

## **A review study of development of Automobile in India**

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### **Abstract**

When it comes to national economic development, the car sector plays a significant role. The Indian car industry has gone a long way since 1991, when it was first de-licensed, thanks to the subsequent opening of the sector to 100 percent FDI via the automatic route. Since the industry was de-regulated and opened to foreign direct investment, it has expanded fast. Currently, the nation is home to operations from almost every automotive giant in the world. Production patterns reveal an expanding car industry. Foreign direct investment (FDI) flows into the automotive sector were analyzed in this report for the years 2004-2014. The car industry is experiencing a period of increased output. One of the world's major industries is the automobile market. Autos used to be a luxury, but now they are a necessity. Indian automakers have a lot of room to grow, but the market has slowed significantly recently. The primary goal of this article is to examine the challenges that have led to the automotive industry's recent slump. It examines how the dynamic automotive market landscape affects customer preferences and spending. The report analyses sales data from many Indian automakers to provide light on the market. It also outlines the potential future outcomes and solutions that may be attained via the use of emerging technologies by the automotive industry in order to gain market share and revenue. New advancements in the automotive industry are also highlighted.

**Keywords:** Automobiles, Industry, Wheelers, FDI

### **Introduction**

As a result of its rapid development over the last two decades, India has gone from being a net importer of cars to a major exporter of whole vehicles and their parts. Despite a general economic downturn over the last decade the industry's development has been rather strong. Looking forward to the next decade however, the sector is predicted to beat the estimates. There's a lot of room for the car industry in India to expand, and it might help boost development in a number of other industries as a result. The Government of India is committed

to minimal Government and maximum Governance in order to facilitate rapid and sustained economic development. India's automobile industry has the potential to significantly boost the country's GDP and employment rates, while also providing essential inputs to a wide range of other manufacturing sectors, including those involved in the production of auto-components, machine tools, steel, aluminum, plastics, chemicals, electronics, and so on. In addition, the car industry helps other service industries including information technology, financial services, insurance, maintenance and repair, public transportation, and logistics. The Indian government has made it easier for businesses to operate by, among other things, launching the Automotive Mission Plans (AMP) 2006–2016 and 2016–2026. In addition to the National Electric Mobility Mission Plan (NEMMP) 2020, the government has also launched the Faster Adoption and Manufacturing of (hybrid &) Electric Vehicles (FAME) initiative. These strategies and programs aimed for brisk car production expansion so that the country could catch up to the likes of the United States, Japan, Europe.

- 1. Automotive Mission Plan 2016-26:** The plan also calls for India to lead the globe in the manufacture and distribution of compact cars, two-wheelers, three-wheelers, tractors, and buses, and to rank third in the production and sale of passenger cars and heavy trucks. Interventions are planned in order to maintain and enhance industrial competitiveness while also addressing environmental and safety concerns. The Indian auto sector has set a goal of multiplying car exports by 5. By 2026, the annual production of automobiles, especially passenger cars, is projected to increase by a factor of three, reaching 9.4 million units.
- 2. The National Electric Mobility Mission Plan 2020 (NEMMP):** Through joint efforts between government and industry, this program aims to hasten the development of HEVs (hybrid and electric vehicles) that live up to the standards of their buyers in terms of both performance and cost. NEMMP 2020 also aims to increase domestic manufacturing capacity, as well as improve related infrastructure, consumer education, and technological skills. Under NEMMP 2020, we want to have 6 million plug-in electric and hybrid cars on the road annually by 2020.

3. **Faster adoption and manufacturing of Hybrid and Electric Vehicles in India:** The program's stated objective is to encourage the widespread use of electric vehicles (EVs), including anything from personal scooters to delivery vans and school buses.
4. **National Automotive Testing and R&D Infrastructure Project (NATRIP):** To facilitate industry adoption and implementation of global performance standards, a USD 573 million initiative has been established. Making and developing products at minimal costs are the main emphasis. Seven locations have been chosen as official testing hubs for this program.
5. **New Green Urban Transport Scheme (GUTS), 2017:** The plan's seven-year objective, estimated at USD10.76 billion, would be carried out with the cooperation of the private sector and assistance from the federal and state governments to develop low carbon sustainable public transport system in metropolitan regions. Non-Motorized Transportation (NMT) initiatives, such as public bike sharing, Bus Rapid Transit (BRT) systems, Intelligent Transportation Systems (ITS), urban freight management, etc., would be prioritized under the plan. India's car industry is booming because to the country's advantageous industrial infrastructure, cheap labor, expanding middle class, and surging demand from the government and rural regions. Government priorities include fostering automotive growth, economic development, and job creation in rural regions, therefore a key strategy is to cater to the unique demands of those living there, such as providing them with low-cost, durable automobiles. People's hopes for transportation that is both secure and economical will be fulfilled by EVs and other forms of low-carbon mobility.

### **Automobile Industry of India**

One of India's primary sectors is the manufacture of cars and related parts. India, like many other countries, would benefit greatly from improvements to its transportation infrastructure. The automobile industry is one of the world's most lucrative. As a result of its extensive forward and reverse ties to several vital economic components. The automotive industry is a vital part of India's economy. The automotive industry is at the forefront of manufacturing innovation in terms of both products and processes. The domestic car sector is often regarded as an indicator

of the health of the economy and is often cited as a key factor in GDP growth. This attitude is consistent with global tendencies; in many developed countries, the success of the car sector is seen as an indicator of overall economic well-being. The Indian economy may now count on this industry as a rising star. Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce reports that the car industry received a total of US\$7,518 million in FDI between April 2000 and November 2012. Four percent of India's total foreign direct investment (in US dollars) goes to the car industry. Scooter and motorbike production in India increased by 4 percent from April to November of 2012, according to statistics just provided by the Society of Indian Automobiles Manufacturers (SIAM). Manufacturing companies throughout the world, including those in India, are putting a premium on creating cutting-edge goods, technology, and distribution networks. When it comes to the latest innovation in the automotive industry—hybrid and electronic vehicles—India is one of the most important markets for global manufacturers. At over \$59,000,000 in annual sales. Thirteen millions of India's working class are employed in the automobile business. There are four subsegments within the automotive industry: two-wheelers, cars, trucks, and motorcycles. Bicycles with two wheels In addition to having a rapidly expanding market for personal automobiles, India also ranks high in the global rankings for the production of two-wheelers and commercial vehicles. The world's biggest motorcycle company is headquartered there as well. In addition, India has the fourth-largest market for automobiles in all of Asia. In the past two years, the automobile industry in India has expanded at a pace of 26%. (2010-12). Still, its 12 percent growth in 2012 was modest. With a projected 10% expansion in 2013, this pattern is expected to continue. Major contributors include stagnant rural income growth and high ownership expenses (including gas, registration, excise charge, and road tax). Stable, moderate expansion is anticipated over the next five years. Macquarie equities research shows that the sales of passenger cars are predicted to treble in the next four years, with growth above the 16% seen over the preceding decade. The Government of India has released the Automotive Mission Plan 2016 with the goal of expanding the automotive sector to a scale where it contributes 10% of India's GDP by the year 2016.

### **Review of literature**

(Rastogi & Gupta, 2013) studied “An Analysis of Indian Automobile Industry: Slowdown as an Opportunity for New Development” discovered that the automotive industry is a major

economic driver. Autos used to be a luxury, but now they are a necessity. Indian automakers have a lot of room to grow, but the market has slowed significantly recently. The primary goal of this article is to examine the challenges that have led to the automotive industry's recent slump. It examines how the dynamic automotive market landscape affects customer preferences and spending. The report analyzes sales data from many Indian automakers to provide light on the market. It also outlines the potential future outcomes and solutions that may be attained via the use of emerging technologies by the automotive industry in order to gain market share and revenue. New advancements in the automotive industry are also highlighted.

(Kanupriya & Kumar, 2019) studied “a Study on Automobile Industry in India” discovered, and when it comes to national economic development, the car sector plays a significant role. The Indian car industry has gone a long way since 1991, when it was first de-licensed, thanks to the subsequent opening of the sector to 100 percent FDI via the automatic route. Since the industry was de-regulated and opened to foreign direct investment, it has expanded fast. Currently, the nation is home to operations from almost every automotive giant in the world. Production patterns reveal an expanding car industry. Foreign direct investment (FDI) flows into the automotive sector were analyzed in this report for the years 2004-2014. The car industry is experiencing a period of increased output.

(Arya, 2019) studied “A Review of Growing Automobile Industry in India” discovered, and the automobile sector in India has been a major contributor to the country's overall economic development and technical progress. In 2016, this industry accounted for 7.1% of global GDP and directly and indirectly employed almost 32 million people. India is the global leader in the production of two-wheelers, three-wheelers, and tractors, and the sixth biggest producer of vehicles overall. The Indian automobile industry has risen to become a worldwide powerhouse because to a combination of high local demand and government regulations that encourage the sector's success. The Automobile Mission Plan 2016-26 details the long-term goals of the Indian government and the automotive sector (AMP 2026). According to the plan, by 2026, India will have risen to the ranks of the top three nations in the world in the design, production, and export of automobiles and automobile parts. By 2020, experts predict, India's car market will rank third globally, behind only China and the United States. The purpose of this paper is to investigate the current state of foreign investment in India's automobile industry and to analyze its past performance and projected future development.

(Kumar, 2015) studied “Growth of Automobile Industry in India” consumer feedback on how well it fulfils its needs was shown to correlate positively with ISO 9000 customer satisfaction ratings. Satisfaction of customers is subjectively evaluated. The key growth engine of the automotive industry in India is the rise in demand for automobiles and other vehicles, propelled by the increase in income. Personalized financing options and flexible payback plans have also contributed to the expansion of the automotive industry. Automobile manufacturing is a global economic and industrial powerhouse. It produces 60 million automobiles and light-duty trucks annually, which account for about half of global oil use. Around 4 million people have direct jobs in the business, and many more are employed indirectly. The automobile sector continues to have considerable influence and significance despite the fact that many significant corporations are struggling with overcapacity and poor profitability. As an added bonus, the sector offers high-paying employment with benefits, is well connected to its supply chain (which plays a disproportionate role in economic growth), and has considerable influence in the political sphere. To both businesses and their clients, customer satisfaction is of paramount importance. As a result of its subjectivity, satisfaction is notoriously hard to measure. It's not possible to provide a universal answer since it differs from person to person and product to product. There is no way to overstate the significance of consumer feedback in shaping market- and customer-focused strategies. Improving client happiness is now a critical objective for every business. Price, style, safety, mileage, interior room, prestige brand name, comfort level, spares component, and after sale service all received high marks from customers. In marketing, "customer satisfaction" is a metric used to assess whether or not a company's goods and services live up to its advertised promises.

(Miglani, 2019) studied “The Growth of the Indian Automobile Industry: Analysis of the Roles of Government Policy and Other Enabling Factors” discovered, and This free book examines the roles of IP codification and innovation governance in the growth of six important Indian businesses. The information technology sector, the motion picture business, the pharmaceutical industry, plant varieties and food security, the automotive sector, the peer production and sharing economy, and so on are all examples of or important to the innovation and economic growth of the two economies. Economics and policy analysis are also considered, in addition to IP legislation. The central question that unites all of the chapters is why certain industries have flourished in some countries while others have not, with a focus on the role that state innovation policy and/or IP policy played, the nature of that policy, and whether it was causal,

facilitating, crippling, co-relative, or irrelevant. In it, the authors ponder the question, "What can India and learn from each other?," and speculate on the potential for cooperation between the two countries. This book offers a practical look at how intellectual property laws affect innovation and growth in six different economic sectors in both India and the rest of the world. The reader may learn from the industries' successes and failures.

(Engineering, n.d.) studied "Unit 1 Introduction To Automobile" discovered, and Mechanical engineering has several subfields, and automobile engineering is one of them. It covers the many vehicles available, as well as their transmission mechanisms and their practical uses. Vehicles, such as cars, are used to carry people, commodities, and other things. Internal combustion is at the heart of every kind of vehicle you can imagine. Vehicle transmission motion is generated by the combustion of various fuels within the cylinder at high temperatures. Vehicles powered by internal combustion engines are the norm. It is essential, therefore, that all mechanical and vehicle engineers understand the workings of automobiles and the many ways they might be put to use.

### **Conclusion**

The automobile sector is crucial to India's economy. Due to factors including delicensing, favorable government policy and wholehearted support from the government, opening up of the automobile industries for 100% FDI, rising middle-class incomes, and a convenient and inexpensive auto-financing facility, this sector of the Indian economy has grown rapidly and steadily since the 1990s. Based on the results of the current research, it can be said that customer happiness is crucial to the success of any business. Because of this, it is imperative that service providers prioritize the happiness and well-being of their clientele as a means to attract and retain a larger clientele. It is not necessary for service businesses to spend more money on advertising and marketing if they consistently provide world-class service; instead, delighted customers will spread the news about such businesses by word of mouth, which is by far the most successful form of promotion. The research will highlight the importance of excellent maintenance as a way of providing pleasure to car users and owners throughout the vehicle's productive life cycle. With this information at hand, the automotive service sector can make smarter investment choices and boost both service quality and customer happiness. The findings of this study will help advance our understanding of consumer habits in the automotive servicing industry and provide useful information to the public.



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