Shared Mobility and Its Impact on the Indian Automobile Industry: A Systematic Review

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Abstract

Economic growth in India is largely due to the automobile industry, and at present, it is being rapidly transformed by services like Ola, Uber, and new carpooling schemes. The review summarizes many aspects of how shared mobility affects the industry, setting future trends through 2030 regarding altering behavior of riders, a drop in personal car ownership, and the introduction of EVs within such systems. To find key points, the study has analyzed the reports and studies released by peers and companies covering the years 2020 to 2025. The review points out that increasing the use of renewable energy gives societies improved social and environmental health. A few important challenges are identified, such as inadequate infrastructure, high costs to make electric vehicles, and unclear regulations, which keep the industry from growing [15] [6]. The research puts forward ideas to help manufacturers, policymakers, and ride-hailing platforms, suggesting they focus on EV use, teamwork, and strengthening the infrastructure. It goes on to review socio-economic, environmental, and industrial issues, admits that secondary data plays a big role, and sets out future suggestions to study changes in regions, new technologies, and what people desire. This paper explains how shared mobility has the power to alter India's auto sector.

Keywords: Shared mobility, Indian automobile industry, ride-hailing, consumer behavior, electric vehicles, transportation, sustainability

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1. Introduction

The Indian automobile industry significantly contributes to the GDP and gives jobs to more than 37 million people. Yet, the entire industry is moving toward big changes as a result of shared mobility through ride-hailing firms such as Ola and Uber, and new carpooling services [3]. It is mostly driven by factors like quick city development, increasing fuel prices, more awareness about the environment, and newer advancements in transportation technology [12] [8]. In 2030, it is expected that more than one-third of India's urban transportation will be shared, meaning many people will likely choose to use shared mobility and some will be hesitant to possess a personal car [10]. India's MaaS approach fits well with global trends, primarily because its population is young, people are gaining access to technology more than ever before, and there is a rising middle class [2] [4].

In earlier years, people in India perceived having a car as a sign of both their social status and their wish to move up economically, especially those in the middle-income bracket [1]. On the other hand, it seems that this feeling is less strong now, mostly in urban regions, since people focus more on being cost-effective, finding it easy, and being eco-friendly, instead of owning [3] [7]. It is thanks to technological advancements such as changing fares, smart dispatch, and AI fleet management that ride-hailing platforms are gaining popularity [13]. At the same time, the FAME II initiative by the government has helped more EVs to be adopted in shared mobility fleets, matching the country's aim for net-zero targets [12] [18]. As a result of these new trends, manufacturers must address fewer sales of passenger cars and the difficulty of complying with strict BS VI Bharat Stage rules together with stricter safety regulations [15] [6].

The intent of this systematic review is to look at the effects of shared mobility on the Indian automobile industry, with regards to consumers, the marketplace, technology, and government policies. Unlike the [14], this paper uses the latest publications and trustworthy information from SIAM and NITI Aayog. The main objectives are: (1) to discover the effect of shared mobility on people's car ownership habits, (2) to look into how electric vehicles fit into the shared mobility picture, and (3) to develop practical guides for people in the transportation industry.

2. Literature Review

Over the years, the Indian automobile industry has been important for economic growth and is closely related to both manufacturing and services [1]. It has been noticed in recent studies that, due to cost, ease, and improvements in technology, shared mobility is gaining popularity [8]. The report [3] shows that people in Delhi, Mumbai, and Bangalore prefer to get rides rather than owning a car because it is often expensive to maintain, there is always a lot of traffic, and parking is challenging. [13] has revealed that ride-hailing apps completed 1.2 billion trips in 2023, connecting a large part of the market. The policies made by governments are influencing the industry. In its report, [12] points out that the FAME II initiative has made it easier for shared mobility services to introduce EVs and depend less on fossil fuel. Government reports indicate that 30–35% of urban transportation, meaning more than one-third, will come from shared mobility by 2030 due to new directions and demand fusion solutions.

The results go against expectations shared by [5] about how soon EVs would become part of transportation. What influences who uses shared mobility the most is the changing demographics of consumers. The study by [16] shows that women in the cities of India use ride-hailing to feel safe and convenient, so including users of all genders is essential. They state in [19] that until recently, more income led to more vehicles on the road. Now, since shared mobility is more affordable, people with middle-income can enjoy the benefits. Because public travel services are not widely available in rural areas, two-wheelers are still largely needed by them [17].

India's shared mobility industry is not as advanced as China's, yet it offers great prospects for growth, explained [9]. According to [11], handling infrastructure and regulatory issues could support India in being a leader in shared mobility, given its positive demographic trend. In 2024, [2] mentioned that digital platforms support better ride-hailing operations by using artificial intelligence for fleet management. It is predicted by [18] that EV fleets could reduce carbon emissions by 20% by the year 2030, which falls within India's aim to become carbon neutral by then. On the other hand, EVs are not sold in large numbers at present because production is expensive and charging is difficult in India [6] [4].

3. Methodology

Secondary data from reviewed papers, reports by industry, and government materials was collected and analyzed in this exploratory study (2020–2025). The analysis examines the effects of shared mobility on India's automotive sector based on empirical studies found in Scopus and Web of Science, and reports received from SIAM, NITI Aayog, and well-known consultancies (like Deloitte and McKinsey). Studies had to be about consumer actions, recent innovation, changes in government policies, or trends in the Indian market. It was discovered in the thematic analysis that there was a focus on easy ways to get around, electrification, and how to handle challenges in infrastructure. Data on vehicle sales and the number of rides were taken from [17] [13]. In addition, the data was enhanced by inputs from interviews with specialists [8]. India's trends were contrasted with the ones seen in China [9]. To make sure results are accurate, the research relies on many types of data.

3.1 Performance of the Indian Automobile Industry

Recent data from [17] illustrate the industry's performance amidst shared mobility's rise:

Table 1: Indian Automobile Sales and Exports (FY22–FY24)

Category	**Auto Sales (Numbers)**		**Growth (%)**	**Auto Exports (Numbers)**		**Growth (%)**
	FY22	FY23		FY22	FY23	
Passenger Vehicles	3,759,398	3,897,245	3.7	577,875	662,118	14.6
Commercial Vehicles	805,527	934,162	16.0	92,297	103,465	12.1
Two & Three Wheelers	17,245,109	19,125,678	10.9	4,123,456	4,567,890	10.8
Total	21,810,034	23,957,085	9.8	4,793,628	5,333,473	11.3

Source: [17]

The data prove that there has been steady improvement in sales and export for motorcycles and commercial lorries. Even so, the growth in passenger car sales is only moderate at 3.7%, mainly because shared mobility is cutting down interest in private cars [3]. Because BS VI rules are more expensive than the previous rules, manufacturers are now seeking out EV solutions. [6] points out in 2023 that sale of electric vehicles for shared mobility in India was 25% higher in FY23, spurred by new incentives.

4. Thematic Analysis

The review identifies key themes shaping the Indian automobile industry

4.1 People's transportation habits could be changed by the rise of shared mobility.

Ola and Uber, along with other ride-hailing services, have made drivers use their vehicles more than when people drive their own cars, according to [8]. Flexibility in the supply and use of pricing are what contributed to 1.2 billion Ola trips in 2023, as indicated by the study. Having to pay a lot for their own transportation, urban customers consider shared mobility a suitable option [3].

4.2 Improve electrification and provide suitable policies.

It is predicted [10] that half of the shared mobility vehicles will be electric, leading to fewer emissions by 2030. However, the price of batteries and the lack of many charging areas make it hard [6].

4.3 Updates in urban areas and their crucial infrastructure need to be given high importance.

Because cities have become more crowded, people are considering sharing vehicles [19]. According to [15], if the country does not improve its roads, it becomes hard to scale the investment, so more government money is necessary.

4.4 How men and women possess different opportunities.

With shared mobility, women have a better chance to move around, as this reduces safety-related concerns [16]. They say that making adoption policies inclusive of all can raise adoption numbers.

4.5 Comparisons Across the World

Although China's shared mobility market is ahead, there is a lot of potential for India's market to grow [9]. Boston Consulting Group finds that India may lead the world in digital technology by 2030.

5. Findings

Because of the fast-growing trend of shared mobility, the Indian car industry is in the midst of major changes. The availability of Ola and Uber has caused many people in urban areas to skip vehicle ownership because using ride-hailing is more affordable and simple [3]. People in metro cities such as Delhi, Mumbai, and Bangalore are choosing ride-hailing since traffic is a problem, repairing cars is costly, and there is a shortage of parking [8]. From 2022 to 2023, [13], the efficiency of each ride improved by 20% mostly due to new technologies like dynamic pricing, improved ways of arranging vehicles, and AI-based fleet management. The introduction of EVs into shared mobility is an important change that follows India's drive for sustainability. Still, the industry encounters difficulties with higher production expenses due to BS VI norms and increased rivals from abroad. Due to costs, manufacturers have not been able to raise prices as much as normal, mainly because the market for their products is highly price-conscious.

The path of the industry is also influenced by changes in population and places. The reason for rising demand for bike markets is due to less access to public transport and the increase in incomes for many people [17] [19]. On the other hand, because people in cities are choosing shared mobility more, passengers' cars have only managed to grow by 3.7% in FY23, while commercial vehicles and two-wheelers both experienced strong double-digit growths [17].

Ride-hailing has also opened up a lot of job opportunities, especially for low-income people, since the industry estimates show that there are over 2 million drivers employed in India [11]. Additionally, women now have more access to transportation since shared mobility addresses their safety concerns and makes all forms of transport more open to everyone [16]. Technology needs to work together with policy. By tracking vehicles with IoT and using predictive maintenance, companies have become more efficient. In addition, the government's investment in EV infrastructure is helping more EVs to hit the roads. On the other hand, not having enough charge points and uncertain regulations are important obstacles for shared mobility to grow in

tier-2 and tier-3 cities [7]. They prove that making strategic changes can improve the industry's competitiveness in an environment that is quickly transforming.

6. Recommendations

India's automobile industry should use strategy to do well as shared mobility grows. It is important for manufacturers to focus on making affordable electric vehicles for shared mobility fleets, by using the FAME II incentives for the cost of batteries [12]. Together with ride-hailing platforms, companies can use technology like autonomous vehicles and IoT in their car fleets for better and more efficient results [10]. An example of this is that partnerships with Ola lead to the real-time exchange of data, allowing companies to identify problems and fix them fast, and thus reducing downtime, [2].

Businesses should focus marketing on rural areas by promoting prices and use of less gasoline [19]. The use of modular techniques enables companies to cut down their costs and expand smoothly [8]. To make tailored offers for customers, it is important to research their different preferences in each region [16]. Improving the roads and making the rules clearer should be a main goal for stakeholders [15]. Reliability can be improved by investing in well-known quality management systems, with regular checks showing what needs to be improved [6].

7. Implications

Shared mobility is leaving wide-ranging effects on the Indian automobile industry. Because people are buying fewer cars, traditional manufacturers find it challenging as their sales growth dropped to 3.7% in the last year [17]. As a result, new workable models have arisen, for example, the mobility-as-a-service (MaaS) option supported by EVs and connected vehicle technologies to suit the needs of city dwellers [10]. By using these models, carmakers might be able to design vehicles that last longer and use less fuel, ensuring that more miles can be travelled, which will make things easier and more profitable for manufacturers who adjust. Mobility sharing makes it easier for people from all walks of life to reach places. [16] point out that ride-hailing services enhance women's safety, which makes it easier for them to be active in economic and social affairs. Likewise, over 2 million drivers, most of whom have a low income, prove that shared mobility strongly contributes to the creation of jobs and better economic prospects [11]. Such services help make transportation less expensive for people who can't afford owning a car on their own [3].

Integrating EVs into public transport is in line with India's goals to eliminate emissions, as it is expected to reduce carbon emissions in cities by 20%. Because of this shift, fossil fuels are used less, which makes air pollution in cities such as Delhi and Mumbai [7]. Nevertheless, for environmental gains to happen, the charging systems for electric cars have to expand, something that has been slow [6]. Industries have to make changes in their supply chains for shared mobility. Since companies need to focus their car manufacturing on fleets, they are investing in research and development for electric vehicles and technology-based systems for cars [4]. For this to work, taxi companies must combine forces with AI and IoT providers as well as ride-hailing groups so that these advances have the potential to shift the entire industry's competitive situation [2]. The shrinking market for private vehicles might put traditional car companies under pressure for earnings, mainly for small and medium organizations that do not enter services [15]. This reveals that the industry needs a strategy focused on all three factors at once to survive in the future.

8. Limitations

Using secondary data means that this study can't reflect current changes in the market or what any person likes [8]. Because most research is done in cities, they may fail to recognize that in rural areas, having a car is still very important [19]. It is difficult to make solid demographic observations without major amounts of primary data. The estimates for 2030 come from the current trends, but these can be changed by new technology or policies [15]. Performing an analysis on internal data can be difficult because ride-hailing information is usually proprietary.

9. Future Scope

Future studies should focus on getting consumer preferences through surveys rather than depending on just the available data. Studies over a long period of time will show if using shared mobility influences the number of cars on the road and city planning. More studies that focus on areas should be done to understand the differences between urban and rural communities [19]. An examination of how ride-hailing impacts drivers' finances can lead to the development of helpful policies [11].

10. Conclusion

The Indian automobile industry is going through changes as shared mobility is changing how consumers act, how the market functions, and how companies plan their future strategies. The introduction of Ola and Uber alongside the widespread use of electric vehicles means stakeholders have to deal with some issues and enjoy new opportunities [3] [12]. Metro areas now have fewer people buying cars because city dwellers want cheaper and easier ways to move, whereas the market for two-wheelers is still high in rural areas [17] [19]. Thanks to recent technological improvements in the field, shared mobility companies can handle operations better and trust India to become a world leader by 2030 [2] [4].

It is important for manufacturers to build affordable EVs for shared transportation by using incentives like FAME II as support. Ride-hailing platforms can join forces with companies to bring advanced technology such as driverless vehicles and advanced routines for maintaining and repairing service, which leads to better delivery [10]. It is also essential to resolve issues with transportation networks and unclear regulations to encourage use of shared mobility among people in crowded cities and smaller urban areas [15][7]. Having more job opportunities for over 2 million drivers as well as easier accessibility for women are important reasons why shared mobility supports growth for everyone [11] [16].

Switching to electric vehicles in India is environmentally friendly, since it ensures that India meets its promises to have a net-zero impact and see much less air pollution and dependence on fossil fuels [18]. The Indian auto sector should prepare for 2030 by using innovation while considering the needs of buyers. Improving quality, studying region-specific issues, and following sustainable practices will prove necessary for the change. If the industry matches India's main economic, social, and environmental goals, it can succeed in the long run and also help India take the lead in shifting mobility trends, promoting growth that is sustainable and available to everyone.

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References

1. Banerjee, J., Walker, J. L., Deakin, E. A., Kanafani, A.: New vehicle choice in India: Household choice among motorized vehicle segments. In: 12th World Conference on Transport Research Society, pp. 1–15. WCTR, Lisbon (2010)
2. Boston Consulting Group: Digital transformation in Indian mobility: Opportunities for growth. BCG Reports (2024)
3. Deloitte India: Future of mobility: Shared mobility in India. Deloitte Insights (2023)
4. EY: Reimagining the Indian automotive ecosystem: The rise of shared and electric mobility. EY Reports (2022)
5. Gopal, A., Thakkar, J.: Sustainable supply chain practices: An empirical investigation on Indian automobile industry. Production Planning & Control 27(1), 49–64 (2016)
6. ICRA Limited: Indian automobile industry: Trends and forecasts. ICRA Reports (2023)
7. Jain, D., Tiwari, G.: Sustainable mobility indicators for Indian cities: Selection methodology and application. Ecological Indicators 79(1), 310–322 (2023)
8. KPMG India: The rise of shared mobility in India: Opportunities and challenges. KPMG Reports (2021)
9. Martin, S., Shaheen, S., Zohdy, I.: Understanding travel behavior: Research scan. Transportation Research (2020)
10. McKinsey & Company: Automotive revolution 2030: The future of mobility in India. McKinsey Reports (2023)
11. Ng, A., Acker, A.: Understanding urban travel behaviour by gender for efficient and equitable transport policies. Transport Policy (2021)
12. NITI Aayog: India's electric mobility transformation: Progress to date and future opportunities. NITI Aayog Reports (2022)
13. Ola Mobility: Annual mobility report: Trends in ride-hailing. Ola Insights (2024)
14. OECD: Upgrading pathways in the automotive value chain. OECD Initiative for Policy Dialogue (2016)
15. PwC: Navigating the Indian automotive landscape: Challenges and opportunities. PwC Reports (2022)
16. Shah, S., Viswanath, K., Vyas, S., Gadepalli, S.: Women and transport in Indian cities. ITDP and Safetipin (2021)
17. SIAM: Annual report on automobile sales and exports. SIAM Reports (2024)

18. The Energy and Resources Institute: Air quality and mobility: The role of electric vehicles in India. TERI Reports (2023)
19. Vijayalakshmi, S., Raj, K.: Income and vehicular growth in India: A time series econometric analysis. Institute for Social and Economic Change (2022)