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Economic Impact of Covid-19 on the Automobile Car Industry of India& Strategy of Internet of things.

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Abstract :

The Indian automobile car industry is going through lot of changes in the past few years; partly due to government introducing stringent emission norms and also the adverse economic impact of covid-19 on automobile industry. Covid-19 has resulted in great loss of earnings of people and the result is less demand for the car industry. Many car manufactures continue to launch new models every year, but what is needed for this companies is to focus on minimising cost so as to survive in this heavily competitive market, which in fact is dominated by 3 to 4 companies. This paper tries to evaluate the economic impact of covid-19 on the automobile car industry. The car industry is now relying on internet of things with use of artificial intelligence to make the car manufacturing process a complete use of sophisticated technology. This has helped companies to make smart cars with more safety.

Key words: *Car Industry, Covid-19, Emission norms, Mobility, Revival.*

Introduction :

After independence in 1947, the Government of India and the private sector made efforts to create an automotive-component manufacturing industry to supply to the automobile industry. Cars in India in those times were imported. In 1953,the import of fully built-up cars began to be restricted. India had few automobilesmanufactures like; Hindustan Motors selling Ambassador cars in foreign tie upwas launched in 1942, Premier Automobiles launched in 1944, which was commonly known as FIAT as it sold Fiat products and Mahindra& Mahindra in 1945, which did assembly of Jeep CJ-3A utility vehicles and Standard Motors launched in 1953. Growth of the car industry was relatively slow in the 1950s and 1960s, due to nationalisation and the license raj, which hampered the growth of the Indian private sector.The beginning of the 1970s saw some growth potential. Cars were still meant for the elite and Jeeps were largely used by government organizations and film industry.Cars still remained a major luxury item. In the 1970s, price controls were finally lifted, inserting a competitive element into the automobile market. Even in the 1980s, the car market was dominated by Hindustan Motors who sold Ambassador model and Premierwho sold Padmini model, both wereworn out products in fairly limited numbers and these two cars had a long waiting period. A big change started to come in the car industry when Maruti Udyog Limited, in partnership with Suzuki Motors of

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Japan was set up with the headquarters based in New Delhi was founded in 1981whichwas owned by the Government of India till 2003. The first manufacturing factory of Maruti cars was established in Gurugram, Haryana. The first car of by Maruti Udyog;Maruti 800 was launched in the year 1984. The car became very popular and soon a second-generation model was also launched. Maruti Udyog, now known as Maruti Suzuki India ltd is the market leader even till date and has not been looking back since it launched its first model in India. Even after the arrival of foreign car manufacturers in India and stiff competition, Maruti Suzuki has maintained an overall lead in this segment due to brand reputation and customer loyalty.

Liberalisation Period from 1991 Onwards :

After liberalisation of Indian economy, many foreign car manufactures entered India in Joint venture with Indian companies. A big change was witnessed in this sector as consumers started getting more choices. Indian customers were not accustomed to it as earlier only 2 to 3 models were available and that too with long wating period. There was a time when second hand cars were more expensive than new cars. With new companies starting their manufacturing in India, Indian consumers got lot of choices to make and that too with short and reasonablewaiting period of around two weeks to one month.By the year 2000, there were 12 large automotive companies in the Indian market with nearly all of them global companies. Indian owned automobile companies like TATA Motors and Mahindra & Mahindra also entered the car market. Today both the Indian companies have firmly established their credentials and have in fact overtaken many global companies in terms of market share. Today Indian car industry produces a wide variety of models ranging from hatchbacks, sedans, SUVs and compact SUVs etc. In 2000, in line with international standards to reduce vehicular pollution, the central government has also unveiled guidelines to be known as Bharat Stage emission standards. In line with international standards to reduce vehicular pollution, the central government announced the introduction of BS-VI norms to control air pollution, taking effect from 1 April 2020.

Slowdown since 2018 onwards :

The automobile industry plays a significant role in the Indian economy. This sector has grown at 2.36 percent compound annual growth rate (CAGR) between the fiscal years (FY) 2016 and 2020 and has transformed the sector into the fourth largest automobile market. In fact,this sector has witnessed a dip in sales since 2018.The rapid decline in sales volumes since 2019, automobile manufacturers have been bombarded with a plethora of strategic choices. Various changes have resulted in this slowdown in sales which are due to revamping the supply chain, driving cost reductions in various areas of operation, and exploring customer-focused makeovers. India-specific strategies such as adopting virtual vehicle certification, making cosmetic design changes, and ensuring supply chain sustainability which are more focussed on making changes as per the global auto industry.

Impact of COVID-19 :

In early 2020, just as the industry was expected to recover, the COVID-19 pandemic introduced challenges that badly affected the Indian automobile sector.In late 2020, government travel restrictions eased, and agricultural

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sector showing good growth, the automobile sector registered a good growth. This paper tries to trace the impact of covid-19on the Indian automotive sector especially the car industry and how car companies are using internet of things and artificial intelligence to cut down costs and to attract new customers.

Objectives of the Study :

1. To understand the Indian automotive sector
2. To understand how Indian car industry developed after liberalisation of 1991
3. To understand the impact of covid-19 on India automotive sector
4. To understand internet of things (IOT) and artificial intelligence of cars in India.
5. To give suitable suggestions to the present study.

Research Methodology :

This study is going to rely on secondary data and which will be available from various reports of Economic survey, SIAM, RBI and similar reports.

Data Sources :

Since the study is based on secondary data only, data will be collected from various Indian government websites, SIAM reports, and the websites of automobile companies including journals and articles.

Limitations of the Study :

The study does not feature primary data, which could have given a different dimension to this study.

Impact of Covid-19 on Indian Automotive Sector :

The COVID-19 pandemic introduced challenges that badly affected the Indian automobile sector. Due to lockdown introduced throughout the country from March 22nd 2020, the auto industry suffered badly. The showrooms of auto industry were closed and these badly affected the sales of all the companies. With the lockdown, people suffered from loss of earnings and this also affected the buying sentiment of people, as it affected the sales of auto companies.

Table 1

	2017-18	2018-19	2019-20	2020-21
Passenger Vehicles	3,288,581	3,377,389	2,773,519	2,711,457
Commercial Vehicles	856,916	10,07,311	717,593	568,559
Three Wheelers	635,698	7,01,005	637,065	216197
Two Wheelers	20,200,117	21,179,847	17,416,432	15,119,387
Quadricycle	0	627	942	-12
Total	24,981,312	26,266,179	21,545,551	18,615,588

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

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The table number 1 showing the sales of Indian automotive sector from 2017-18 to 2020-21. It can be seen that from 2017-18 to 2018-19 the passenger vehicles market has shown good increase but from 2019-20 and 2020-21 onwards we find lower sales across all the categories. The effect of covid-19 is very much evident through this data. The commercial vehicles are going though lower sales which shows the impact of slowdown of 2018 onwards in this sector. Two-wheeler industry has also undergoing lower sales due to impact of COVID-19.

Market Share of Car Manufactures in India :

Table 2

Manufacturers	Cars Made in November 2020	Cars Made in November 2021	Market Share (%)
Maruti Suzuki India	135682	109722	44.74
Hyundai India	48,800	37001	15.09
Tata Motors	21640	29,780	12.14
Mahindra	17971	19400	7.91
Kia	21,022	14214	5.80
Toyota	8508	13002	5.30
Honda	9820	5457	2.22
Renault	10181	5052	2.06
Volkswagen	1412	3154	1.29
MG Motors	4163	2481	1.01
Nissan	158	2392	0.98
Skoda	1056	2196	0.90
Jeep	709	1052	0.43
Datsun	859	259	0.11
Citoren	-	100	0.04
Ford	3991	-	0.00

Source: https://www.team-bhp.com/forum/indian-car-scene/245296-november-2021-indian-car-sales-figures-analysis-4.html

The above table number 2 gives the latest figures of car manufactures in India from the period from November 2020 to November 2021. This one-year figure clearly shows that Maruti Suzuki is the dominant market leader with around 45% of market share followed in second position but by a distance by Hyundai with 15.09 % and TATA Motors share of 12.14 % market share. The above figure shows that Indian car industry has stiff competition but it is dominated by Maruti-Suzuki, Hyundai & TATA Motors. This market can be described as a monopolistic market

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with dominance of three players. Many big global brands in India are struggling with miniscule market share. During the month of May 2021 when the second wave of COVID had peaked in India, all the car companies had very low output due to lockdown and other restrictions. But after that car sales have improved considerably.

Internet of things (IOT) & Artificial Intelligence on Indian Car Companies :

1. Digital Revolution in car manufacturing industry: The Indian automobile industry is going through a disruptive change, moving today in a period of all-encompassing connectivity, mobility, integration, and immersive experience.Mobile devices will become control devices to operate connected car features. In coming days Autonomous driving will become the rule. Data will flow from smart mobile devices, to smart connected cars and smart cities and infrastructure.
2. Telecommunication Technology: Smart cars are being driven by by the 2G, 3G and 4G/LTE technologies. 2G is now being replaced by 4G/LTE that is to be applied in some of the most sophisticated connected cars.
3. Machine-to-Machine: Navigation and speed information will be shared between cars on the roads, this will help to bring down road accidents.

Future impact of COVID-19 on Indian Car Sector :

1. Decline in car sales: With the end of pandemic not yet in sight and its variants coming out, it is possible that the world may have further restrictions or lockdowns to reduce social contact of people with each other. Work from home will also lead to less travelling. This may possibly lead to less demand for automobiles in the future.
2. Costly electric vehicles: Electric vehicles (EV) are costly than the conventional vehicles. Government in India is encouraging people to buy EV vehicles which include certain incentives as well. But still the production of EVs has not reached mass production, which may hamper the plan to reduce the cost of such cars in the future. This may keep the demand for EVs sluggish.

The Way Ahead :

The post covid-19 are the challenging times for the entire automotive sector in India. With stiff competition and India enforcing global emission and safety norms, car manufactures have the dual challenge i.e., not only to be compliant with all these regulations but also ensure that price of cars do not increase very much. The companiesneed to focus on cost savings methods to remain competitive in the long run. We have fewexamples in India when two leading American car companies, General Motors and Ford Motors have exited the Indian market. Many global companies arestrugglingto evenretain 2to3 percent of market share. This may lead to more exits in the future from the country. These car companies not only have a bigger workforce but also support indirect employment through dealers and repair workshops. If one company exits the market, it leads to loss of employment of large number of people in the country. The need is for all these companies to sustain and prosper in the country. The use of smartcars will be the norm just as smart mobiles.

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Conclusion :

The increase in the incomes of the people in India is a god indicator that future of car industry is good. But this market is dominated by three to four companies only. There is a need for other companies to develop India specific products, whereby the cost of ownership of these brands for the Indian consumer comes down. Use of IOT and AI will make owing a car a really immersive experience. This will help companies to consolidate.

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