduce carbon footprint to ensure EHS is intact in the global order

TABLE-1 - Government initiatives source Pib.gov.in 2022b

The Skill India [Niti aayog, 2022] program launched by India's government was established to offer enhanced skill development and training in manufacturing excellence, professional competency, marketable skills, and assistance in employment. The automotive industry is known for its dynamic change and constant advancements across the globe that are constantly redefining the landscape (ASDC, 2022). Constant skill-building of the workforce is crucial to cope with paradigm shifts in the industry.

### 5. TAILORING INFRASTRUCTURE TO MANUFACTURING:

The government has created specific clusters where infrastructure has been provided for state-of-the-art manufacturing, with tax holidays or tax exemptions, viable supply of labor, and other subsidies for the automobile



industry to benefit the infrastructure development and availability of skilled labor. Development of Ports, Highway infrastructure, more movement of goods, education, and vocational/technical education institutes being set up are all part of the strategy to push make in India in these clusters. The clusters are as follows:

Chennai-Bengaluru-Hosur

Mumbai-Pune-Nashik-Aurangabad

Delhi-Gurgaon-Faridabad

Kolkata-Jamshedpur

Sanand-Hansalpur-Vithalpur

## 6. EXAMINING NEGATIVE EXTERNALITIES OF INDUSTRIAL POLICIES : TURNING TOWARD CLIMATE-CONSCIOUS MANUFACTURING

To achieve green manufacturing in India, environmental concerns in core areas, such as cleaner energy sources, including renewables like CNG, wind, solar, and biomass, are being addressed. The aim is to achieve higher energy efficiency in companies' operations. The Government of India (GoI) has introduced various regulations and incentive schemes not only to boost the adoption of Sustainability across the automotive sector but also to strengthen India's automotive position globally. GoI introduces three widely-known schemes to boost manufacturing, infrastructure, and the adoption of electric and hybrid vehicles, as well as encourage circularity within the industry (CapGemini, 2022).

By 2030, GoI plans to achieve EV sales penetration of 40% for buses, 30% for private cars, 70% for commercial vehicles, and 80% for two- and three-wheelers. The Road Transport and Highways Minister (under GoI) pointed out that in the EV mission, the National Institution for Transforming India (NITI) Aayog (under GoI) has inspired 25 states of India to come up with EV policies, out of which 15 have already announced their state's EV policy. The other area is implementing green processes in operations, reducing waste generation through lean operations, and decreasing the carbon footprint. Increasing regulatory pressures through new, stricter environmental and waste management laws is enhancing innovation in the industry and attracting new business opportunities (BCG, CII, 2011). Historically, India's infrastructure has responded very slowly to these changes with the transport system aging. The new norms aim to speed up change rapidly but are marred with corruption and inconsistency.

The government intervention in pollution control, technology improvements, and rising energy prices has created turbulence in the sector in the short term. The Corporate Average Fuel Efficiency/ Economy (CAFÉ) norms were established in 2017 worldwide and aimed to bring down average corporate emissions. These apply to auto manufacturers and are incentivized by either increasing fuel efficiency or reducing fuel consumption. Both help lower CO<sub>2</sub> while reducing the country's fuel import dependence and vehicular pollution. Under this norm, corporate average CO<sub>2</sub> emissions are mandated to be less than 130 gm/km per Phase I (till 2022) and less than 113 gm/ km per Phase II (post-2022). The first Bharat Stage (BS) norms came into effect in 2000 and have had multiple iterations since. These standards are set by the Central Pollution Control Board of India, and all vehicle manufacturers must mandatorily only sell vehicles that comply with these norms. With every new iteration, these standards aim at tighter regulations by reducing the permissible level of tailpipe pollutants. For example, BS-IV – introduced in 2017, allowed 50 parts per million (ppm) of sulphur, while the new and updated BS-VI – applicable from 2020 allows only 10 ppm of sulphur. A further comparison on permissible limits is presented below in table 2:

**Table 2: BS-VI vs BS-IV**

Pollutant	BS-VI	BS-IV	% reduction
NO <sub>x</sub> (Petrol)	60 mg	80 mg	25%
NO <sub>x</sub> (Diesel)	80 mg	250 mg	82%
Particulate matter (Diesel)	4.5 mg/km	25 mg/km	68%
Hydrocarbon + NO <sub>x</sub>	170 mg/km	300 mg/km	43%

Source – CEEW(2023)

The state's efforts, though, are inadequate in keeping pace with international trends and widespread climate change alarms. In response, automakers in India have innovated, creating alternative powertrains for internal combustion engines (ICEs) (Sierzchula et al., 2018). According to the World Health Organization (WHO), India has the world's worst air quality. In 2020, even during the Covid crisis with national and state lockdowns, 36 cities out of 50 that had unhealthy air quality levels were from India. The vehicular pollution arising from the increasing stock of private vehicles, especially internal combustion engines (ICE), has contributed significantly to the deterioration of air quality in Indian cities. The increase in ICE vehicle stock has led to India becoming the third-highest oil-consuming and



greenhouse gas (GHG) emitting country worldwide. Additionally, nearly two-thirds of deaths in India can be attributed to emissions coming from ICE (diesel) vehicles. To address these issues, the central ministry announced a goal to transition from new ICE (Petrol and diesel) vehicle sales to 100% plug-in electric vehicles (EV) by 2030. The government also aims to transform India into a global hub for electric vehicle manufacturing. In 2019, the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) II scheme was adopted. It is important to note that the FAME II policy which is the umbrella policy for India, has been designed considering demand-side incentives, where 86% of the funding is set aside for consumer incentives for EV purchases, and 10% is allocated to fund charging infrastructure. PEVs are central to India's environment, energy, and industrial policy (Economic Times, 2022).

### IMPACT OF PRO-INDUSTRIAL POLICIES ON LABOR:

With large scale FDI coming in and with the Government's policy of ease of doing business, trade union activity has taken a beating. Collective bargaining and labor laws are interpreted to suit the business houses rather than the labor at large. FDI coming in a considerable measure results in unification and harmonisation of laws with developed countries, resulting in little or no labour protection. We are also experiencing the breakdown of industrial relations in leading auto factories due to exploitation, poor working conditions, and discrimination. Violence in Suzuki and Honda factories is an example of the growing unrest in the industry; owing to wage disparities and blatant use of contract labor, management's lack of humanitarian concern over basic worker rights is vitiating the environment. Employers' refusal to enhance collective bargaining and bring participative management and their attempts to eliminate rather than engage with trade unions in this sector are vitiating the work environment. Many auto manufacturers are also leaving the Indian market, for example, Ford, Chevrolet, and Harley Davidson, resulting in the loss of many jobs owing to changes in business cycles and disruptive technologies coming into the fray. Ford India's operations ended up losing roughly two billion dollars due to a lack of demand and sales. The pandemic has placed the company on the back foot, with unprecedented failures affecting employees' livelihoods. The shutdown of the company's Indian wing will reduce up to 4,000 factory jobs, with over 2,600 regular employees and around 1,000 contract workers. The shutdown will also affect auxiliary companies that sell minor components and parts to Ford. Data was collected from workers, union leaders, union members, dealers, customers, and management to understand the issues faced by Ford. Indian operations were typically marginal and vulnerable to significant economic shifts; export was a face-saver. The closure's impact on workers' socioeconomic conditions was severe (Krishnan & Poorani, 2020).

Some of the policy measures the government could undertake to mitigate the risks of all stakeholders is to ensure the continuity of business operations by encouraging other auto manufacturers to take over, shutting businesses by providing tax holiday or exemptions, providing infrastructure support, and assisting labor in up-skilling or reskilling to ensure the protection of jobs. MNCs exiting India operations will have to provide for an expense that protects the labor for one year of salary with reskilling to be job-ready in other industries. This must be in partnership with the state governments to avoid a backlash or labor unrest.

### 7. RECOMMENDATIONS:

The infrastructure for manufacturing has to improve substantially to compete on the global front and challenge nations with larger automobile manufacturing bases, namely China. However, the government's support of manufacturing has to consider that

- Subsidies for imports will soften the pricing and consumption in the domestic market
- Labour unrest in the automobile sector is alarming in a few pockets, and this needs to be diffused with all stakeholders playing a proactive role in ensuring social justice without losing the essence of business in the process
- The skill level in many areas is still far from desirable, which makes it unattractive. The exception is that south Indian states, including Maharashtra and Gujarat, have laid out an extensive vocational skill training infrastructure, including technical education, unlike other parts of India, which still lack adequate infrastructure in education, resulting in poor development of industry and this needs immediate focus from the respective state governments
- Ford, Chevrolet, Harley Davidson, and many others have come and left the Indian landscape not understanding the domestic market, which has been a big let-down by this industry in India
- Road infrastructure needs improvement given the demand for high-end cars and expansion of the road transport sector

The government in India policy will be a success only if it brings reforms at a faster rate and acts as a mediator in settling all outstanding business disputes promptly.



## 8. CONCLUSION:

The Government of India has announced a national manufacturing policy to enhance the share of manufacturing in GDP to 25% within a decade and create 100 million jobs. It also seeks to empower rural youth by imparting the necessary skill sets to make them employable. Sustainable development has been integral to the spirit of the policy and technological value addition in manufacturing, which has made a difference (Meity.gov.in, 2011).

Government trade policy attracting foreign direct investment with the supporting regulatory framework has made India a viable alternative for manufacturing automobiles. Recent changes in tax structure and financial policy decisions drive favourable trends in this sector. The Indian business landscape is evolving, and the market is progressive for foreign investors. The technological transformation cutting edge and path-breaking technological innovation prevailing in the country makes it a valuable destination globally. However, a sizeable production is catering to the global markets, and India is seen as a satellite hub for manufacturing owing to costs. The manufacturing infrastructure is also gaining momentum with a renewed focus on EHS (environmental health and safety), addressing the interests of all the stakeholders. To conclude, India is now considered a preferred manufacturing location for “leading automakers of the world.” The key takeaway is that with the government's renewed focus on manufacturing, the auto sector stands to gain and establish its position in the manufacturing landscape in India. While the legal system needs to reinforce a level playing field for all the companies through consistent decisions in the future and international arbitration settling most disputes to ensure fairness, the manufacturing business operations in India will essentially comply with the Trips agreement and protect IPR issues. This will ensure that MNC companies trust India as a destination to set up their businesses and bring their technologies to enhance value to all stakeholders. The labor and management partnership needs to improve to make this sector sustainable in the long run.

## IMPLICATIONS

- India aims to be a global hub for automobile manufacturing
- Employment will enhance the share of wages in the national income
- Skill levels will enhance the socio-economic elevation of the workers
- Industry contribution to GDP will propel the country to greater heights
- Customers in India will get the best at an affordable price and enjoy the experience
- Technology transfers will exploit the talent in the country and make MNCs to produce the best products emanating from India

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