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GROWTH DRIVERS AND EMERGING TRENDS IN THE INDIAN AUTOMOBILE INDUSTRY

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ABSTRACT

The automobile industry plays a crucial role in India's GDP and employment generation. Despite challenges such as rising crude oil prices, semiconductor shortages, and supply chain disruptions, India remains the fourth-largest automobile market globally and is projected to secure the third position by 2026, indicating strong growth potential. The government's proactive policies and regulatory support have further strengthened the sector. India has become a vital part of the global strategy for international vehicle manufacturers and component suppliers. While the industry is expanding rapidly, it must remain adaptable to evolving global market conditions and challenges. This study explores the latest trends shaping the global automobile industry and examines the obstacles faced by India's automotive sector. Additionally, it highlights the key growth drivers and potential opportunities for major industry players in the coming years.

Keywords: GDP, Global Market, Automobile Industry, Employment

1. INTRODUCTION

The Indian automobile industry is among the largest and fastest-growing sectors globally and is widely regarded as a crucial indicator of the country's economic progress. India holds a strong position in the production of two-wheelers, three-wheelers, tractors, and heavy vehicles. To sustain rapid growth and enhance the market's appeal, the government has introduced initiatives such as the Automotive Mission Plan 2016-26, the Scrappage Policy, and the Production-Linked Incentive (PLI) Scheme. These measures aim to boost the sector's contribution to GDP from 7% to 12%. Additionally, the auto industry directly and indirectly generates employment for over 37 million people. With increasing demand from both rural and urban markets, the sector presents significant opportunities for industry players, particularly in serving the needs of the low- and middle-income population. A rising middle class and a large youth demographic are further fueling automobile demand. The Indian vehicle market continues to expand, witnessing strong growth in both domestic and international sales.

To meet the increasing demand and evolving global trends, such as electric vehicles (EVs), hybrid technology, the growing preference for CNG vehicles, and other technological advancements, several automakers have been making significant investments across various industry segments. Support from both state and central governments has positioned India as a highly attractive destination for global investment in the EV sector. The implementation of Phase II of the FAME scheme is expected to play a crucial role in developing EV infrastructure. With these opportunities, Indian automobile companies are successfully securing funding to enhance their R&D capabilities, integrate advanced technologies, drive innovation, and expand their market presence.

The automobile sector in India has attracted a cumulative equity FDI inflow of approximately US$ 36.268 billion from April 2000 to March 2024. The country is poised to become the largest EV market by 2030, presenting an investment opportunity exceeding US$ 200 billion over the next decade. These emerging trends, coupled with supportive government policies, are expected to further accelerate the growth of India's automotive sector. Against this backdrop, this paper examines the key growth drivers and challenges faced by the Indian automobile industry in light of recent sectoral developments.

1.1. OVERVIEW OF INDIAN AUTOMOBILE INDUSTRY

The Indian automobile industry is divided into four key segments: two-wheelers, three-wheelers, passenger vehicles, and commercial vehicles. With vast potential to drive economic growth and employment, the sector also plays a crucial role in supporting various manufacturing industries, including auto components, machine tools, steel, aluminium, plastics, chemicals, and electronics. Additionally, it contributes to the services sector, encompassing IT and software, banking, insurance, transport, logistics, and public transportation.

To enhance ease of doing business, the Indian government has streamlined regulatory policies and introduced multiple schemes to boost the auto sector. In the domestic market, two-wheelers and passenger vehicles dominate, accounting for 75.35% and 17.69% of total market shares, respectively, in FY24. As of 2024, India holds the top position in the global two-wheeler market and ranks third in passenger vehicle sales.

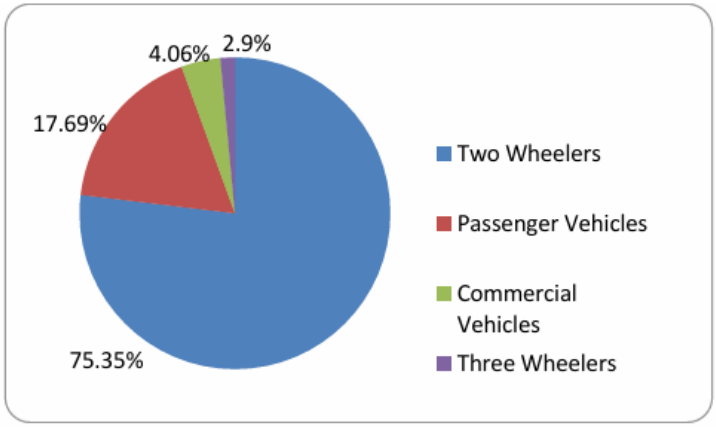

Figure 1 Segment wise Domestic Market Share in FY24

Segment	Top 5 Players in the auto market
Two Wheelers	Hero MotorCorp, Honda, TVS, Bajaj Auto, and Suzuki
Passenger Vehicles	Maruti Suzuki, Hyndai , M&M, Tata Motors, and Toyota
Commercial Vehicles	M&M, Tata Motors, Ashok Leyland, Maruti Suzuki and Force Motors
Three Wheelers	Bajaj Auto Limited, Piaggio Vehicles Pvt. Ltd., Mahindra & Mahindra Ltd., Atul Auto Limited and TVS Motor Company Limited

Table 1 Segment wise Top Players in Indian Automobile Market

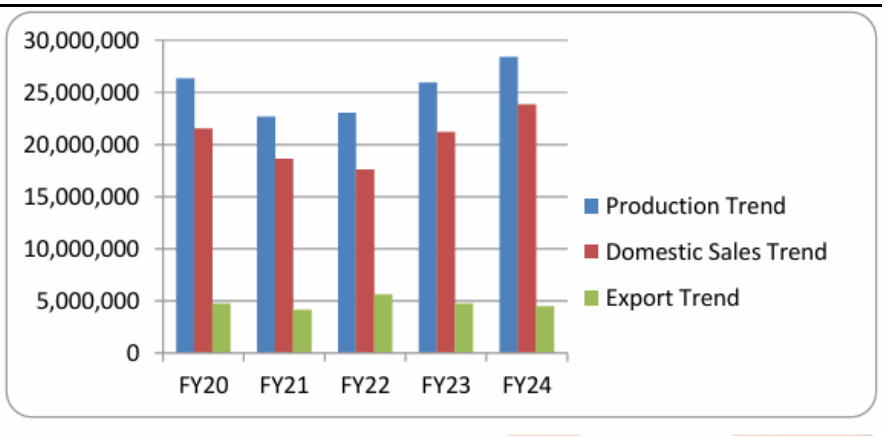

Figure 2 Indian Automobile Production, Domestic Sales and Export Trends Source: The Society of Indian Automobile Manufacturers (SIAM)

2. REVIEW OF LITERATURE

Nikita Arya (2019), in her study "Review of Growing Automobile Industry in India," analysed the performance and expansion of the Indian automobile sector. The research also highlighted the current status of foreign investment in the industry. The study found that India is emerging as a major exporter of connected and software solutions for automobiles. Additionally, the country benefits from key advantages in the evolving automotive landscape, such as an abundant supply of skilled labour at a lower cost and affordable steel production. However, the sector must address several significant challenges to sustain growth.

Similarly, Kanupriya and Sandeep Kumar (2018) examined the rising inflow of FDI into the automobile industry. Their research emphasized that FDI positively impacts both domestic manufacturers and consumers by facilitating technological advancements, upgrading managerial skills, enhancing global competitiveness, opening export opportunities, and strengthening supply chain linkages. Moreover, foreign investments contribute significantly to employment generation. This study evaluates the progress made in India's automobile sector through FDI.

Menonjyoti Kalita and Golam Imran Hussain (2021) conducted a study examining the opportunities and challenges in India's electric vehicle (EV) sector. Their research highlighted the rapid expansion of the EV market in the country. One of the primary concerns identified was the evolving infrastructure necessary to support this growth. The authors noted that while securing initial investments to adapt to changing infrastructure remains a challenge, the promising future prospects of the EV industry indicate continued market expansion.

2.1. OBJECTIVES OF THE STUDY

- To explore the latest trends shaping the Indian automobile industry.
- To identify the key factors driving the growth of the automobile sector in India.
- To assess future growth opportunities within the automobile industry.
- To critically evaluate the major challenges faced by the Indian automobile sector.
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3. RESEARCH METHODOLOGY

The current study relies entirely on secondary data obtained from a literature review, journals, newspapers, websites, published articles, and expert opinions on the subject.

3.1. EMERGING TRENDS IN INDIAN AUTOMOBILE INDUSTRY

The rising demand for Indian vehicles is driving the auto sector's recovery in the post-pandemic period. Several key trends are expected to continue influencing the industry's growth:

Digital Automobile Sales: To enhance customer convenience, automakers are increasingly shifting the vehicle purchasing process online through virtual showrooms. These digital platforms simplify sales and help reduce infrastructure and overhead costs, allowing retailers to offer vehicles at more competitive prices.

Autonomous Vehicles (AVs): One of the most recent advancements in the auto sector is autonomous vehicles, which can navigate independently in autopilot mode using advanced technologies and sensors. These include active steering, anti-lock braking systems, adaptive cruise control, GPS, radars, and lasers. The development of self-driving vehicles requires expertise from multiple technological domains to transition from mechanically driven to software-driven vehicles.

Vehicle Connectivity: Modern vehicles are now equipped with a unique digital identity that allows them to connect and interact with external systems. This connectivity facilitates real-time tracking of vehicular data for various applications, including maintenance, insurance, driver safety, and fleet management.

Electric Vehicles (EVs): The transition from traditional internal combustion (IC) engine vehicles to electric vehicles is one of the most significant trends in the industry. Both manufacturers and consumers are increasingly focused on EVs. The Indian government actively supports the EV market as a sustainable solution to combat climate change and reduce greenhouse gas emissions.

Hybrid Vehicles: Hybrid vehicles are gaining significant traction as the transition from fossil fuels to electric vehicles (EVs) remains a gradual process. With EV infrastructure still in its early stages, major automakers are investing in hybrid technology as a viable alternative to traditional internal combustion (IC) engines. Hybrid cars offer multiple advantages, including improved fuel efficiency, a lower carbon footprint, regenerative braking systems, and strong resale value. Although adoption has been relatively slow due to high costs, original equipment manufacturers (OEMs) are introducing new models with competitive pricing to boost demand.

CNG Vehicles: Rising fuel costs and limited EV charging infrastructure have led to increased demand for compressed natural gas (CNG) vehicles across India. In the passenger vehicle (PV) segment, CNG penetration rose from 31.4% in FY23 to 38.7% in FY24. With CNG being nearly half the cost of petrol, these vehicles offer a more economical and fuel-efficient alternative while being environmentally friendly. As more consumers seek mid-priced passenger vehicles, major OEMs are expanding their focus on factory-fitted CNG models.

Shared Mobility: The rise of connected vehicles has given birth to a new business model centered around shared mobility as an alternative to traditional vehicle ownership. This approach promotes mobility as a service, reducing the need to purchase new vehicles. Shared mobility solutions are particularly beneficial for businesses, as they minimize fleet expansion costs while improving operational efficiency and reducing waiting times.

Digital Twins: In the current landscape, big data and advanced analytics play a crucial role in the Indian automobile sector. The concept of digital twins enables automakers to make data-driven decisions throughout a vehicle's lifecycle. This technology enhances vehicle performance, accelerates production efficiency, and improves customer satisfaction by providing insights into real-time operational metrics and predictive maintenance.

3.2. GROWTH DRIVERS OF AUTOMOBILE INDUSTRY

1) **Policy Support**

The rapid expansion of the Indian automobile industry is driven by several key policy initiatives:

2) **National Automotive Testing and R&D Infrastructure Project (NATRIP):** This initiative involves the establishment of research and development centers with a total investment of $388.5 million, aiming to elevate the industry to global standards.
3) **Production-Linked Incentive (PLI) Scheme:** In September 2021, the Indian government introduced a PLI scheme for automobiles and auto components, amounting to ₹25,938 crore ($3.49 billion). This initiative is projected to attract investments exceeding ₹42,500 crore ($5.74 billion) by 2026. Additionally, in November 2023, the Union Government expanded the scheme to include over 100 advanced technologies, such as alternative fuel systems (CNG), Bharat Stage VI-compliant flex-fuel engines, Electronic Control Units (ECU) for safety, advanced driver assistance systems (ADAS), and electric quadricycles.

4) **Automotive Mission Plan 2016-26 (AMP 2026):** This initiative aims to achieve a fourfold expansion in India's automobile industry, covering automobile manufacturers, auto components, and tractor production over the next decade.
5) **Faster Adoption and Manufacturing of Electric Vehicles (FAME):** The Indian government introduced the FAME scheme to promote electric vehicles (EVs) across all segments. The first phase (FAME I) was extended until March 31, 2019. In February 2019, the government launched FAME II with a budget of ₹1,000 crore to establish EV charging infrastructure over five years.

PM E-Drive Scheme: This initiative, with a budget of $1.30 billion (₹10,900 crore), is set to run from October 1, 2024, to March 31, 2026. It aims to accelerate EV adoption, enhance charging infrastructure, and foster the EV manufacturing ecosystem in India.

- **Clean Tech Scheme:** The government has allocated $3.5 billion in incentives over five years (until 2026) to encourage the production and export of eco-friendly vehicles.

Vehicle Scrappage Policy: This policy is expected to bring transformative changes to India's auto industry by offering benefits such as zero registration fees, rebates on road taxes, special discounts on new vehicle purchases, and lower maintenance costs, ultimately boosting sales.

- **Battery Swapping Policy:** Designed to enhance EV convenience, this policy allows users to replace depleted batteries with fully charged ones at designated swapping stations, improving EV viability for consumers.
- **Growing Demand:** Rising Income and Young Population: Automakers like Kia Motors and Volkswagen have adapted their designs and strategies to appeal to India's growing middle-class market. By modifying their traditional models, these brands can compete directly with domestic manufacturers, increasing competition in the sector.
- **Improved Credit and Financing Options:** In October 2021, Maruti Suzuki India Limited (MSIL) introduced Smart Finance, an integrated online platform offering financing solutions with 14 financial institutions, enabling customers to secure competitive interest rates. Similarly, in November 2021, Mahindra & Mahindra Financial Services launched 'Quickly', a subscription-based vehicle leasing service targeted at urban markets.

4. INFRASTRUCTURE DEVELOPMENT & INVESTMENT

Charging Infrastructure Expansion: In November 2023, Mahindra & Mahindra partnered with Jiobp, Statiq, and Charge Zone to provide EV charging solutions for its passenger electric vehicles.

Advanced Automotive Testing Facility: India inaugurated National Automotive Test Tracks (NATRAX) in July 2021, making it Asia's longest high-speed test track, designed to support extensive automotive testing and development.

As of December 2022, a total of 5,151 EV charging stations have been installed by oil companies under the Ministry of Petroleum and Natural Gas (MoPNG) as part of the FAME India Scheme (Phases I & II).

In September 2021, e-bike Go announced plans to set up 100,000 IoT-enabled charging stations across India. Their charging network, branded as 'eBikeGo Charge', aims to offer an affordable and smart charging solution powered by IoT technology.

5. CHALLENGES AND FUTURE OPPORTUNITIES IN THE INDIAN AUTOMOBILE SECTOR

To tackle issues such as rising road accidents, rapid population growth, increasing oil import costs, and heavy dependence on fossil fuels, the Indian government has introduced stringent regulations and policies. Key initiatives include the New Road Transport and Safety Bill and the implementation of BS VI emission norms, which automakers must strictly adhere to during vehicle manufacturing. Apart from regulatory requirements, the automobile industry faces additional hurdles, including: Frequent technological advancements, requiring continuous adaptation. Inadequate EV infrastructure, making electric vehicle adoption challenging. Price sensitivity among consumers, impacting demand. Semiconductor shortages, disrupting vehicle production. Supply chain delays, causing inefficiencies. Rising costs of auto components, increasing vehicle prices. Despite these challenges, the automobile sector has witnessed strong growth in recent months. However, emerging factors like tightening government safety regulations and a potential economic

slowdown could pose significant risks. To stay competitive, automakers must devise robust strategies to navigate these challenges effectively. Looking ahead, the Indian automobile sector has the potential to: Tap into new market segments and expand its global footprint. Establish itself as a small-car manufacturing hub, leveraging its cost advantages. Emerge as a global R&D hub, fostering innovation in vehicle technology. Additionally, the Indian government is actively promoting electrification in public transportation, encouraging a shift from internal combustion (IC) vehicles to electric mobility. With a strong commitment to achieving 100% green mobility and carbon neutrality, various initiatives are being implemented to accelerate this transition.

6. CONCLUSION

Over the next decade, the automobile industry will need to embrace new technologies and emerging trends, driven by evolving consumer preferences and regulatory measures focused on safety and environmental sustainability. Given the price-conscious nature of Indian consumers, the industry must innovate both in product development and operational processes to remain competitive. This transformation will require collaboration across the entire value chain, along with support from non-automobile sectors. The government's proactive involvement will be crucial in ensuring a smooth transition, fostering growth, and helping the industry meet future challenges.

CONFLICT OF INTERESTS

None.

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REFERENCES

Nikita Arya (2019). A Review of Growing Automobile Industry in India. - International Journal of Research and Analytical Reviews. e ISSN 2348 –1269, Print ISSN 2349-5138, VOL. 6, ISSUE 1, JAN. – MARCH 2019.

Reena Balani, Dr. Kamlesh Pritwani (2023). Emerging Trends & Technologies in Automotive Sector in India (With Special Focus on Electric Vehicles. International Journal for Multidisciplinary Research. E-ISSN: 2582-2160, Vol. 5, Issue 1, Jan-Feb 2023.

Kanupriya, Sandeep Kumar (2018). A Study on Automobile Industry in India. ABS International Journal of Management. Vol.6, Issue-1, June-2018.

Menonjyoti Kalita, Golam Imran Hussain (2021). Opportunities and Challenges of Electric Vehicles in India. International Journal of Engineering Research & Technology. Volume 9, Issue 11, Special Issue – 2021.

Dr. T. Vijayaragavan (2021). An Overview of Automobile Industry in India. International Journal of Creative Research Thought. Vol.9, Issue8, Aug-2021

Automobile Industry Report, Nov-2024. India Brand of Equity Foundation (IBEF)

Automobile Industry Report, March-2024. Society of Indian Automobile Manufacturers (SIAM).