

Indian Automobile Industry – Strength and Challenges

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Abstract— The first car that plied on Indian roads was as early as 1897 and the first Indian to own a car in 1901 was Jamshedji Tata. It was in 1942, before India's independence that Hindustan Motors manufactured the first automobile in India. Soon after India's independence, the Government of India tried to boost the sector by encouraging manufacturing of automobiles. Before that, the cars were imported directly. The automobile sector formally came into being in the year 1952 when the Government appointed its first tariff commission with the aim of indigenizing this industry. The year 1952 also marked the introduction of passenger cars in the country. Manufacturers like Hindustan Motors, Premier Automobiles and Standard. Even SUV's started being manufactured by Mahindra and Mahindra, Bajaj, Standard Motors, etc. Cumbersome and medium commercial vehicles were made by 7 manufacturers which included Ashok Motors, Simpsons and Co., Premier Motors and more. Two-wheeler vehicles like scooters, motor bikes or mopeds were manufactured by Bajaj Auto, Escorts Group, Royal Enfield, Automobiles Product of India, Ideal Jawa, etc.

I. AUTOMOBILE INDUSTRIES IN INDIA

The first car that plied on Indian roads was as early as 1897 and the first Indian to own a car in 1901 was Jamshedji Tata. It was in 1942, before India's independence that Hindustan Motors manufactured the first automobile in India. Soon after India's independence, the Government of India tried to boost the sector by encouraging manufacturing of automobiles. Before that, the cars were imported directly. The automobile sector formally came into being in the year 1952 when the Government appointed its first tariff commission with the aim of indigenizing this industry. The year 1952 also marked the introduction of passenger cars in the country. Manufacturers like Hindustan Motors, Premier Automobiles and Standard. Even SUV's started being manufactured by Mahindra and Mahindra, Bajaj, Standard Motors, etc. Cumbersome and medium commercial vehicles were made by 7 manufacturers which included Ashok Motors, Simpsons and Co.,

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India's automobile market is one of the fastest growing auto markets in the world. The global automotive industry is currently dominated by seven large automobile producing countries. India is one of the seventh largest global automobile manufactures, producing 12.7 million vehicles per year. India trail behind China, Japan, Germany, USA, South Korea and Brazil and followed by India and biggest automobile market in the world. The motor vehicle industry has attracted the attention of economists the world over. But the Indian motor vehicle industry was impartial growth starting from mid-twentieth century to last quarter of the twentieth century. The 21st century the industry to produce all type of vehicles produced and assembling. The structure of the assembling segment of the industry at one level covered by the regulatory policy at more fundamental level, the crucial factor is technology, diversification and collaboration has governed and promote strength the segment of the firm. The automobile company in India is one of the key contributors to GDP in the country. In recent years, automobile industry in India has grown by leaps and bounds. This Phenomenal growth rate is owing two factors, mainly which are better standard of living of the Indian middle class people and a subsequent rise in their disposal of income which in turn increasing the purchasing of power adding to the growth of *automobile industry as a whole*

II. INTRODUCTION

In recent years technology and innovation have been cited as important drivers of competitive positioning of a company. The enlarge business opportunities in both developed and growing markets. The lengthened number of suppliers of products and services will also

get change to the way these goods and services are consumed and received. The market place pressure to deliver these products and increase their utility from the consumer's perspective will drive continuing innovations in both existing and rising market. While emerging markets will fight to provide value for the end user while sustaining profitability, developed market will increasingly try to guard their existing market share by flanking itself with cooperating allies and looking to expand service of innovations. The industry rapid growth in the last couple of decades has been primary driven by services sectors like technology and process of business expansion. The contribution of gross domestic product, manufacturing and service sectors in top more than half of the percentage GDP, industry sectors second place it contribute twenty seven percentage and rest of them agriculture allied sectors. The increased in domestic car sales in year by year the result in liberalization of financial sector reforms and reducing the rate of interest in commercial bank and approved financial institutional borrowings.

Today rules and regulations had been changed in favorable the automobile industry the first reason for this knowledge about new technologies spreads quickly to different parts of the country. Another reason is that ability to attract customers and tools to apply knowledge at the disposal of individual income and organizations expenditures. Particularly in the automobile market survey result the sale of passenger car have increased by three folds than what it used to be five years down the line. The emerge as the destination of choice in the world for design and manufacture of automobiles

and auto components with output reaching a level of US\$ 145 billion accounting for more than 10% of the GDP and providing additional employment to 25 millions of people by 2016. The Government of India takes necessary steps not only to maintain the high rate of growth but also retain the attractive of Indian market for further attractive the competitive strength of Indian companies. The Government was setup through the development council on automobile and allied industries, constituted a task force to draw up a decade mission plan for Indian automotive industry, the challenge was to give a shape of innovative plan of action with full participation of stakeholders and to

complexity it into a mission mode to remove barrier coming in the way of growth industry. Automobile industry to meet the customer demands and changing business needs, they raise a strategy to accomplish the demands of consumers as well as face the competitor's challenge with the aid of new technology and innovative ideas. The industry service to the society next advance stage introduction of new electric cars in the place of LPG, petrol and diesel cars due to continuous hiking of fuel prices as well as to reduce the emission of carbon-dioxide in the earth. The focus of the research enhances the passenger car segments and how to develop with sophisticated technologies is used in production of cars; sales of vehicles in the particular segment, revenue generation etc. and create millions of employment opportunities both direct as well as indirect nature for rural and urban areas in this sector. There are various reasons for the growth of the Indian automobile market such as: The people have more disposable income as economy is growing. Increase in the need of mobility due to urbanization and leisure travel. Car finance options available from Financial Institutes at reasonable rate of interest and length of repayment. Availability of service centers, spare parts across the nation in near locality. Improvement in highway infrastructure and reduce cost of service and time.

Key growth of the Indian Automobile industry -

- Proven Product Development Capabilities. There are more than 550 R&D centers in India.
- Proximity to markets in India and proximity to other Asian economies.
- Shipment to Europe is cheaper than those from Brazil and Thailand.
- Availability of Manpower. 8.5, lakhs Engineering graduates every year and 7 0 lakhs people enter into workforce every year.
- High quality standards. 11 Indian component manufacturers have won the "Deming Award" for quality. And most leading component manufacturers are QS and ISO certified.
- Demand growth of 14% CAGR makes India one of the fastest growing Markets.
- Skill labor costs amongst the lowest in India. Future vision the automobile industry in "2020" The auto-shows began in January 2014, the industry promised a blend of technology and

automotives. With the recession trend breaking its leashes form the past two years, 2016 is expected to get back on track with the sales of automobiles in the country. The future vision of the industry follows :-

- Almost Self-governing cars are predicted to be on the streets by 2020th year.
- More than half the cars on the streets are going to be powered by diesel by in the year 2020.
- High Performance Hybrid cars are likely to gain greater popularity among consumers.
- An approximately two digits percentage increase in global industry vehicle sales in 2020.
- Improved mix of full-size SUVs and full-size pickup trucks
- Forecasted consolidated EBIT-adjusted margins of 9% to 10% by the Year 2020.

The Indian automobile industry has a prominent future in India. Apart from meeting the advancing domestic demands, it is penetrating the international market too. Favored with various benefits such as globally competitive auto-ancillary industry; production of steel at lowest cost; inexpensive and high skill manpower; entrenched testing and R & D centers etc., the industry provide immense investment and employment opportunities.

Manufacturing –

Last four years production trends shows improvement in production ,only in 2020-21 there are less production than 2019-20 it is happen because of covid 19 pandemic .definitely there is (In Numbers)

Sr No	Category	2019-20	2020-21	2021-22	2022-23
1	Passenger Vehicles	3424564	3062280	3650698	4578639
2	Commercial vehicles	756725	624339	805527	1035636
3	Three wheeler	1132982	614613	758669	855696
4	Two wheeler	21032927	18349941	17821111	194009
5	Quadricycles	6095	3836	4061	2897
	Grand Total	26353293	22655609	23040066	25931867

Ref- SIAM

Domestic Sale

(In Numbers)

SR.No	Category	2019-20	2020-21	2021-22	2022-23
1	Passenger Vehicle	2773519	2711457	3069523	3890114
2	Commercial Vehicle	717593	568559	716566	962468
3	Three Wheeler	637065	219446	261385	488768
4	Two Wheelers	17416432	15120783	13570008	15862087
5	Quadricycles	942	-12	124	725
	Grand Total	21545551	18620233	17617606	21204162

Refe- SIAM

Export -

(In Numbers)

SR. No	Category	2019-20	2020-21	2021-22	2022-23
1	Passenger Vehicles	66218	404397	577875	662891
2	Commercial Vehicles	60379	50354	92297	78645
3	Three Wheelers	501651	393001	499730	365549
4	Two Wheelers	3519405	3282786	4443131	3652122
5	Quadricycles	5185	3529	4326	2280
	Grand Total	4748738	4134047	5617359	4761487

Ref- SIAM

Challenges before automobile industries in India –

1. Supply chain disruptions: The Covid-19 pandemic has led to significant disruptions in the supply chain of the automobile industry. Many auto manufacturers have struggled with sourcing critical components, and this has led to production delays and increased costs.

2. Changing consumer preferences: There has been a shift in consumer preferences towards electric and hybrid vehicles, which is a challenge for the Indian automobile industry that has historically been focused on producing gasoline and diesel vehicles.
3. Increasing competition: The Indian automobile industry is highly competitive, with both domestic and international players vying for market share. This puts pressure on companies to innovate and improve their products and services, which can be a challenge.
4. Rising input costs: The prices of raw materials, such as steel and aluminum, have been increasing globally, which has led to higher input costs for the automobile industry. This has put pressure on companies to increase prices or absorb the costs, which can impact their profitability.
5. Regulatory challenges: The Indian automobile industry is subject to a range of regulations related to safety, emissions, and fuel efficiency. Compliance with these regulations can be challenging for manufacturers, particularly smaller companies that may lack the resources to invest in research and development.
6. Infrastructure challenges: The development of electric vehicle infrastructure, such as charging stations, is still in its early stages in India. This can be a challenge for companies that are looking to introduce electric vehicles to the market, as consumers may be hesitant to purchase these vehicles if charging infrastructure is not readily available.
7. Economic slowdown: The Indian economy has been facing a slowdown in recent years, which has impacted consumer spending on automobiles. This can be a challenge for the automobile industry, as companies may struggle to maintain their sales volumes and profitability.

Overall, the Indian automobile industry faces a range of challenges that require innovation and adaptation to overcome. Companies that can navigate these challenges and continue to provide high-quality products and services are likely to succeed in the long run.

Opportunities in Automobile industries in India - the Indian automobile industry, including both electric vehicles and internal combustion engine (ICE) powered

vehicles, is presently the fifth largest in the world and is expected to become third largest by 2030. The industry contributes around 7.1 per cent of India's Gross Domestic Product (GDP) and 49 per cent of its manufacturing GDP. While the automotive sector is valued at \$ 222 billion, the net worth of the EV market in the country is expected to be just \$2 billion by 2023 and \$ 7.09 billion by 2025.

The Indian automotive sector can be broadly segmented into four categories – passenger vehicles, commercial vehicles, two-wheelers, and heavy vehicles. Among these, the two wheelers and passenger vehicles dominate the Indian roads, accounting for 81 per cent and 13 per cent of total unit sales. The commercial vehicles and heavy vehicles, on the other hand, constitute of just 1 per cent and 4 per cent of the total units sales.

With several emerging growth drivers and facilitating policies drafted by the government the automotive market capex is set to cross \$ 3 billion or Rs 27,000 crore in financial year 2023 – a significant year on year growth of 24 per cent. While affordable car loans, transparent financing options and the escalating sale of electric vehicles has been the major factors catapulting the growth of the auto industry in India, here's a glance at the emerging trends which are expected to shape the Indian auto industry in 2023.

Autonomous vehicles

There has been a significant rise in investments in the research and development (R&D) of the autonomous vehicle. The fast paced technological advancements in the recent years has further opened up opportunities for the auto makers to explore new arenas and manufacture autonomous vehicles to enhance the commuting experience of the customers; a trend which is expected to get more popular in 2023.

Digital automobile sales

Players in the auto sector are further working on enhancing the vehicle purchase opportunities of the buyers by exploring options to make the entire buying process online through virtual showrooms. The need for the virtual showroom rose tremendously during the pandemic while there were restrictions in physical movement. Even while the pandemic disruptions are slowly normalizing, the customers' inclination towards shopping online, even for cars, prevailed. The primary

benefits of the virtual showrooms are that they make sales easy, unburdens infrastructural and overhead costs enable retailers to offer competitive prices and lucrative deals. It also offers customers ease of buying car through online platforms, take virtual car tours, complete paperwork online and get the car delivered at their doorstep through secured payment channels.

Wireless technology

Usually cars have over 100 million codes and 30,000 parts, and latest technological advancements have further increased the numbers to help drivers navigate more properly. Especially, the inclusion of 5G technology is projected to be a game changer as people will be able to exchange information through wireless technology including traffic and weather updates, road conditions, etc. while commuting.

Connected cars

Backed by the Internet of Things, the connected cars are safer, comfortable and provide the use of on-demand features that allow drivers to do anything they want on the web while on road. Connected cars can not only communicate bidirectionally with various other systems but also share internet access and data devices inside and outside the vehicle. The advanced modes of transportation can monitor and share information and services like digital data and remote diagnostics, vehicle health reports, data-only telematics, access 4G LTE Wi-Fi Hotspots, get turn-by-turn directions, warn of car health issues and directly intervene to prevent breakdowns.

The emerging trends and growing focus of automakers on integrating cutting-edge technologies in car manufacturing has opened up massive investment opportunities in the India auto sector. Here are a few factors attracting major investments in the auto sector.

Government policies

Eyeing the emerging trends and steadily growing business prospects in the auto sector the central and state governments have been introducing various facilitating policies to encourage more investments. To foster the growth of the industry, the government has introduced Production-Linked Incentive (PLI) Scheme in the Automobile and Auto Components sectors. With a total outlay of \$ 3.5 billion, the PLI scheme proposes financial incentives of up to 18% to boost domestic manufacturing

of advanced automotive technology products and attract investments in the manufacturing value chain.

Profitability

The operating profit margin of auto companies has fallen significantly due to the rising commodity prices. However, as the fluctuations in the rates are slowly normalizing the operating profit margin is expected to grow in 2023.

Rise in the penetration of EVs

There has been a growing awareness among people regarding issues related to climate change and the country as a whole is attempting to reduce its carbon footprint to meet its sustainable development goals (SDGs). This has bolstered the popularity of the electric vehicles. The sale of EVs witnessed a whopping 218 per cent year-on-year growth of the highest sale of 429217 unit sales from 134,821 unit sales in 2021.

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