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Shared Mobility – Impact on Passenger Car Sales: A Study

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ABSTRACT

The advent of shared mobility since 2015 has significantly reshaped urban transportation, emerging as a pivotal solution in response to the inadequacies of traditional public transit systems, especially in rapidly urbanizing regions. App-based platforms like Ola, Uber, and other localized services have revolutionized commuting patterns, offering cost-effective, convenient, and accessible alternatives. This transformation has not only benefited low-income groups by reducing ownership costs but has also addressed first- and last-mile connectivity, contributing to the efficiency of multimodal transport systems. According to projections by Morgan Stanley, the adoption of electric and autonomous vehicles will further enhance shared mobility economics, positioning India as a global leader in this space by 2030. This paper aims to explore the dual impact of shared mobility: while enriching commuter experience and urban mobility, it also challenges the traditional automotive business model. Through a comprehensive analysis of industry data, trends, and literature, the study will assess the correlation between shared mobility's rise and the decline in PV sales, evaluating its broader implications on manufacturing, dealer networks, and the future of the automobile sector

1. INTRODUCTION OF STUDY AND RESEARCH METHODOLOGY

Shared mobility, a new concept started sprouting up in 2015 and over the next five years it has grown in leaps and bounds. With more work force in cities and work place located on the outskirts, it was a call for alternate mode as the normal public transport system couldn't meet up to the demands. Ola and Uber, leaders in this segment apart from app driven local players like Commute unleashed their services taking the traditional cab services by storm. No doubt, it is a great boon for the commuters. In accordance to a Morgan Stanley analysis, shared mile economics would improve with a rising number of

electric and autonomous vehicles, making India a leader in shared mobility by 2030. Having said that, flip side of this new business model has thrown the spanner into the wheels of passenger car sales. It was well predicted by none other than Anand Mahindra, Chairman, Mahindra & Mahindra. He tweeted 'In an age of shared mobility, personally owned cars need to be object of desires. (Kodransky et al., n.d.) Shared mobility benefits the low-income groups from reducing the ownership costs and the barriers for increased travel choices. Minibus and Vanpool rides are reliable means of transport to meet the demand in the crowded areas. (A. Shaheen & Bansal, 2015) Shared mobility aims at number of economic benefits such as increased economic activities near multi modal hubs and it acts as a connection for the multimodal transport systems where first and last mile are severe problem for most of the commuters. Comparing sales of passenger vehicles—which include cars, vans, and utility vehicles—to FY19 sales, there was a 17.8% decline in growth. In FY20, cumulative PV sales were 2,775,679 units, which was a decrease from the 3-million-unit level for the first time since FY17, according to data supplied by industry group Society of Indian Automobile Manufacturers (SIAM). Regretfully, FY20 sales are at a 5-year low and lower than FY16 sales data.

1.1. Shared Mobility

Shared mobility is one of the vital supplements to avail transport equity which in turn ensures the access to the health care, goods services, jobs and all other social connections. The socio demographic diversity is a key factor for transport equity, requiring coordination between federal, local, states and private sectors. Shared mobility also connects the equity gaps between the rapid and cost efficiency. Demographically, the older adults with low income and rural areas have less likely to use shared mobility than the educated individuals having higher incomes. Shared mobility is a stand-alone option for bridging the gap between the start and end mile service and to connect the mass transit systems. Shared mobility reduces waiting travel over the traditional service models which reduces the overall travel time and with the benefits like prior booking options. During the late-night hours shared mobility is more economic and viable than the conventional fixed route transits. Shared mobility also provides a variety of payment options with digital platforms and others which gives welcome and timely offers for the usernames. Shared mobility has revolutionized transportation, addressing the challenges posed by urbanization and workplace decentralization. Leading platforms like Ola and Uber, along with local players like Commute, have reshaped the traditional cab services, providing a boon for commuters. The shift towards shared mobility in India is expected to soar by 2030, driven by the increasing adoption of electric and autonomous vehicles, as highlighted in a Morgan Stanley report. However, this disruptive business model has cast a shadow over passenger car sales, aligning with predictions from industry figures such as Anand Mahindra. Shared mobility benefits extend to lower-income groups, reducing ownership costs and breaking down barriers to travel choices. Minibus and Vanpool rides emerge as reliable transport options, particularly in densely populated areas. The economic advantages of shared mobility include increased activities near multimodal hubs, addressing the first and last-mile challenges faced by many commuters.

Despite these merits, the increase in shared mobility have contributed to a significant decline in passenger vehicle sales, experiencing a 17.8 percent degrowth compared to FY19. Societal changes, such as the concept of personally owned cars becoming less desirable, underscore the profound impact of shared mobility on traditional automotive markets. Transport equity is a cornerstone of shared mobility, ensuring accessibility to healthcare, goods, services, and social connections. Coordination between federal, local, state, and private sectors is crucial for addressing socio-demographic diversity. Shared mobility acts as a standalone solution for bridging the gap between first and last-mile services in public transportation, reducing overall travel time and offering diverse payment options through digital platforms.

1.2. Ride Hailing Services in Hyderabad

Pooling is a type of ride service where commuters travelling same route or same place to share cost time and to reduce traffic. People view carpooling or biking as one of the simplest yet least expensive modes of transportation, which has been shown to be effective in a variety of ways. A bike pool is simply a click away for daily commuting in Hyderabad. There are plenty of apps that offer this feature and allow to utilize services. In the context of Hyderabad, ride-hailing services and pooling options have gained popularity. Carpooling and biking are seen as simple yet cost-effective modes of transportation, with apps facilitating convenient bike pooling for daily commuting. Top leaders of the share mobility market in Hyderabad includes Ola, Uber, Rapido. In summary, the evolution of shared mobility represents a transformative force in the transportation landscape, with India poised to lead this change by 2030, albeit with challenges for traditional automotive industries.

1.3. Statement of the Problem

Few literatures are available on this highlighting how shared mobility has changed the life style and added value to the commuters. A dive deep approach will be done to assess the impact of passenger car sales to correlate and interpret. With already automobile sector reeling under stress, the future predictions of shared mobility could have a bearing on the auto business model– from manufacturing to dealer network.

1.4. Research Methodology

The study was carried out by doctrinal non-doctrinal method. Relevant data will be collected from various sources namely

Auto research, reports of professional bodies like ASSOCHAM, NITI AYOG, auto makers report, published and unpublished materials and websites.

1.5. Objectives of the Study

a. To explore the impact on shared mobility on passenger car segment.

b. To attempt to correlate the impact due to the growth of shared mobility services

To find out whether study will recommend robust business models for the future of auto industry.

2. REVIEW OF LITERATURE

A web-based review of literature was performed. The articles were searched with key words like Shared mobility, on-demand services, Urban transit system, and Vehicle ownership. The reports of several government organizations were also scrutinized and the key points were drafted for review of literature. (Soares Machado et al., n.d.) conducted a web based bibliographical review on shared mobility systems in urban areas, the user profiles and the transportation perspectives. The findings include the synchronous shift of approach towards the shared mobility than the conventional transportation services like public and private vehicle ownership. The reasons stated were to cut off the personal costs for travelling and increase the efficiency by reducing environmental emissions. To counter act shared mobility, the current transportation industry has to resilience their business strategy and adopt an innovative means. In large cities there are chances for many mobility options, it's the choice of the commuters based on the maximum travel efficiency.

(*Genealogy of Shared Mobility in India*, n.d.) Limited publications were published on Shared mobility in Indian scenario. Although the concept is emerging, it gained a positive response. The need of Government and the encouragement of policy makers can uplift the current shared mobility than the existing mobility service models. In developing country like India, the struggle for new strategies and innovations is quite common.

(Hu & Creutzig, 2021) Focused on the development of shared transport, its influence on climate change, low carbon transportation system. The systematic review focused on shared mobility in China where 2541 English papers and 12,140 Chinese papers were analysed and factors such as Car sharing, Bike sharing and ride hailing were considered. It also enumerated the four shared mobility patterns like consumes, government, service providers and environment on the Car sharing, bike sharing and ride hailing. The overall rise of shared mobility was observed since the past decade in China but the covid 19 reduced the Car-pooling but rendered the bike sharing.

(A. Shaheen & Bansal, 2015) Shared mobility aims at number of economic benefits such as increased economic activities near multi modal hubs and it acts as a connection for the multimodal transport systems where first and last mile are severe problem for most of the commuters. Shared mobility also includes the transit services like private transit service, Shuttles, paratransist, microtransist which are add-ons to the regular rail and bus services. The studies also reported that there was reduction of usage of vehicles, Ownership and Vehicle travel kilometres which positively impacts on number of social, environmental and transportation related benefits. The new shared mobility also shares the California mission. Transportation department for a secure, sustainable, essential and effective transport system which supplements Californians' liveability and economy.

(Kodransky et al., n.d.) Shared mobility benefits the low-income groups from reducing the ownership costs and the barriers for increased travel choices. Minibus and Vanpool rides are reliable means of transport to meet the demand in the crowded areas. The barriers with the low-income group's mobility sharing include the areas where there is low demand to support operations and the additional risk of damage to the assets. The financial supporters invest in favour for the low-income where there are subsidies from the government and the localities where profitability is expected to be high. The lack of information, benefits and logistics of shared use systems also create low usage rates which can be overcome by outreach programmes and partnering with the local organizations. Asset ownership is considered as status icon in many of the low-income communities which increase the individual vehicles rather than shared. To decrease the barrier reduction in shared mobility among low-income groups a comprehensive, collaborative approach is needed which will succeed in the larger scales.

(Pavlenko et al., n.d.) The deployment of electric vehicles has been accelerated in the urban areas for shared mobility. The increased use of electric vehicles confluence the financial incentives, Charging infrastructure, awareness campaigns. The use of electrical vehicles in shared mobility benefits the greater fuel annual savings of the Transport Network Companies owner which operates at lower mean lower-per mile costs. In the progress of achieving the zero emission the shared vehicles which are run by conventional fuel hybrid and are electrified. The maintenance cost of the electric vehicles in the shared mobility are less compared to the conventional.

(S. Shaheen et al., 2017) Shared mobility is an important component to achieving transportation equity, which in turn provides access to health care, commodities and services, jobs, and all other social connections. The socio-demographic diversity is a critical component for transportation fairness, necessitating collaboration across the federal, local, state, and private sectors. Shared mobility is a stand-alone solution for connecting public transit by bridging the gap between first and

last mile service. When compared to typical service models, shared mobility saves waiting time.

(Computers et al., n.d.) Small-scale mobility services like dockless motorbikes and electric bikes are making a significant impact on the urban transportation system. These services promising the low-cost alternative sub urban travel short travel facilities reminiscent of other mobility services. Shared micro-mobility services provide better services than the existing automobile-based ride-hailing. In an urban setting, always the automobile services are not better options, where heavy traffic congestions in rush hours than the micro-mobility services which provides the fastest means of transport.

(Bruglieri et al., 2011) created PoliUniPool, a car-pooling service project, for the Politecnico di Milano and the University Statale to get around the present constraints of the transit services. An algorithm was designed for the proper functioning of the system in which the customization of the partner during the travel, pick and drop points etc. can be changed. The app also priorly updates if any delays by the driver and expected schedules. The objective of the project is the successful mobility of the students, faculty and employees of the two universities moreover promoting sustainable mobility services for students which influences for their tomorrow. The algorithms consider several factors like route length, travel partners, driver and the number of vehicles available etc for proper functioning.

(Dawra, 2018) The growing population has demanded the increase in the travel demand which increased the private mode of transportation. The degraded quality of the public bus services led to the alternate modes like shared mobility. The maximum traffic zones analysed has reported the reason to be cars users and car-based aggregators. An integrated proposed spatial plan is made to reduce the cars running on to the roads instead shift towards the public transport. The involvement of the government plays a major role in encouraging the shared mobility for sustainable transportation.

(Vani et al., n.d.) conducted study on cars on different companies in Hyderabad. The researchers conducted questionnaire-based survey on 136 car owners of selected six different the companies namely Honda city, Logan, Folk ion, Tata Indigo, Swift, 110. The customer preference towards the cars includes the dimensions like price, brand image, features, etc. Majority of the customers have chosen that the necessity is the important criteria among all the dimensions. The companies should focus on test drive, demonstration and dealer support for the upliftment of current sales.

(Aluri, 2017) conducted research on the effect of cab services like Ola, Uber on public transit and vehicle ownership in Hyderabad. The research has shown that there has been a shift of on-demand cars and the decrease of occupancy ratio in city busses. Metro rail services also largely affect the services of cabs, but the first and last mile problems are achieved by the shared mobility services like cabs and bikes. The growing digital world also transforming the transport options in urban mobility like the shift towards the shared mobility which are easily available on single click in various mobile applications. The demand for shared mobility is also due to the various payment modes available from service provider to driver level.

Gilbert Laporte et.all, (2015) The operational scientific community has become fascinated with shared transportation systems for cars and bicycles as they have become more and more shared. Cohen, (2018) The "sharing economy," a group of customers and entrepreneurs who are using technology to pool resources, save expenses, and boost capital, has emerged in recent years as a result of social, environmental, and economic variables.

Scott Le Vine, (2015) The term "Sharing Economy" implies to a broader phenomenon that includes shared mobility. This is because smartphones along with emerging ICT are widely utilised to foster novel forms of market communications that can lead to the emergence of new services and increased asset utilisation efficiency. Gilbert et.al (2018) Shared mobility systems have resulted in about a major shift in transport habits over the last a decade.

3. METHODOLOGY

Objective 1 & 2: To explore the impact of shared mobility on passenger car segment and attempt to correlate the impact due to the growth of shared mobility services.

3.1 To Explore the Impact of Shared mobility on the Passenger Car Segment.

The objective of exploring the impact on the passenger car segment in light of the growing popularity of shared transportation is a multifaceted endeavour that involves delving into various aspects of the automotive industry in India. This analysis is crucial in understanding the dynamics of consumer behaviour, sales patterns, and the overall landscape of private car utilization. To commence, it's essential to acknowledge the burgeoning phenomenon of shared mobility, which has reached a substantial valuation of approximately 1,025.8 million dollars in India. Shared mobility encompasses a spectrum of services, including ride-sharing, carpooling, and subscription-based models, all of which pose a challenge to the traditional ownership model of private cars.

3.2 Consumer Preferences

One pivotal area of examination is the transformation in consumer preferences. With the advent of shared mobility, individuals might be inclined to reassess the need for personal vehicle ownership. The convenience and cost-effectiveness of shared rides could potentially influence a shift in consumer mind-set, moving away from the notion of owning a private car towards embracing on-demand mobility solutions. Understanding these evolving preferences is instrumental for

automakers and policymakers in adapting to the changing market dynamics.

3.3 Sales Trends

The impact on sales trends within the passenger car segment is a critical metric to gauge the influence of shared mobility. As shared mobility gains prominence, traditional car sales could witness fluctuations. Analysing the sales data over a specified period can unveil patterns and relationships between the demand for private vehicles and the growth of shared mobility services. This insight is invaluable for automakers strategizing their production and marketing efforts in response to the evolving market conditions.

3.4 Utilization Patterns of Private Cars

Another facet of this analysis involves scrutinizing the utilization patterns of private cars. Shared mobility, by its nature, promotes efficient utilization of vehicles, potentially leading to decreased idle time for privately owned cars. This shift in utilization patterns might influence consumers to opt for shared services, contributing to a decrease in number of private cabs on the roads. Understanding these changes may aid in predicting future trends and optimizing transportation infrastructure accordingly.

3.5 Challenges and Opportunities for the Passenger Car Segment

As shared mobility disrupts the traditional automotive landscape, it brings forth both challenges and opportunities for the passenger car segment. While decreased demand for private cars may pose a challenge for automakers, it also opens up avenues for innovation. Exploring opportunities in creating vehicles tailored for shared mobility, such as designing cars for ride-sharing comfort or developing innovative ownership models, can be a strategic approach for the industry.

3.6 Policy Implications

The rise of shared mobility necessitates a re-evaluation of existing policies related to the automotive sector. Policymakers must consider the environmental impact, traffic management, and the overall sustainability of shared mobility solutions. Adjustments in regulations and incentives may be required to maintain the sustainability of the passenger car industry while simultaneously encouraging shared mobility.

3.7 Technological Adaptation

Technological advancements have a significant influence on how transportation will evolve in the future. The integration of intelligent technologies, networking, and self-driving capabilities in personal vehicles and shared transportation services is a factor that demands attention. Exploring how technological adaptations impact consumer choices and enhance the overall shared mobility experience is integral to understanding the trajectory of the passenger car segment. In conclusion, exploring the effect of shared transportation on the passenger car segment involves a comprehensive analysis of consumer preferences, sales trends, utilization patterns, and the broader implications for the automotive industry. This endeavour is crucial for stakeholders, including automakers, policymakers, and technology providers, as it provides insights that are instrumental in navigating the evolving landscape of the transportation sector in India. As shared mobility continues to reshape the way people move, understanding its impact on the passenger car segment is not just a matter of adapting to change but a strategic imperative for sustainable growth and innovation

3.8 Attempt to Correlate Impact with Growth of Shared Mobility Services

Objective Two seeks to establish correlations between the growth of shared transportation utilities and its impact on passenger car segment. This may involve examining factors such as the rate of acceptance of shared transportation, emergence of new ride-hailing apps, and the associated economic and convenience benefits that contribute to market expansion. The anticipated Compound Annual Growth Rate (CAGR) of 56.8% for the shared mobility market in India during the forecast period (2022-2025) suggests a dynamic landscape. The prime factors driving this growth include cost-effective measures and convenient mobility solutions provided by ride-hailing apps. These encompass areas such as maintenance, fuel, insurance, and parking, which take jointly in order to render shared mobility services more appealing.

During the pandemic outbreak the shared mobility start ups and market went down because of the restrictions from the government which led to the recession in the industry.

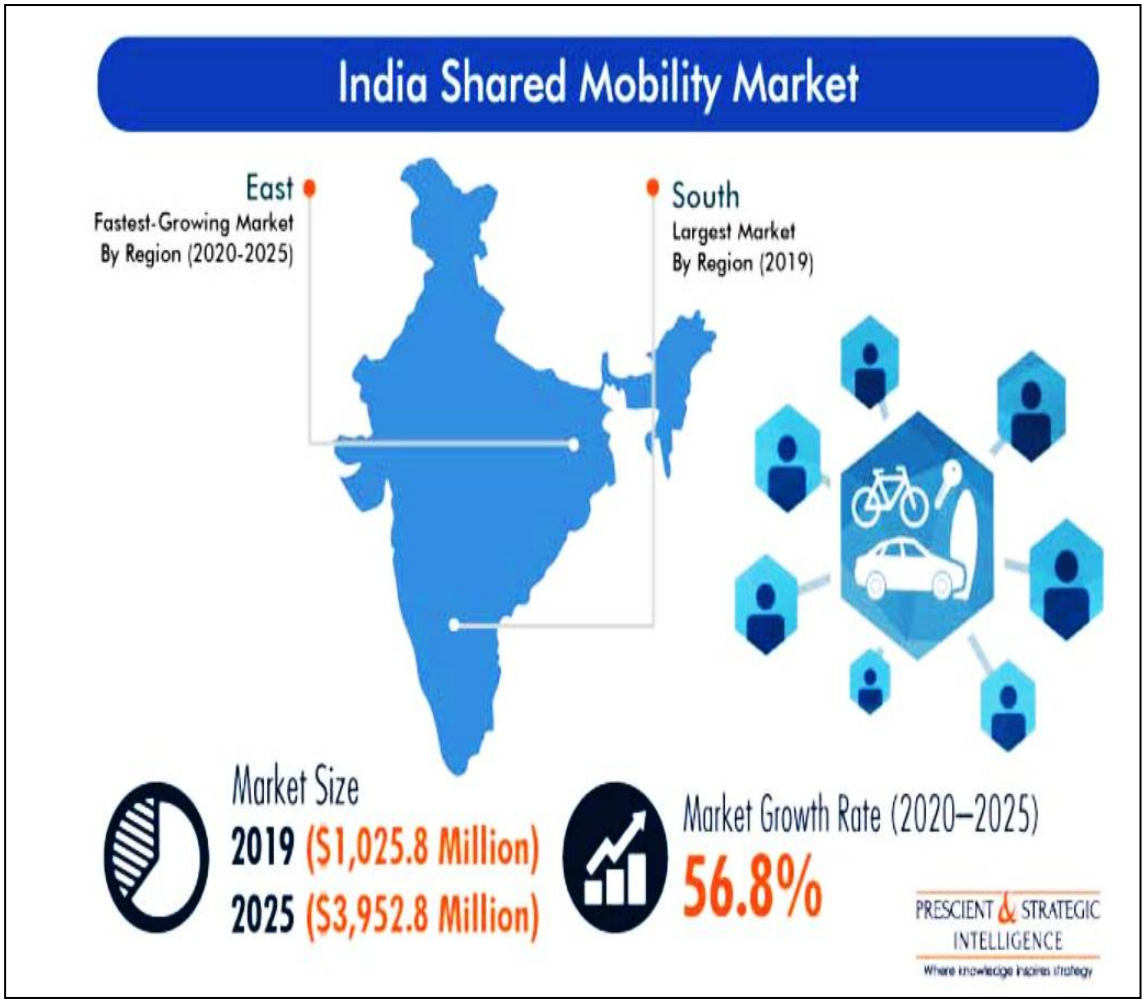

Image 1: Source (How shared mobility will change the automotive industry | McKinsey, n.d.)

In summary, the objectives aim to delve into the multifaceted impact shared mobility has on the passenger car segment and understand the factors contributing to the market's notable

expansion for shared mobility in India. During the forecast period of 2022–25, the shared mobility market in India was estimated to be worth $1,025.8 million USD and was predicted to grow at a CGAR of 56.8%. Cost effective measures and convenient mobility offered like maintenance, fuel, Insurance and parking by the ride hailing apps is the prime factor for the growth of the market. Research shows that commuters who own private vehicles typically do not use them for approximately two months out of the year. Compared to possessing a car, shared mobility is more affordable. Because of this, a growing percentage of commuters worldwide are coming around to the idea of shared mobility. This is seen in the world's major economies, where commuters are searching for less expensive options and are open to the idea of car sharing.

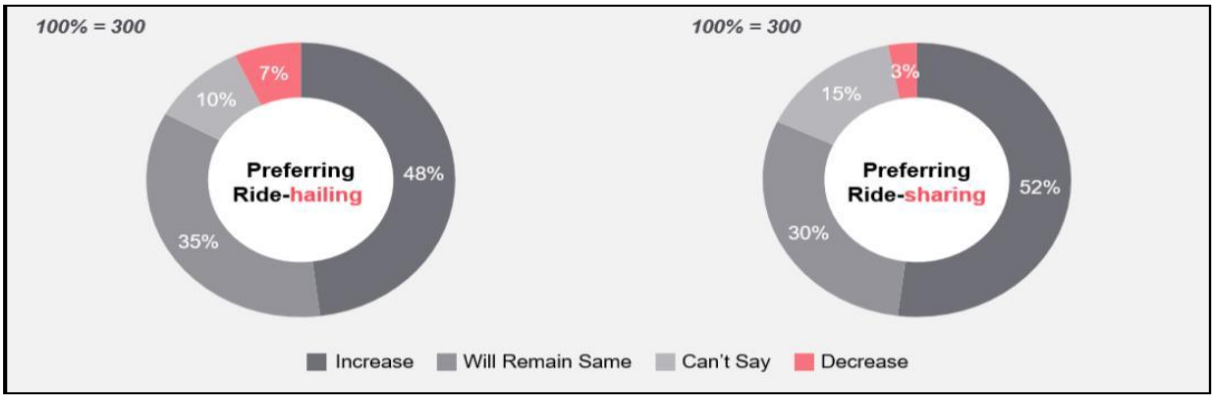

Image 2: Source (How shared mobility will change the automotive industry | McKinsey, n.d.)

The outcomes of the research reveal that car sales will rise over the next five to ten years, though at a slower rate. Although the growth rate of vehicle sales was between 3 and 4% CAGR from 2015 to 2020, it is projected to slow downward by 2030, with commuters preferring to share vehicles over owning them being a major contributing factor.

While the trend towards shared mobility can differ by region (Asia, North America, and

Europe), commuters around the globe are switching to it at an increasing rate. Within the next two to three years, it will be expected that commuters will grow more interested in shared transportation services.

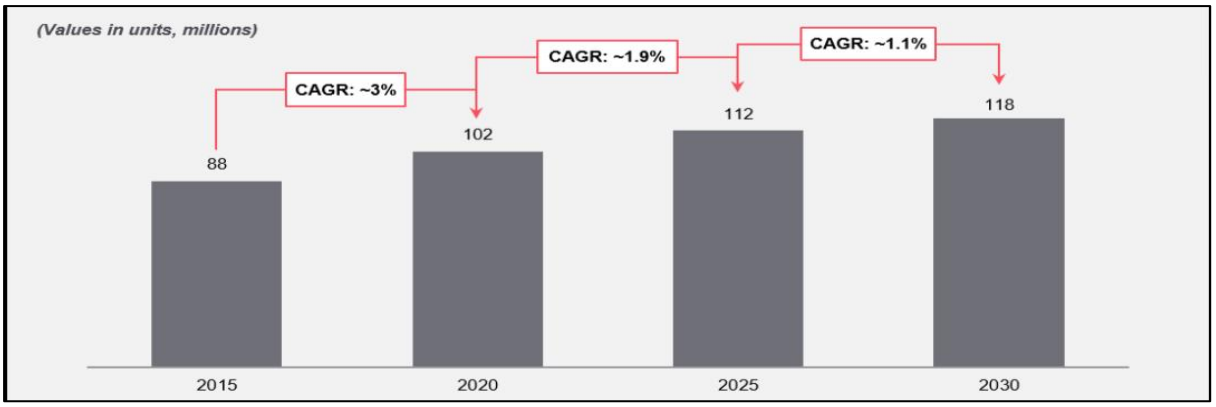

Image 3: Source (How Shared Mobility Will Change the Automotive Industry | McKinsey, n.d.)

The increasing acceptance of shared transportation will lower but not reverse automobile sales. Shared mobility is unlikely to account for around one-third of the predicted rise in vehicle sales due to urbanisation and macroeconomic growth, even though it will result in fewer new cars on the road. Over the next 15 years, car sales in developing cities like Hyderabad will outpace the impact of shared mobility.

(*Urban Mobility Happiness Survey Reveals Personal Mobility Is Preferred Mode of Commute | The Financial Express*, n.d.) report says 71% of the Vehicle owners travel or take out their car with merely with only one passenger. Only 1% of the respondents always travel with more than one occupant.

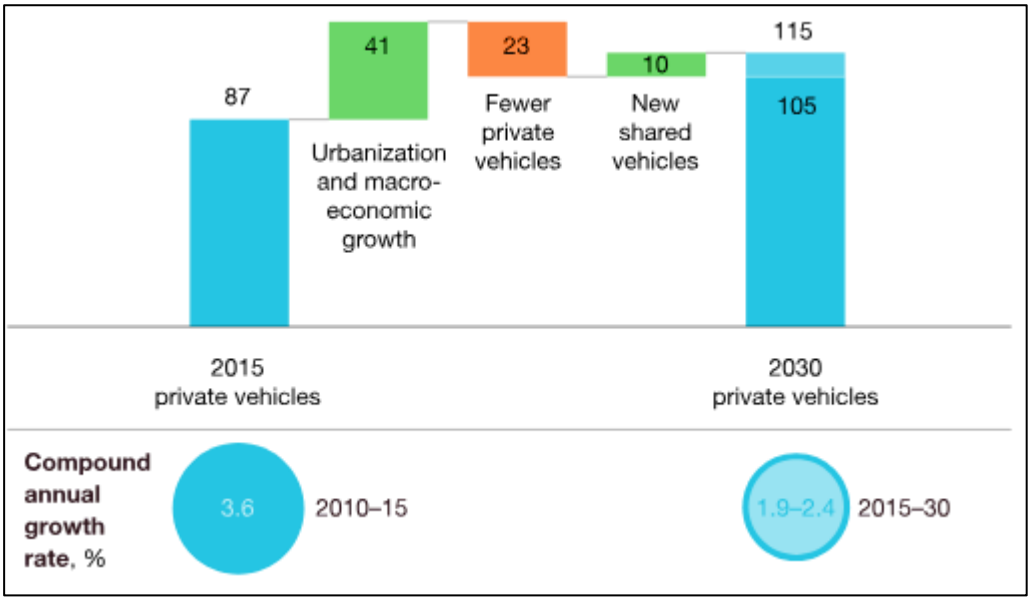

Image 4: Source (How shared mobility will change the automotive industry | McKinsey, n.d.)

Fig: Annual global vehicle sales in view of shared transportation distribution on auto industry.

3.9 Objective 3: Robust Business models for the future of Business Industry.

Shared mobility services like ride hailing apps are convenient alternatives to owning personal vehicles. In urban areas, the services are widely high like Car-sharing, bike-sharing which decrease in car sales and shift of preference towards the shared mobility as a Car consumer than a Car owner. Different approaches have been suggested by researchers for increase in sales. One of the approaches is CASE approach - Connected, Autonomous, Shared and Electrified. This is the future of the

automobile industry.

New Business model – Integrating Vehicle sharing:

Trends shows that there will be significant diversification towards shared mobility than owning personal vehicles by 2030. At least one among the ten cars sold may be used for Shared transportation. Today consumers are using same vehicle for all purposes but in future due to the flexibility of shared mobility and diverse mobility solutions the consumers use specific vehicle for specific purposes rather than same vehicle. The auto industry makers should focus on building an ecosystem than updating or perfecting their cars. EV stations network app-based management for ride hailing services etc. The network should allow the customers to either ride sharing services in their vehicle or renting vehicle.

Online Sales may be an option:

Automakers can also offer options for customers to buy vehicles online. With a Smart phone or other digital accesses, the buyers can take Virtual tour, chose desire features and financing options. Dealers and sellers can bargain chip through virtual reality. Online portals to register complaints and for addressing problems. Current trends in marketing indicate that using brief videos for video marketing converts leads into customers more successfully than textual content. Creators can use a variety of video formats, such as how-to videos, customer testimonials, car highlights, etc., to release their work or promote it., VR tech adaption offers a great advantage where customers experience Virtual reality without visiting a dealership which may increase customer experience. Upgrading built in message apps where chat bots are key technology in automotive industry. Increase in digital advertisements on social media platforms and other mobile apps. Strategic plans to capture the potential digital shoppers are drawn to car purchases through call conversions, social media marketing, and other apps.

Parking infrastructure problems have to addressed:

Most of the Vehicle owners facing problems such as Car parking. (*Urban Mobility Happiness Survey Reveals Personal Mobility Is Preferred Mode of Commute | The Financial Express*, n.d.) survey found that 74% of Vehicle owners face parking problems like management of parking spaces in the City. These parking problems favouring the ride hailing services and usage of Mass trasist for a hassle-free ride.

Hiking fuel prices affecting the Vehicle ownership:

Fuel price increase has a widespread impact on urban automobile drivers with no exception. Studies confirmed that hiking fuel prices have great impact on vehicle ownership. On an average daily commuter who use car spend Rs.6,000/- on fuel every month. This may be sign for the auto makers to focus on alternate engines like EVs or Hybrid vehicles.

Compact Mini Smart cars can be an alternate solution for Urban agglomeration:

Urban agglomeration is compelling the commuters to travel longer distances in the cities for attending daily office and colleges. Longer distances mean longer period. The probable solution for feasible and effective commuting by Car owners can be by Compact Smart cars which can reduce travel time by solving many hassles faced during the journey every day. A Hassle-free parking can be done in compact places and it also reduces parking time etc.

Focus on Digital Vehicles:

Introducing IoTs (Internet of Things) features into the cars Software's to control. Cars that are wirelessly connected to the Internet of Things are referred to as connected automobiles. With their on-demand features, they offer a safe, enjoyable, and practical multimedia experience that lets users browse the web while driving. These consist of features like turn-by-turn navigation, 4G LTE Wi-Fi hotspots, auto health alerts, remote diagnostics, and vehicle health reports. **Increase Charging Networks for expanding EV fleet (Tesla model):**

Perhaps surprisingly, there is a very simple reason why American consumers still choose Teslas over products from other brands, like Audi. They can travel great distances in their Tesla cars and be completely confident that they will come across convenient charging stations. Tesla has been thinking about the entire vehicle system in order to meet consumers' primary driving needs, while the traditional automakers are still only concerned with improving their electric vehicles. (*How Tesla's Charging Stations Left Other Manufacturers in the Dust*, n.d.) The Indian auto dealers can also adopt Tesla model like building eco system which benefits long term sales.

Preference for Preowned Cars/Used Cars:

The automotive makers can also focus on Pre owned cars for lower middle class. Increased sales might be seen by Certified Pre owned cars with low financing options, extended warranty periods can also increase the sales of the cars.

- Investing in or working with start-ups can offer assistance and foster relationships with tech organisations, service companies, and other entities that boost innovation and create electric and autonomous infrastructures to lower significant capital expenditures on R&D (Research and Development).
- Switching from conventional to technical business models like social media and other potential advertisement

platforms and other online third-party apps.

- Attracting customers with LTV (Loan to Value) Car loan with 100% on-road financing.
- Studies shows Luxury Car market grows several folds by 2030. Increase in high-net-worth consumers which makes the Luxury brands sales ultra profitable. This may be the indication for upgrading the current auto trends towards the sophisticated models. Industry has to be ready to provide premium models with personalisation options.

4. RECOMMENDATIONS AND CONCLUSIONS

In conclusion, the study delves into the transformative influence of shared transportation on the traditional landscape of transportation, particularly in Indian context. The evolution of shared mobility, spearheaded by industry leaders like Ola and Uber, has witnessed substantial growth over the past five years. This surge is attributed to the changing dynamics of the workforce, decentralized workplaces, and the need for alternative modes of transportation in congested urban areas. India's increasing use of electric and driverless vehicles is likely to make it a leader in shared mobility by 2030. While shared mobility brings about economic benefits, especially for low-income groups, it has posed challenges to the traditional passenger car market. The decline in passenger vehicle sales, a 17.8 percent degrowth in FY20, underscores the profound impact of shared mobility on conventional automotive industries.

According to the study, shared transportation is essential to achieving transportation equity because it addresses sociodemographic diversity and can be used as a stand-alone the start and end-mile connectivity solution. However, the shift towards shared mobility has implications for the auto business model, from manufacturing to dealer networks. The research methodology combines both doctrinal and non-doctrinal approaches, utilizing data from various sources, including auto research, professional bodies, and industry reports. The Objectives of the study include exploring the increase of shared mobility on the passenger car segment, correlating this impact with the increase of shared transportation services, and recommending robust business models for the future of the auto industry. Reviewing relevant literature provides insights into the global trends of shared mobility, emphasizing its economic, environmental, and social benefits. Studies highlight the importance of shared mobility in achieving transportation equity and suggest innovative solutions to overcome barriers, including collaboration between sectors and outreach programs.

The methodology also addresses the impact of shared mobility during the pandemic, emphasizing its economic efficiency over car ownership. The anticipated Compound Annual Growth Rate (CAGR) for shared mobility in India suggests a dynamic and growing market, influenced by cost-effective measures and convenient mobility solutions provided by ride-hailing apps.The conclusion outlines potential reasons for the decrease in car sales, such as high costs, increased interest rates, and supply chain issues. It also presents recommendations for robust business models, including the integration of vehicle sharing, online sales options, addressing parking infrastructure problems, and focusing on digital vehicles and charging networks.

In essence, the study highlights the complexity shared mobility's influence on passenger car segment, acknowledging its challenges while presenting innovative solutions for the future of the automobile market. The continuous evolution of shared transportation signifies a paradigm shift in transportation, emphasizing the need for adaptability and forward-thinking strategies within the automotive sector

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