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## FDI INFLOW AND ECONOMIC GROWTH IN INDIA IN AUTOMOBILE SECTOR

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### ABSTRACT

This article has been prepared with an intention of a close analysis of India's trade over the past decades and to examine the past events, current situation regarding the same and what are the possibilities that are pointing towards the future times which are yet to come also the ways that the data can be interpreted in order to predict the trails of economic growth and International Investments. Having the study of trade for a specific country being done a glance at its top competitors & neighbouring countries would also be done for a fair comparison and more efficient output of the research.

**Keywords:** Trade, Economic Growth, International Investment.

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### I. INTRODUCTION

From the time of the emergence of the very concept of economy, the automobile sector has performed and also has proven itself to be an undisputed performer towards the economy's growth. Taking the focus towards the economy and automobile sector it shall also be put in light, that the very concept of Foreign Direct Investment having its roots connected from the period of late 17<sup>th</sup> century and having a modern face in today's ongoing era has also played a vital part in shaping the sector's past, present & future though the FDI may not have/had provided the functioning of the sector or we can say the industry as a whole but being an financial aspect it has ensured to be the support its expansion and growth in a way by providing the key to the deposits of finance.

By the help of this study the intention has been made to track the flows of FDI in the sector of automobile industry and what has made this sector capable of being so important that the wheels of the economy may freeze if the collapse of this sector is observed. India being a hub of various manufacturing giants and also the largest market for the consumption of these end products has been put up for the area of our research throughout the content presented below with support of factual grounds.

### II. LITERATURE REVIEW

Smita Miglani (2019) lays out a summary of the automobile industry which has been attempted to be tracked down to way back and to give out the reasons and details of its current state. The study has been divided and covered in seven main parts which have its brief reporting and way it has affected the sector's growth and modernisation. Apart from the past pages of history and visionary future possibilities the research has also pitched its footing in the areas which require the attention of both the government houses and private manufacturers while being in the race of competition with countries like China and others. Not to mention the international representation of the products being prepared with in-house manufacturing facilities.

Dr. Nishikant C. Dhande and Prof. Anshuman Vijay Magar (2018), the study had been done by the author on the impact of FDI in Indian automobile sector. The study shows that after 1991's open economy policy of the government the automobile production has increased tremendously and India has emerged as one of the key global players both as consumer and a producer in the automobile industry where Maruti leads in the total FDI inflow. This research concludes that the automobile sector has become the most important sector in Indian industry in terms of FDI inflow, contribution in GDP and generating employment.

Rekha Melwani, Manish Sitani (2019), focuses on the subject of financial performance having its role in 2/3-wheeler manufacturing firms, the study has covered and showed a detailed derivation of different numbers having relations with financial performance of the renounced manufacturing houses in the country via help of research tools, data and financial formulations which have ended up presenting the study of financial statement and impact of internal financial determinants of financial performance.

Arvinder Kaur (2020), the study is done by the author based on the secondary data for the production, exports and imports of Automobile sector for the period 2001 to 2018 to examine the performance of the automobile sector in India. In the study the author found that the segment of the two-wheelers constituted a major part of the total production of automobiles in the country whereas the sales of all other vehicles increased with some variations over the period. Export performance of the automobiles sector has also been examined in terms of

shares in total exports, export to import ratio, growth rates of exports, and share in world exports of capital good

Dilip Chenoy, Shobha Mishra Ghosh & Shiv Kumar Shukla (2019) have looked into the manufacturing sector of India and its position past & future estimates by reconciling with the government reforms and policies to support those initiatives. Make in India initiative within the context of GDP growth projection has also been briefly reported including the supporting initiatives have also been explained. Apart from the list of initiatives taken, a light of focus has been thrown at the concept of 'reskilling and upskilling' factors which have been shown as important are to be considered while involving collaborative efforts of government and industries.

Praveen Jha and Dinesh Kumar (2021) present simple quantitative techniques for measuring participation of the automobile industry in GVCs and its contribution to economic and social upgrading in the Indian economy. For the manufacturing sector as a whole the outcomes during the last three decades have been largely disappointing, with stagnant shares in GDP and employment, the automobile sector has performed relatively better. In fact, during this relatively static phase of manufacturing in terms of contribution to the GDP and employment, the automobile industry has been a reasonable success story in terms of its contribution to both GDP and employment, and its improved performance in the world economy with respect to the number of automobiles, including passenger and commercial vehicles sold. However, the authors revealed that it is significant to note that profits and profit per employee have tended to remain low during the period of the study. The rising input cost, increased competition, increased investments in technology, innovations and R&D etc. maybe some of the reasons for low and relatively volatile profits. Hence, they conclude that there have been limited and uneven economic gains; as regards most indicators for social upgrading it is difficult to find positive stories.

K. Rajalakshmi, Dr T. Ramachandran (2011) studies the impact of foreign direct investment on India's automobile sector with reference to the passenger car segment. The study concludes that FDI inflows have shown significant growth in the post liberalization period and are expected to continue to grow at a healthy pace. The automobile sales are expected to experience a boom in the coming years because of the growing buying power of the middle class and the low-interest EMI schemes. The study also reveals that demand for diesel vehicles has increased so much that it has more than made up for the fall in demand for petrol vehicles. They also conclude that structure of India's auto industry is unique when compared to other developed economies. Besides a strong four-wheeler market, India also has sizeable two wheeler, three-wheeler and commercial truck markets.

### III. RESEARCH METHODOLOGY

Research means a systematic and scientific search for relevant information on a particular topic. To build the comprehension of any topic research incorporates collection, organisation and analysis of data. For example, research activities can be very valuable for instruction or to grow further information on a subject. It could be a development on past work in the field. To test the legitimacy of instrument, methodology or then again tries exploration may imitate elements of earlier activities or the venture at all.

Research is in the way a very significant and unique commitment to previously existing information for making it more advanced and educational. The efficient strategy for discovering answers for an issue with looking for information through objective is research.

Objective of our research paper is-

1. To analyse the impact of COVID-19 on the automobile sector.
2. To overview the position of the automobile sector.
3. To judge the investor's sentiments and the briefings of the economic report regarding the sector.
4. To study the aspects of future aspects of the industry in the country.

The data used in the study has been borrowed from the secondary sources of information related to the subject of this research paper. Also, the websites and blogs were chosen to be the ones having authentic data. The tools mentioned while analysing the data and its interpretation with relation to are study are:

Graphical representation aims to present a clear picture of the purpose of the scenario of the automobile sector.

#### IV. DATA ANALYSIS

##### **Position of Automobile Industry in India- Historical background**

The Indian automobile sector is one of the biggest in the world, both as far as deals volume and creation. Discussing historical foundations of the vehicle market in India, the principal vehicle that was employed on Indian streets was as early as 1897 and the first Indian to possess a vehicle was Jamshedji Tata. At that time India did not have any assembling office and vehicles were imported straightforwardly from different nations. The milestone decade in the assembly cycle was that of the 1940s, where Indian organizations like Hindustan Motors and Premier began to fabricate vehicles of different firms. During that very time, Mahindra and Mahindra likewise began to create utility vehicles.

Not long after freedom 1947, the Government of India attempted to make a car part fabrication industry to enhance the automotive fraternity. From 1960 to 1980s, the Indian market was overwhelmed by Hindustan Motors, which assembled a huge amount of shares because of its Ambassador model. Although, during the 1950s to 1960s, the general business moved at a lethargic speed because of exchange limitations set on imports. Not long after this abusive stage, requests flooded yet less significantly, which was for the most part found in the tractor and commercial vehicles section.

It was in the 1980s that the two firms, Hindustan Motors and Premier, were tested by another contestant, Maruti Udyog Limited. Not long after the liberalisation period, vehicle creators that were beforehand not permitted to put resources into Indian market because of severe strategies showed up in the country. Post liberalisation, the collusion among Maruti and Suzuki was the main joint endeavour between an Indian organization and foreign one. Gradually and consistently, the financial changes prompted the passage of major unfamiliar organizations like Hyundai and Honda, which extended their bases to the country. From 2000 to 2010, pretty much every significant vehicle organization extended its essence to India by setting up assembly offices across various pieces of the country.

As the assembly cycle during the mid-2000 decade acquired traction, exports of vehicles were very low in that period. Maruti Suzuki was among the main vehicle marks that began dispatching vehicles to significant European business sectors. During that very decade, the Government of India presented compulsory outflow standards to diminish contamination emerging out from vehicles. The refreshed rules known as 'Bharat Stage' happened in significant urban areas as these principles depended on severe European standards. As of now, Bharat Stage IV is carried out in 13 urban communities that incorporate Delhi (NCR), Mumbai, Kolkata, Chennai, Bangalore, Hyderabad, Ahmedabad, Pune, Surat, Kanpur, Lucknow, Solapur, and Agra while the remainder of the country is as yet under Bharat Stage III.

Throughout the long term, the vehicle market in India has advanced significantly as practically all significant organizations are available in the country. India has now become a centre for automobile producers to set up their plants for assembling vehicles proposed for home-grown and global business sectors. The three conspicuous districts wherein most of Indian vehicle industry is moved lies in south, west and north. In the southern locale, Chennai is the centre point for assembling vehicles while Mumbai and Pune belt comes in runner up. For the north, the NCR holds a decent amount taking everything into account.

##### **Present Scenario of Automobile Sector**

India is expected to emerge as the world's third largest passenger vehicle market by 2021. In FY 2018-19, sales of passenger vehicles have increased by 2.70%, two-wheelers by 4.86% and three wheelers by 10.27% as compared to FY 2017-18. In April -March 2019, overall automobile exports grew by 14.50%.

Thus, it tends to be sensibly reasoned that India has arisen as one of the key worldwide players both as a buyer and a maker in the auto business. It has seen huge development, particularly in the last few years and has gotten a base for worldwide producers. Volkswagen, Nissan, Renault,

General Motors, Portage, Honda, Suzuki, Hyundai, Daimler, BMW, Skoda, Audi are largely present in India and are fabricating and assembling locally.

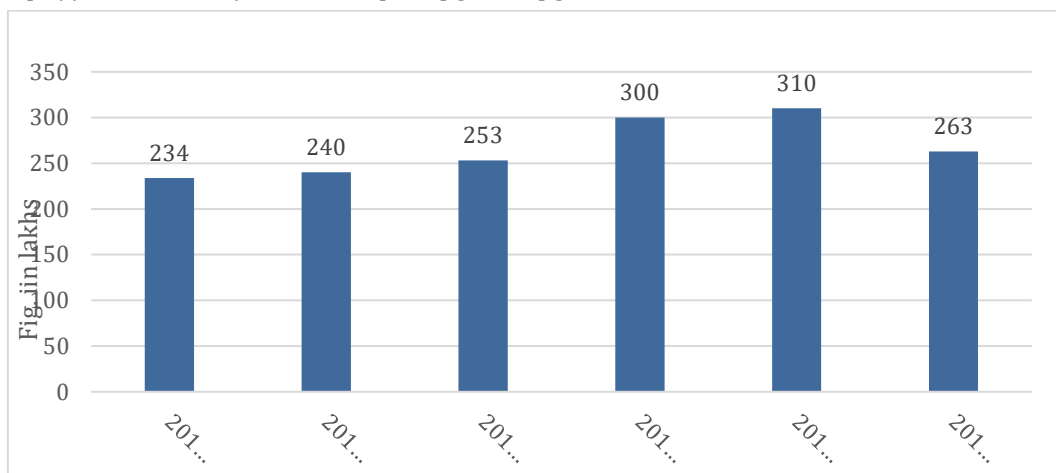
We can divide the Indian automobile industry into four main categories such as two-wheelers, three-wheelers, passenger vehicles and commercial vehicles. Two-wheelers and passengers dominate the domestic Indian automobile market and account 81% and 13% of total unit sales, respectively. Mid-sized and small cars have

dominated the passenger car sales. India is also a prominent auto exporter and has strong export growth expectations for the near future.

**Table 1:** Production trend of automobile sector in last 6 years

Sr.no	Category	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	Passenger vehicle	3,221,419	3,465,045	3,801,670	4,020,267	4,028,471	3,434,013
	Commercial vehicle	698,298	786,692	810,253	895,448	1,112,405	752,022
	Three-wheeler	949,019	934,104	783,721	1022,181	1,268,833	1,133,858
	Two-wheeler	18,489,311	18,830,227	19,933,739	23,154,838	24,499,777	21,036,294
	<b>Grand Total</b>	<b>23,358,047</b>	<b>24,016,068</b>	<b>25,329,383</b>	<b>29,092,734</b>	<b>30,909,486</b>	<b>26,356,187</b>

Source: <https://www.siam.in/statistics.aspx?mpgid=8&pgidtrail=13>



**FIGURE 1:** Position of Automobile Industry in India

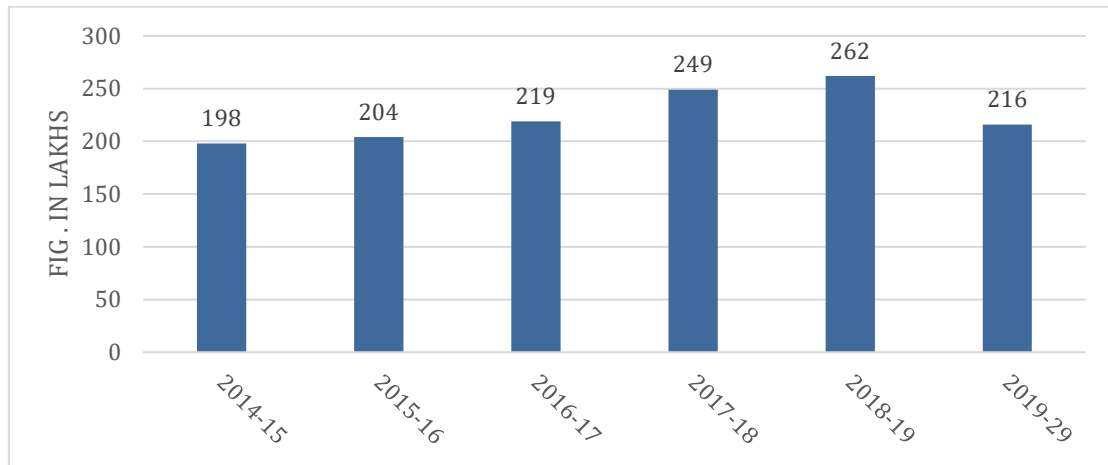
Source: Generated by researcher through above table

From the above graphical representation, we can say that there is a consistent expanding pattern in the automobile sector in spite of various mishaps faced by Indian Economy till then development in production continues except the year 2020 in the month of April-March where de-growth is seen.

**Table 2:** Domestic sales trends of automobile sector in last 6 years

S.no	Category	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	Passenger vehicles	2,601,236	2,789,208	3,047,582	3,288,581	3,377,389	2,773,575
	Commercial vehicles	614,948	685,704	714,082	856,916	10,07,311	717,688
	Three wheelers	532,626	538,208	511,879	635,698	7,01,005	636,569
	Two wheelers	15,975,561	16,455,851	17,589,738	20,200,117	21,179,847	17,417,616
	<b>Grand total</b>	<b>19,724,371</b>	<b>20,468,971</b>	<b>21,863,281</b>	<b>24,981,312</b>	<b>26,265,552</b>	<b>21,545,448</b>

Source - <https://www.siam.in/statistics.aspx?mpgid=8&pgidtrail=14>



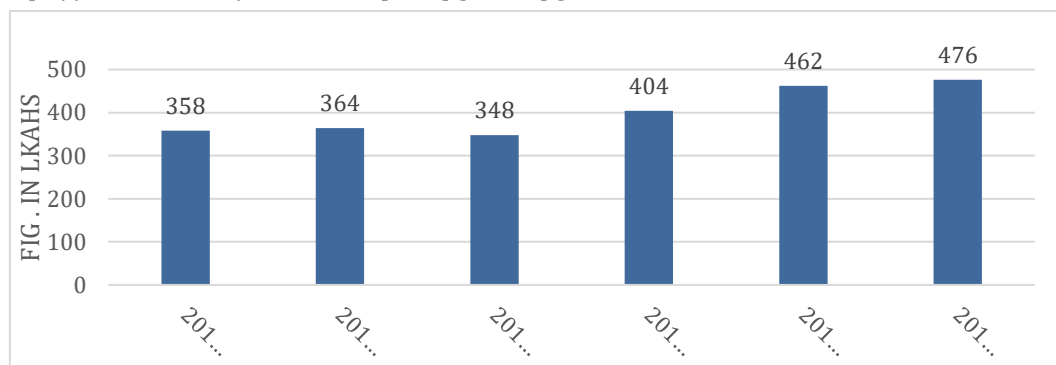
**FIGURE 2:** Position of Automobile Industry in India

Source: Generated by researcher through above table

**Table 3:** Export trends of automobile sector in last 6 years

S.no	Category	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	Passenger vehicles	6,21,341	6,53,053	7,58,727	7,48,366	6,76,192	6,77,311
	Commercial vehicles	86,939	1,03,124	1,08,271	96,865	99,933	60,713
	Three wheelers	4,07,600	4,04,441	2,71,894	3,81,002	5,67,683	5,02,169
	Two wheelers	24,57,466	24,82,876	23,40,277	28,15,004	32,80,841	35,20,376
	<b>Grand total</b>	<b>35,73,346</b>	<b>36,43,494</b>	<b>34,79,169</b>	<b>40,41,236</b>	<b>46,24,649</b>	<b>47,60,569</b>

Source: <https://www.siam.in/statistics.aspx?mpgid=8&pgidtrail=15>



**FIGURE 3:** Position of Automobile Industry in India

Source: Generated by researcher through above table

**FDI Inflow in Indian automobile Industry**

Foreign direct investment in the automobile industry in India is heavily promoted by the government by permitting 100% FDI, under programmed courses. The business is delicensed and permits free import of auto parts. Also, the Indian government does not set out any base speculation rules for the investment in components. This course does not require any earlier approval either by the RBI or the government. Under the current policy, FDI is allowed up to 100%

**Types of FDI investment in automobile sector**

In the automobile sector in India, the companies were preferred to enter in joint ventures in India before liberalization period and after liberal policy environment and delicensing in the country the automobile companies can invest by following any method. Following are the four types of FDI through which foreign countries can invest in the host country.

**1. Horizontal FDI**

The most well-known kind of FDI is Horizontal FDI, which principally rotates around putting assets in a foreign company which belongs to the same industry. Here, an organization puts resources into another organization situated in an alternate country, wherein both the organizations are delivering comparative products.

**2. Vertical FDI**

Vertical FDI is another type of foreign investment. A vertical FDI occurs when an investment is made within a typical supply chain in a company, which may or may not necessarily belong to the same industry. As such, when vertical FDI happens, a business invests in an overseas firm which may supply or sell products.

**3. Conglomerate FDI**

At the point when ventures are made in two various organizations of altogether various enterprise, the exchange is known as conglomerate FDI. In such case, the FDI is not connected straightforwardly to the investors business.

**4. Platform FDI**

The last kind of foreign direct investment is platform FDI. In which a business invests into a foreign country, however the items produced are sent out to another, third country.

**The progress of Indian Automobile Industry through Foreign Direct Investment inflow**

With a constant force of innovation and investment to achieve and conquer one of the world’s largest automobile markets the company’s domestic and foreign have made it a trend of bringing FDI inflow for higher efficiency and also to achieve determined objectives.

**Table 4:** FDI equity inflow in sub-sectors in automobile industry (from January,2000 to December,2018)

Sub Sectors	Amount of FDI equity inflows		% with total FDI inflows
	Rs Crore	US\$ million	
Automobile industry	30,141.97	5,273.49	1.29
Passengers' cars	49,201.82	8,610.54	2.10
Auto ancillaries/parts	26,717.31	4,472.11	1.09
Others(transport)	14,797.41	2,646.95	0.65
<b>Total</b>	<b>120,858.51</b>	<b>21,003.09</b>	<b>5.13</b>

Source: [https://dipp.gov.in/sites/default/files/AUTOMOBILE\\_INDUSTRY\\_vi\\_18.pdf](https://dipp.gov.in/sites/default/files/AUTOMOBILE_INDUSTRY_vi_18.pdf)

**Table 5:** Share of top five countries attracting FDI equity inflows for automobile industry (From January,2000 to December,2018)

Ranks	Country	Amount of FDI equity inflows		%with total FDI inflows for automobile industry
		Rs Crore	US\$ million	
1.	<b>Japan</b>	33,164.91	5,700.47	27.14
2.	<b>Germany</b>	15,604.85	2,604.95	12.40
3.	<b>U.S.A</b>	12,926.69	2,301.62	10.96
4.	<b>Netherlands</b>	8,250.22	1,567.48	7.46
5.	<b>Mauritius</b>	8,593.80	1,533.38	7.30
	<b>Total of above</b>	<b>78,540.47</b>	<b>13,707.90</b>	<b>65.26</b>

Source: [https://dipp.gov.in/sites/default/files/AUTOMOBILE\\_INDUSTRY\\_vi\\_18.pdf](https://dipp.gov.in/sites/default/files/AUTOMOBILE_INDUSTRY_vi_18.pdf)

The above table presents the FDI inflow in Indian Automobile Industry published by DIPP which shows the source of FDI in the country. By observing table 2 we can say that the amount of FDI equity inflows has been more in passengers' cars in comparison with other sub sectors. And in table 3 the first three positions are held by Japan, Germany and U.S.A which are technology savvy countries and have interest in the automobile sector of India. India is the second greatest consumer market in the automobile sector in the world and the manpower has been drastically changed then before, now they are more skilled.

### **Policies made by government in the Automobile Industry**

#### **1. FAME INDIA SCHEME II PHASE**

This scheme is approved by the government of India in February 2019 with the fund necessity of USD 1.39 Bn for FY20-22. It is proposed to be carried out from 1<sup>st</sup> April 2019 for next 3 years for the improvement of the ecosystem in the country by adopting the electric mobility and growth of hybrid and electric technology. Department of Heavy Industries (DHI) is the nodal Department, answerable for arranging, execution and survey of the scheme.

#### **2. AUTOMOTIVE MISSION PLAN 2016-26**

This plan focuses on the growth of the automotive ecosystem in India which includes the policies and regulations that govern design, research, manufacturing, testing, sale, repair etc. This industry is estimated to become the third largest in the world by contributing 12% to GDP. The main aim of this scheme is to increase exports of vehicles by five times and specially the passenger vehicles to triple by 2026 and also to make India the first in the world in terms of sales and production.

#### **3. DRAFT NATIONALAUTOMOTIVE POLICY 2018**

Draft of national automotive policy is formulated for the development of the automobile industry in India by the Department of Heavy Industries. The aim of this policy is to increase the exports by 35-40% and make India the greatest automotive export hubs in the world.

#### **4. NATIONAL AUTOMOTIVE TESTING AND R&D INFRASTRUCTURE PROJECT**

This project is adopted and implemented to set the industry global performance standards. The main goal of this project is to provide low-cost manufacturing and product development solutions. And 7 test centres had been assigned for this program.

#### **5. NATIONAL ELECTRIC MOBILITY MISSION PLAN 2020**

The initiative of this mission is to have 6 mn hybrid and electric vehicles on road by 2020 by making it affordable for the consumers and also to meet the expectations and performance. The promotion and development of this mission requires technology, infrastructure and consumer awareness.

### **Future of Automobile Industry in India**

The Indian auto area was already battling in FY20 before the Covid-19 emergency and degrowth was seen. The present circumstances deteriorated by the beginning of the Covid-19 pandemic. These two years (FY20 and FY21) are testing times for the Indian auto area because of moderate monetary development, negative shopper slant, low limit usage and expected insolvencies. According to some reports we can say that the automobile sector in India will start recovering from the third quarter of FY21. Sellers and providers with solid money holds and better admittance to capital will be better situated to sail through. Post the pandemic, changes can be seen in the preferences of the consumer as now they are more concern about the hygiene, health and cleanliness may switch more towards owning personal vehicles instead of sharing mobility. Because of which we can expect increase in growth of demand of buying new vehicles in the next 3 to 6 months. On the other side of the value chain, suppliers may face heavy financial and operational burden due to great exposure in domestic as well as global world. Some of the points which we can say are in the favour of automobile sector in India are:

1. Rising pay and more prominent accessibility of credit and financing choices have been the key development drivers for the area. Additionally, the interest for business vehicles driven by an undeniable degree of action in the framework area has supported development. India's set up auto auxiliary industry additionally offers the necessary help to support development in the area.

2. India has significant cost advantages - auto firms in India save around 10-25% on operations vis-a-vis Europe and Latin America. As a result, the Indian automobile industry has received Foreign Direct Investment (FDI) worth US\$ 24.2 billion between April 2000 and March 2020.
3. Many different policies made by the government like Make in India and Automotive Mission Plan 2026 will also help the automobile industry to boost till 8.7 trillion (US\$ 118 billion) by 2026.
4. Also, the initiative is taken by the government to reduce the emission by shifting the focus to electric cars in the Indian Automobile Industry. The proposal has also been approved by the union cabinet to implement it in the second phase of faster adoption and start the manufacturing of electric vehicles (FAME II) through which India can expect support of up to 1 million two wheelers.
5. In India, the automobile sector has various advantages such as availability of skilled labours at low cost, R&D centres and low-cost steel production. The auto area also provides great opportunities for direct and indirect to skilled and unskilled labour and investment.

### **Analysis of impact of COVID-19 on the automobile sector**

#### **Background**

The Covid Pandemic has been influencing the jobs of nearly everybody that we know and it hasn't saved the Indian auto industry all things considered.

1. Indian automobile industry was at that point battling in 2019 as deals of practically totally settled players have gone down.
2. As industry battled with lower deals number so couldn't get the stock free from BS4 and that become extra weight on the business
3. Coronavirus added to that, the marketing projections for the period of Walk 2020 shows that circumstance is more regrettable than anybody anticipated.
4. Thinking about all explanation, we get an unmistakable image of the degree of the effect of each on the business and which automaker has been confronting.

#### **Change in emission Standards (BS4 to BS6)**

1. This move emanation principles was very much arranged and educated to Indian makers ahead of time, industry was given season of 3 years (2017-2020) to move from BS4 to BS6.
2. Indian auto players couldn't change to 100% BS6 vehicles, inside the given range of time and got left with extensive BS4 stock.
3. In 2019 deals have dropped by 30%, Industry was trusting rebound in first quarter of walk by selling the excess supply of BS4 variants by offering enormous limits anyway because of lockdown all vendor has shut and individuals are not accepting vehicles.
4. ₹6,400 crore worth BS4 vehicles stay unsold because of Covid. Indian Automobile Industry in 2019. In 2019 when auto organizations were hoping to clear their BS4 stock the circumstance turned worse. Car portion witnessed a huge decrease, low creation and low deals have led to tremendous interest contraction in Q1 2020 organizations attempts to clear their stock by giving monstrous limits to clients however that likewise couldn't work because of spreads Crown pandemic and came about lockdown.

#### **Effect of lockdown**

1. The significant wellspring of auto parts – China, Germany, Japan, US are more awful influenced by the pandemic prompting inventory network interruptions for the Indian car
2. Industry. The impacts of the pandemic will be dependable as this actually gives off an impression of being a long fight
3. Indian vehicle industry is a lot of ward of rest of the world for the imports of extra parts utilized in assembling.
4. Lockdown of Wuhan, one of China's alleged "engine urban communities", producing and providing sensors, power controls, motor control units, engine and batteries to India was likewise danger for the makers in India.

#### **Effect of India's lockdown on Vehicle Industry**



As indicated by Industry body Society of Indian Vehicle Makers (SIAM) has said the business will endure a creation loss of an expected Rs 2,300 crore each day because of the shutdown. This isn't all, in any event, when the business gets approval to open it can't be begun in a similar speed, it will be moderate and it will resemble working without any preparation. It was the 24<sup>th</sup> of March 2020, when a nationwide lockdown was announced by the Government of India. By the 50<sup>th</sup> day of lockdown the automobile industry had estimated total loss of 1,12,700 crores.

### Top five companies to take a financial dig due to COVID-19

#### 1. Maruti Suzuki

The country's top explorer vehicle producer, Maruti Suzuki uncovered arrangements of 13,865 units in the local market, which is basically 89% lower than that very month a year prior. During common events, Maruti dispatches around 1.3-1.5 lakh units in a month. The association proceeded with all its collecting exercises post-lockdown in a staggered route in May. More than 2,000 of its very nearly 3,000 showcase territories are as of now open

#### 2. Hyundai Motor India

The second greatest voyager vehicle maker, Hyundai Motor India sold 6,883 units in the local market during May, which it said was on the back of strong customer premium in the new Creta, new Verna, Setting, A-list i20 and Terrific i10 NIOS. Tarun Garg, boss (arrangements, publicizing and organization), Hyundai Motor India, said, "In a staggeringly troublesome market environment, HMIL made an unassuming beginning.

#### 3. Mahindra and Mahindra (M&M)

Mahindra and Mahindra (M&M) sold 3,867 units in the explorer vehicles segment, which was a root of 81% which stood out from May 2019. In the business vehicles area, the association persevered through a fall of 71% year-on-year and sold 5,170 vehicles in May 2020. Vehicle industry heads are believing that as the initial beginnings solicitation will procure traction in the coming months. Veejay Nakra, President (auto division), M&M said, "Our presentation during May has been calmed, in light of the challenges the business is defying. We have opened 70% of our sellers and retail bargains have begun." The association is seeing basic balance for its little business vehicles and SUV brands like the Bolero and Scorpio.

#### 4. Toyota Kirloskar

Toyota Kirloskar sold 1,639 units in the time of May, which was an abatement of 86% on a y-o y premise. Naveen Soni, senior VP, (arrangements and organizations), Toyota Kirloskar Motor, said, "The market has been moderate and with demand being less, we have had the alternative to limit only 20% of what we would have planned under a normal situation. Regardless, retail bargains have been much higher when diverged from wholesales, in like manner helping us with lessening the month closing stock levels at merchants. We have moreover seen a basic flood in customer orders and enquiries on the web, through cutting edge stages

#### 5. Legend MotoCorp

Bicycles in the local market, which was a lessening of 83% y-o-y. Every one of the six amassing workplaces of the association in India has now proceeded with exercises with limited creation. Right around 5,000 outlets of Holy person MotoCorp have also re-opened. These outlets, which contribute 85% of the association's local arrangements, retailed more than 1,60,000 units of cruisers and bicycles during the extended length of May, which the association said was driven according to popular demand in the semi-metropolitan and common business areas, with BS-VI vehicles seeing positive customer response.

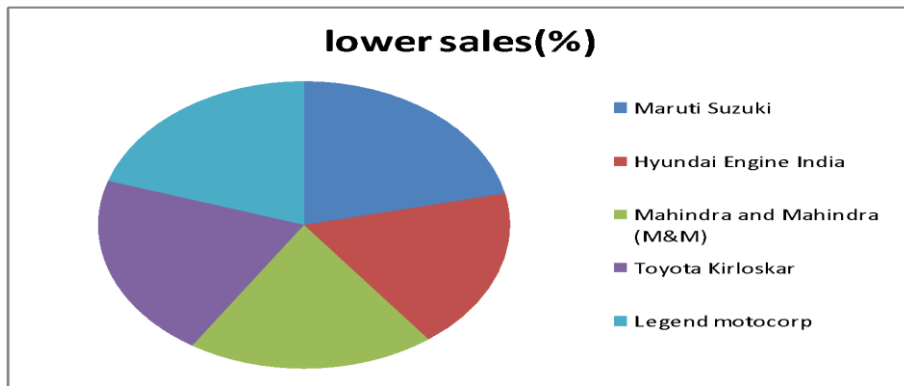


FIGURE 4: Analysis of impact of COVID-19 on the automobile sector

Source- Data mentioned in above content

**Effect of vehicle Industry on economy**

Auto area utilizes in excess of 35 million individuals, straightforwardly and by implication, representing almost 50% of India's assembling yield. Lockdown have brought about stop underway units which have straightforwardly and by implication affected from various perspectives It was normal that Indian workers will get normal compensation climb of 9.1% in 2020, Crown pandemic have affected this climb and as auto area contributes half nations Mechanical Gross domestic product so this is certain that it will have colossal repercussions on Indian Economy. Lying down of 7% pf labour force in April 20 with cut in pay rates of representatives hand halt on examinations & recruitment of representatives had led to a creation of misfortune of hard times. Though being in a mid of such unpredictable crisis the industry had a bit of uplifting news to offer. Pandemic has affected the greater part of the industry yet it is normal that traveller vehicle portion can observer recuperation sooner after the lockdown is over as individuals may favour staff transport to public vehicle after the lockdown gets over 57% of Indian Vehicle intenders actually expects a rise in the sales figures once the lockdown comes to its end. Pandemic has influenced most of the businesses, anyway it is typical that explorer vehicle area can onlooker recovery sooner after the lockdown is over as people may lean toward personnel transport to public vehicle after the lockdown gets more than 57% of Indian Vehicle intenders actually expects to purchase vehicle after lockdown opens.

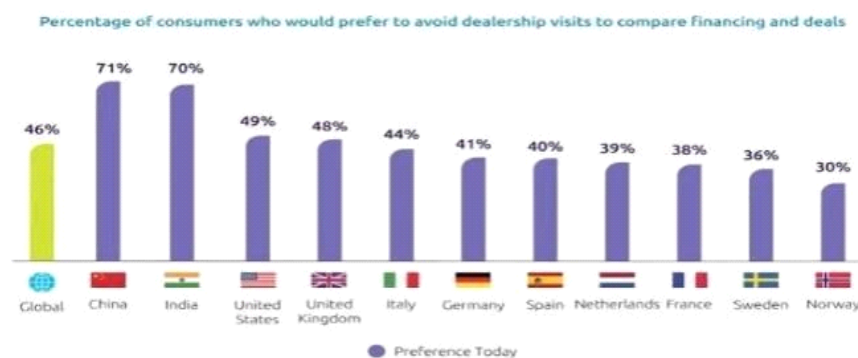


FIGURE 5: Analysis of impact of COVID-19 on the automobile sector

Source: <https://images.app.goo.gl/F3njG6uyqLuh3R4q9>

**Investor's sentiments and economic report**

Automobile industry is exceptionally cyclical industry which implies during a financial expansion; manufactures will actually develop their volume at a high rate and vice versa during a monetary slum. Prior to putting resources into the automobile stocks, one ought to be cautious about this repetitive nature of the business and not be gotten at the limit end of the cycle. Investors ought to likewise see how organizations manage the recurrent nature and decrease their unpredictability. They attempt to reduce down their expenses during declines while boosting income during upswings. Other than that, financial backers should see car stocks which are essentially stable, who have solid asset reports, demonstrated history and the executive's abilities.

The organizations must have deceivability in development and capacity to come out stronger from declines. Investment opportunities in automobile sector in India:

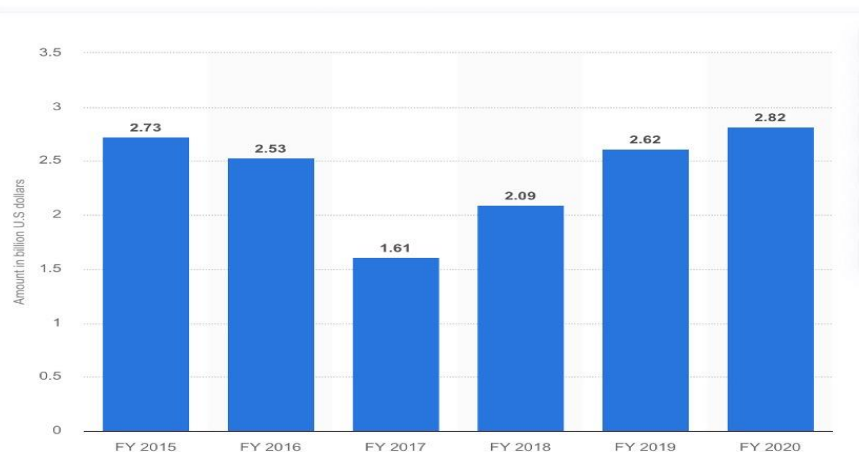
1. Passenger vehicles: traveller vehicles, utility vehicles, multi-reason vehicles.
2. Two-wheelers: mopeds, bikes, etc.
3. Three-wheelers: traveller transporters, products transporters.
4. Commercial vehicles: light business vehicles, medium and weighty business vehicles.
5. Huge requests for minimal effort electric vehicles that are appropriate for safe brief distance metropolitan drives (averaging 50-100 km/trip) that are sufficiently tough to perform dependably through India's summers and storm.

There are many reasons why one should invest in the automobile sector i.e., India is on the path of being the third biggest automotive market in the world by 2026. Also, the government issued many policies in the “Make in India” program like Automotive Mission Plan 2016-26, National Electric Mobility Mission Plan 2020, National Automotive Testing and R&D Infrastructure Project etc. Ongoing Projects in India having large scope and brings huge opportunities for investors -

1. Setting up an automotive manufacturing unit Lucknow in Uttar Pradesh having total project cost of USD 13.63mn.
  2. Agricultural and earth moving vehicle manufacturing project in Uttarakhand with total project cost of USD 12.71 mn.
  3. Electric vehicle manufacturing project in Uttarakhand of total project cost USD 6.13 mn
- And to stay aware of the developing interest, many automobile manufacturers have begun putting vigorously in different fragments of the business during the most recent couple of months.

The automobile sector having its 7.1% contribution to the nation’s GDP had surely taken a serious hit during the pandemic as discussed above. The period was that serious that the economic grid was completely shaken to the core of the sector. From employees being shed off to low sales records, the quarterly reports were shedding its tears too, stating how much the situation was bothering all the players in the sector. For the obvious reasons the investors on the other hand were left in sweat too, not to forget the sharp fall in stock exchange graphs and the unpredictable future for the market time was holding.

India being projected to be the youngest nation by the year 2025 is the 6thlargest manufacturer of the automobile is also the 5thlargest market of the same sector, being the largest producer of tractors and second largest bus manufacturer Indian automobile industry has credentials that make it a hot spot for investments also a reason for a competitive race among the firms to attract the biggest chunks of the FDIs. The data below shows the projections of the FDI inflow in the last five years and projects the records of the FDI investments made in the last 5 financial years that the sector has witnessed. The investments are not only crucial for the industry and its players but also to the country’s economy as it play a crucial role in shaping it.



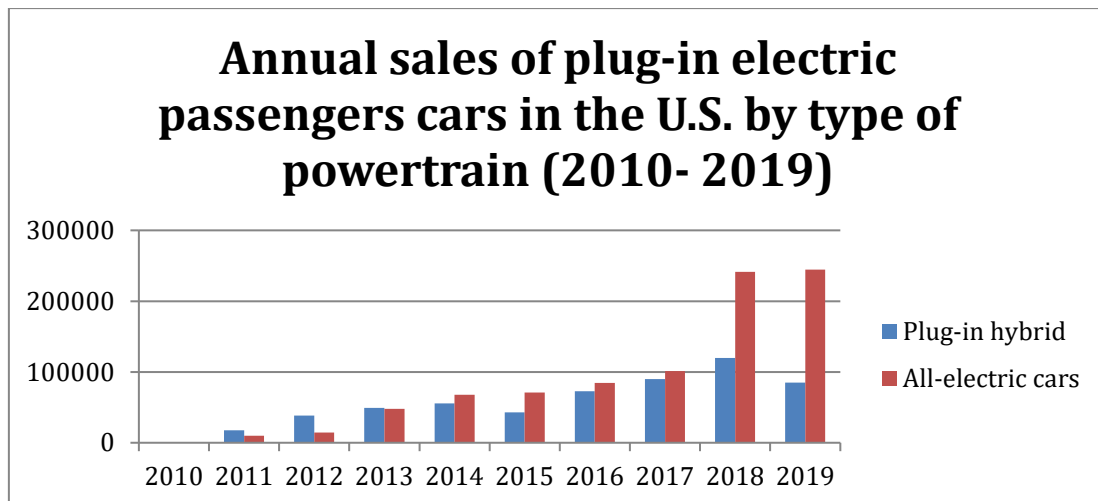
© Statista 2021

**FIGURE 6:** Investor’s sentiments and economic report

Source: as per Statista February 8, 2021

**Aspects of future competition**

The sector having a considerable number of players in the markets have been on a corporate war among each other where the market operates in a oligopoly form of pricing but also take all the measures to maintain an edge over the other competitors when it comes to please/attract the customers and toil over the sales tactics. This also is a crucial agenda for the players to consider as India being a country with a huge population not only has its demand within the country; it also presents itself as a young and vibrant player in its neighbourhood. From having a rich cultural heritage and a secular binding the calendar is often filled with festive vibes giving the opportunities to the players to bag as much sales as possible. In the era of the 21st century when the R&D is not limited to the petrol/diesel automotive new options like electric and hydrogen fuel aspects are very actively looked into not only by the players but also the government has marked its presence in discovering the future possibilities. This also comes after the difficulties faced by the governments of the world in the purchase of the crude oil, with continuous cut in supply and rising demand had led to the rise in the crude oil prices.



Source: [https://no.xcv.wiki/wiki/Plug-in\\_electric\\_vehicles\\_in\\_the\\_United\\_States](https://no.xcv.wiki/wiki/Plug-in_electric_vehicles_in_the_United_States)

As per the trend the crude oil had taken a severe hit due to fall in demand in the active high times of pandemic (COVID-19). At that point of time the government of India had officially addressed the situation with the government of Saudi Arabia and had assured them to buy their crude oil in as much quantity as possible with an assurance in return that when the global economy starts to revive the OPEC countries won't cut the supply in order to gain higher profits and hamper the global economic revival for personal gain. The pre agreed terms were applauded by the government of Saudi but the terms weren't followed as they were planned, resulting in supply cut and rise in prices. Taking this as a lesson the Indian government has realised the serious need of having an alternative fuel available to the usage to the citizens of the country as the prices have crossed the mark of Rs 100 in some of the major cities of the country. Taking it also as a case study the government has come up with a strategy of increasing the content of ethanol mixing in the petrol/diesel being sold on a nationwide scale which has its benefits not only on the cost outcome but also at the auto motive's engine and its life. As per April, 2021 the content of ethanol being mixed in petroleum has been increased to 7.2% which means that 7.2% of ethanol is being mixed in 92.8% of petrol. The mixing is also considered beneficial because the molecular structure of ethanol is such that it contains oxygen within it, allowing the engine of the automotive to effectively or we shall rather say completely combust the fuel, resulting in fewer emission output from the vehicle and thereby reducing the pollution which is harmful for environment also adding life to the engine also for the years to come. The target set by the government of India was to make the mixing of ethanol in petrol up to the percentage of 20 by the year 2030 which has been moved up by 5 years and has been rescheduled to the year 2025 to achieve the set target. 20% of ethanol means 12 Billion litres of ethanol would be required for which 6 million tonnes of sugar surplus would be produced for 7 billion litres of ethanol and the remaining 5 billion litres would be produced from surplus wheat production, which also means beneficial opportunity for the agricultural industry. Coming on from the fossil fuel to alternate fuel resource available for

the people to consider, use of electric cars comes at top alone. The United States of America has sold 1.74 million electric cars since the year of 2010 which shows the signs of change that has already begun over there and what the future beholds within. Given below are the statistical numbers showing the trend which is being followed, also another thing to relate from this figure is that India being a developing country has now over the past few years started following the ongoing trends in the USA especially in the field of technology. With this we can also apprehend that the Indian electric market also holds some progressive figures to show in John times to come. With continuous government policies and changes being introduced India is now being looked at not only as a large market but also as to be the largest electric car manufacturer. This statement comes from the Minister of Road Transport & Highways Shri Nitin Gadkari while he was addressing the Amazon's Sambhav Summit virtually in which he emphasised on the lithium-ion batteries and its full production in India and also stated that India would be the largest electric car manufacturer in the next 6 months. He also mentioned the use of flex fuel engines and use of hydrogen fuel [HFC technology] the technology which uses the chemical reaction between hydrogen and oxygen (from air) to generate electrical energy, eliminating the use of fossil fuel. The honourable minister further said "we are encouraging ethanol, methanol, bio-CNG, electric & hydrogen fuel cell", indicating a direct series of changes which the country would observe in the times to come. Apart from lithium-ion batteries the government of India has signed its memorandum of understanding with countries like Israel for research and development of aluminium air batteries since the availability of lithium on planet earth is limited. Indian companies like Indian Oil are also registering their presence in the field of energy by signing an agreement with Norway's Green state for centre of excellence on hydrogen.

## V. CONCLUSION

The baseline of the automobile sector in India is reinstated with a strong coordinated cooperation of both governments and private houses. The vast market and consumer needs are made a top priority for survival in any line of business be it of any line and country, making India an exception the manufacturing houses are often found to adapt another approach being to be dealt with a huge cultural diversity and secularly united population having into own taste and demands as compared to global trends. The study has attempted to focus on different points that are somehow interlinked to each other while having its own separate stance in relation to the industry. The position of the automobile industry has been observed to grow with exceptional speed with all the economic reforms and policies formation for its support while the real times of trouble were to be observed within the timeline only in which we can say the sector not only managed itself to survive but also grew over it and outperformed itself while effectively keeping up with global standards though it took time for the manufacturers to come at the global safety norms in manufacturing but as it is said it's never too late to adhere the change for good. The Covid-19 situation did buy the clouds of doubt over the sector's future and its role but the FDI investments showed how the investors had continued to believe about the strong future of the industry. Not only with the investments the futuristic vision is also being kept in mind by the key players and the government as well if it comes to exploring of alternate fuel usage and research & development on the same in order to upkeep the environmental health and making a choice available to the consumer over the petrol/diesel variants of automotive in being use over a long period of time. It is thereby also a crucial time for the authorities to act with time efficiency while sustaining the interests of the future generations responsibly and also promoting a healthy competitive environment too by protecting the rights and interests of small parties involved.

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