

Automobile Industry : Past, Present and Future

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Abstract The International Automobile Industry has seen a plethora of change over the years, not only in terms of the technology put to use but also in terms of the ways in which our vehicles now look and drive like. In this research paper with the topic "Automobile Industry: Past, Present and Future" the researcher by means of inputs from various sources, and on the deductions based on such inputs, has tried to find out how internationalisation has made the Automobile Industry of now and how the automobile industry has influenced the world economies. A journey to track its past, sail through its present

Introduction:

Automobiles over the years have influenced our lives to a great extent. They have evolved from mere means of transport to a great source of revenue generation, which in turn contributes immensely to the economy of any and every nation on this planet.

Automobile industry is one of those diverse industries which have helped not only in shaping the economic status of any country but also influencing the investment trends. A nation with good transport system has always been the talking point for the investor. Those countries which have developed a good system of transport over the years are reaping its benefits now.

The Automobile industry at large comprises of 4 types of vehicles.

Passenger Vehicles, Commercial Vehicles, Two -Wheelers and Three-Wheelers. Being an industry its production aspect is listed as a part of the secondary sector, but it's immense usage in the transport industry also makes it a great contributor to the Tertiary sector.

Evolution and Growth:

The evolution of the Automobile Industry can be tracked back to the year 1808, when François Isaac de Rivaz designed the first car powered by an internal combustion engine fueled by hydrogen.

But it was in the year 1885, Karl Benz developed a petrol or gasoline powered automobile.^[1] This is also considered to be the first "production" vehicle as Benz made several other identical copies. The automobile was powered by a single cylinder four-stroke engine.

Ford Motor Company's Model T became the first mass-produced automobile in 1908, focusing on affordability for the average consumer. By 1927 Ford produced over 15,000,000 Model T automobiles.

Indian Context:

In 1897, the first car ran on an Indian road. Through the 1930s, cars were imports only, and in small numbers.

An embryonic automotive industry emerged in India in the 1940s. In 1953, an import substitution programme was launched, and the import of fully built-up cars began to be restricted.

Over the number years plethora of Car manufactures both domestic and International tried knocking on the door of Indian Automotive Industry. Some survived and excelled whereas some simply perished due to unfavourable economic conditions on offer and the restrictions imposed by the Government at times.

Through all these safe and turbulent conditions the Indian Automobile Industry sailed ahead, to become today the seventh largest producer of Automobiles in the world with an annual production of 25.31 million vehicles in FY 2016–17, following a growth of 5.41 per cent over the last year. The automobile industry accounts for 7.1 per cent of the country's gross domestic product (GDP).

The Two Wheelers segment, with 76 per cent market share, is the leader of the Indian Automobile market, owing to a growing middle class and a young population. The overall Passenger Vehicle (PV) segment has 15 per cent market share. The Commercial Vehicles (CV) and Three-Wheelers

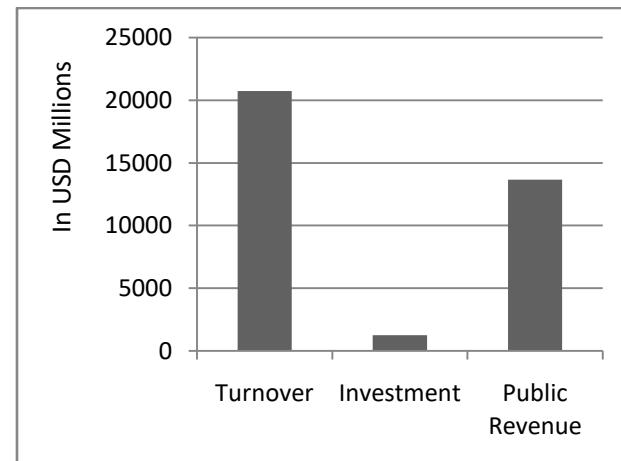
together account for the remaining 9 percent of the production in India

With the increase in number of production facilities the Automobile Industry is also contributing to the employment opportunities, contributing in satisfying the employment needs of a young nation. At present the Automobile Industry is giving employment to in total of 270,000 , the eighth biggest employer when compared with other automobile manufacturing nations.

In the year 2016 UNIDO provided Training provided to 155 automotive component suppliers on lean manufacturing and continuous improvement initiatives on the shop floor is helping to position India as a reliable supplier of automotive parts.

Automotive Industry and Economy

The automobile Industry has a large impact on the economy of any country, since it plays a major role in both the secondary and tertiary sector with indirect influence on the primary sector it's contribution cannot be left out.



The investments made in the automotive industry is near about USD 1,245 millions and the turnover from the industry has been recorded as USD 20,740 millions.

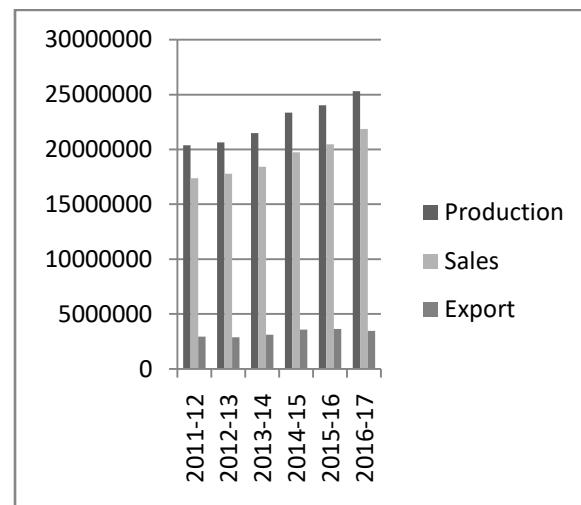
The income of the government through all sources is called public revenue which is valued at USD 13,655 Millions. Hence the Automotive Industry is also quite crucial in the governments earnings owing to the high revenue being generated.

Employment

The world's automobile industry made over seventy-two million cars, vans, trucks and buses in 2016. These vehicles are essential to the working of the global economy and to the well being of the world's citizens.

Building seventy-two million vehicles requires the employment of more than nine million people directly in making the vehicles and the parts that go into them. This is over five percent of the world's total manufacturing employment. In addition to these direct employees, about five times more are employed indirectly in related manufacturing and service provision, such that an estimated more than 50 million people earn their living from this Industry

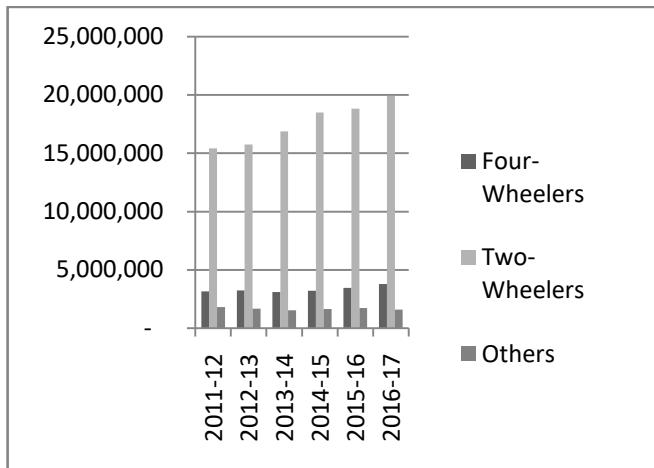
Indian Automobile Sector



Since the late 1990s' that is after the implementation of the new industrial policy, the automobile industry in India also showed signs of a positive growth. At present the Indian automobile industry has the Capacity to produce near about 25 Million Vehicles per annum, an improvement of 5.4 percent over the previous year. One important point to be noted is that even though the production capacity has increased over the previous years. Owing to the increasing production the domestic sales have also shown an upward trend, in the FY 2016-17 a total of about 22 Million units were sold that is about 7 percent increase over the previous year. The export figure has seen a trend of decrease in export over the previous year by 4.5 percent.

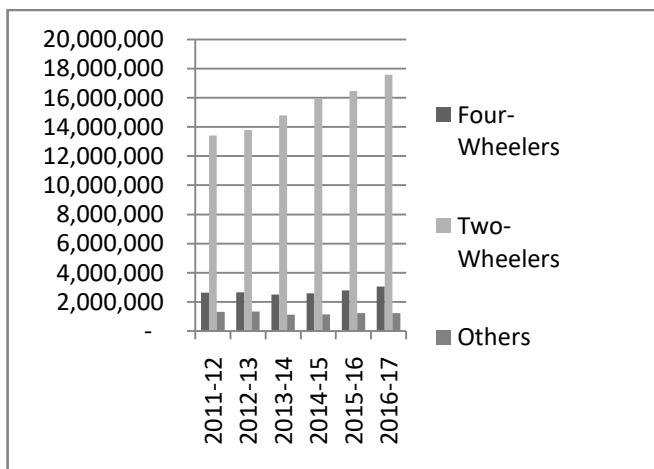
Further study of the different aspects viz. Production, Sales and Exports has been studied below.

Automobile Sector : Production



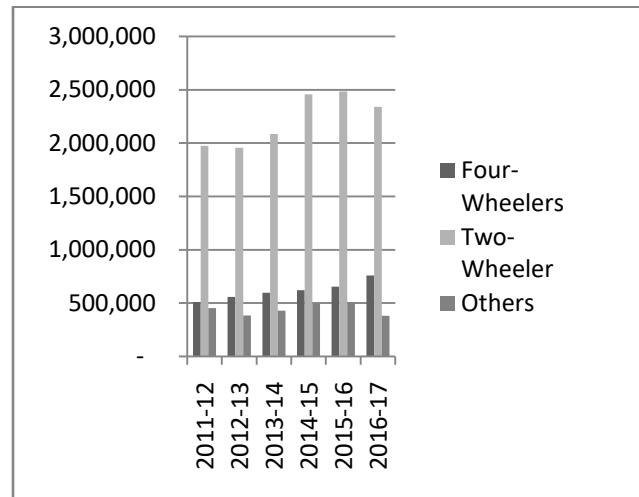
The contribution towards the production in the Automobile Sector is by Two-Wheelers which in FY 2016-17 accounted for 78 percent, Followed by Four-Wheelers-Wheelers at 14 percent. The major difference seen is arising due to the fact that majority of the working population of India belong to the Middle Class and owing to the 1.3 Billion strong population, commute is much easier by means of a Two-Wheeler, reaching the destinations on time through the ever increasing traffic.

Automobile Sector : Sales



The domestic sales figure have shown an upward trend owing to the increased population and increasing demands. As the Two-Wheeler are the most produced vehicles in the automobile industry, its sales figures are also very high when put in comparison. Near about 80 percentage of vehicles being sold are two wheelers followed by 14 percent four-wheelers being sold.

Automobile Sector : Exports



In the FY 2016-17 the overall exports dipped to a value of near about 3.5 Million units that is 4.5 percent lower than the previous year. The reason behind the decrease in the units is the decrease in export of Two-Wheelers and Other vehicles (viz. Commercial Vehicles and Three-Wheelers). But the Four-Wheeler Industry has been promising with the increase in number of units being exported.

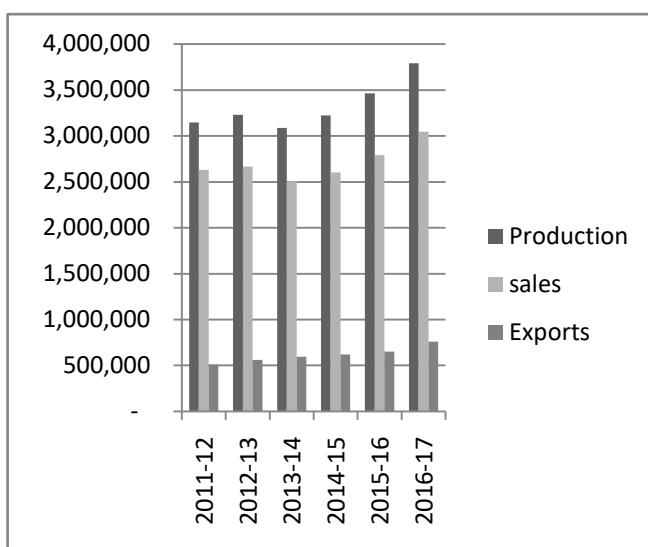
Hence we shall now focus on the four Wheeler industry especially the Passenger Vehicles (PV)

Four-Wheeler Industry : (PV)

Owning a car has since the ages of our Fore-Fathers being linked to the status of living and now the climatic conditions are becoming harsher forcing more people to chose a four-wheeler over a two-wheeler. If one can afford it, one does spend on it. In India majority of the population still relies on two-wheelers and public transport to travel as these modes are cheaper. More preference is given to the Two-wheelers due to the lack of proper public transport in some places and to save on the time being spent waiting for a bus.

But since the past few years the trend seems to be changing, more and more people are upgrading to a four wheeler and those who are not owning one are using Cab services. The onslaught of Cab aggregator companies like Uber and Ola have made Taking a Cab cheaper so more and more people are preferring the same.

The following graph shows the figures for the Four-Wheeler (PV): -



All the figures may it be Production, Sales or Export all have seen an upward trend in the Four-Wheeler sector. The Government has also from time to time shown interest in the Four-Wheeler industry as even though the production value to be comparatively low when put in comparison with two wheelers but the revenue generation is comparatively higher and four-wheelers are turning to be need of the hour for the international market.

More and more global brands are being invited to set up their production facilities in India, helping not only the nation in increasing the GDP but also in providing with employment opportunities, something which a nation comprising majorly of Young population needs a lot.

In an attempt to bring in more companies to set up their plants in India, the government has to make sure that they are able to provide with hassle-free and seamless process of set up and operations, which helps in making it easier and profitable for companies to produce in India and export their products to the other nearby countries as well.

Organisations like Automotive Research Association of India (ARAI) and National Automotive Testing and R&D Infrastructure Project (NATRIP) have been set up to promote research and development in the Automotive Industry. These not only help in providing with new innovations to the Automobile sector but also help with finding ways to make travel safer, economical and eco-friendly as well

To aid the needs of manufacturing units India has four large auto manufacturing hubs across the country: Delhi-Gurgaon-Faridabad in the north, Mumbai-Pune-Nashik-Aurangabad in the west, Chennai-Bengaluru-Hosur in the south and Jamshedpur-Kolkata in the east.

Objectives of Study

1. To know the present status of the Passenger Vehicle sector in India and its prospects in the future.
2. To find out the strength and weakness of four wheeler Industry.
3. To undertake a comparative studies of India with the Top three PV manufacturing countries
4. To know the problems and prospects of Automobile Sector, especially Passenger Vehicles and to suggest the suitable remedies to overcome the problems.

Methodology of the study

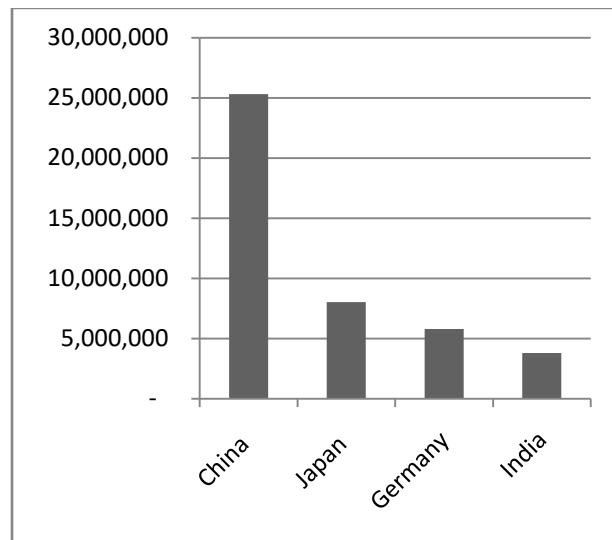
Collection of data

The present study is entirely based on secondary data which were collected from the facts and figures for the FY 2016-17 published on various websites of different organisations which have been duly acknowledged in the References.

Analysis of Data

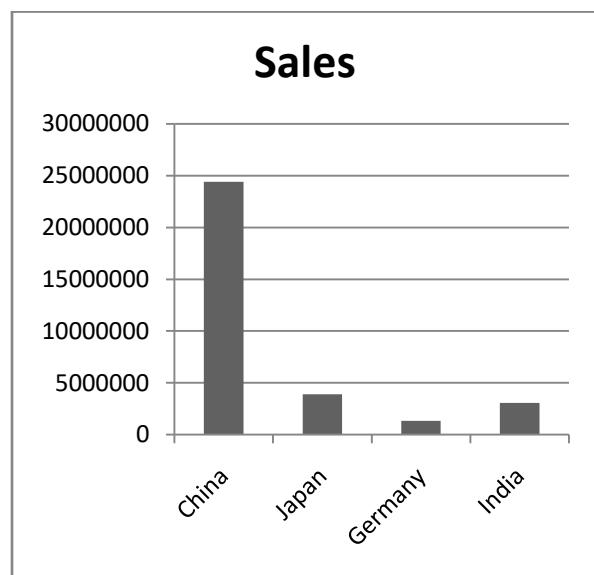
For this research paper the data of the top three manufacturing countries is being compared with India to find out how the Indian PV sector is functioning when compared with those of others.

Production



For the FY 2016-17 China is the biggest producer of PV globally amounting to near about 25 million units per annum, it is followed by Japan with a production of 8 million cars a year that is 3 times lesser than China, closely followed by Germany at 6 million units and India at 4 million units.

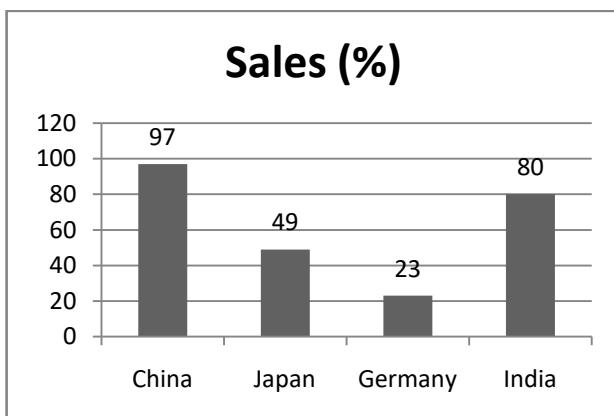
Sales



Owing to the huge amount of sales China has a sales value much higher than others, near about which is six times more than the second highest in sales Japan. It is a noticeable fact that

even though Germany has a production value more than that of India but it has an sale of near about 1 million units which is substantially small when compared with India standing about 3 million units.

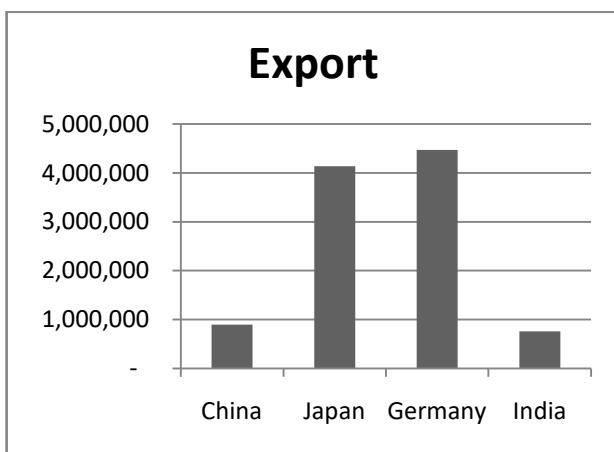
But these are the value based figures and need not show the correct comparison. Henceforth it is being compared on basis of percentage of Production.



Here the comparison becomes completely fair as it is calculated on the basis of percentage of production.

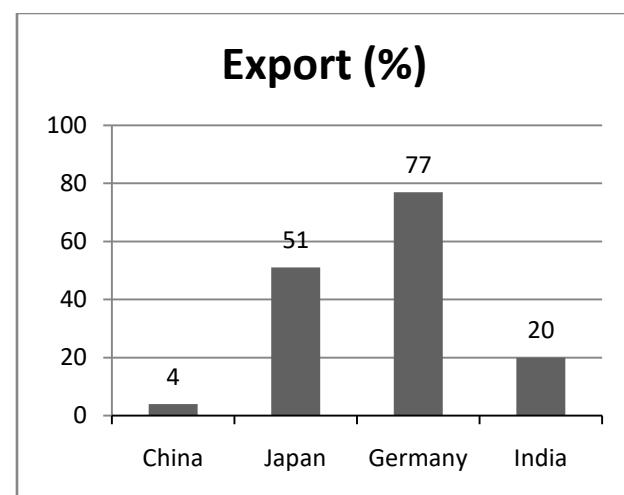
Export

For any nation to earn foreign currency reserves exports are the way, hence are very crucial for the economy of any country, especially for a developing country like ours.



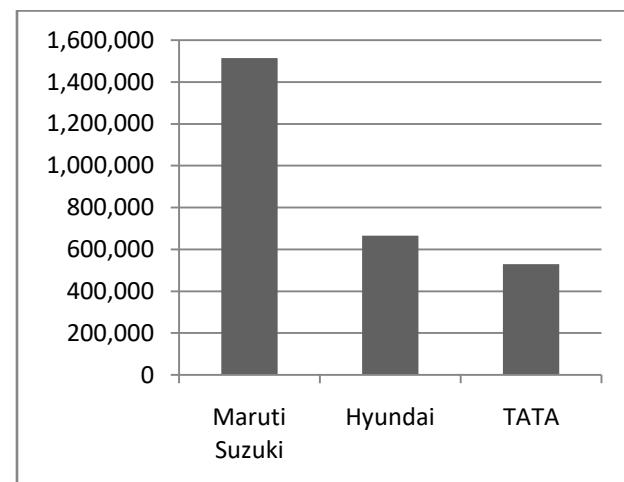
When put in comparison with the countries in case of figures Germany, with an annual export of 4.5 million PVs, is the biggest exporter, closely followed by Japan with 4 million vehicles exported. China and India are quite close in terms of vehicles exported.

But these are the value based figures and need not show the correct comparison. Henceforth it is being compared on basis of percentage of Production.



Comparison on the basis of production makes it easier to compare and shows the true picture.

Automobile Companies



Maruti Suzuki is by-far the largest manufacturer of Passenger Vehicles in

India with an annual production of near about 1.5 Million which also accounts for 50 percent sales of Suzuki's Global sale.

Hyundai is the foreign company which comes in second closely followed by Tata motors.

Findings

1) Considering the current growth rate of 5 percent on average the Indian Automotive Industry will become the 4th largest producer of Passenger Vehicles by 2020.

2) Even though China is the biggest producer of automobiles especially PVs but its major production is consumed for domestic sales and only a marginal percentage of vehicles are exported.

3) Japan has a good balance between the domestic sales and exports of the overall production taking place, with a bit of inclination towards export.

4) Germany is the third largest producer of Automobiles but it is the biggest exporter. Reason being that only 22 percent vehicles being produced are being kept back for domestic sale and the remaining exported.

5) Of the Production of PVs in India 80 percent is being used for domestic sale and only 20 percent is being exported.

6) Even though there is a big difference between the sales figures of China and the other three countries. But when the percentages of production are calculated for the same, it turns out that they are in close proximity.

7) The employment provided by Germany is comparatively higher than the other countries with one person for

every 8 vehicles being produced. India stands at a position of employing one person for every 15 vehicles produced.

8) Till the year 2002 India was producing PVs one million more than what China used to produce and at present China has taken over to produce nearly six times over what India produces.

9) It has been since 2009 that China has taken over the title of world's largest producer and continues to do the same. Till 2009 Japan was the world leader.

10) The reason behind China producing so many PVs is because of the huge population it posses, being the country with the largest population demand of people rises as well.

11) China having cheaper labour force is able to produce more vehicles at cheaper rates, which in turn helps the people to afford a four wheeler

12) The biggest automobile company of India Maruti Suzuki is an undertaking of the Japanese auto-major Suzuki. The years of belongingness to the company has made people feel connected to and prefer it as a brand over others.

13) Hyundai is the only foreign company with a great market share captured, it is followed by Tata and Mahindra.

Suggestions and Concluding Remarks

The Indian automobile Industry has a great potential to grow especially in the Passenger Vehicle Segment which is seeing a constant increase in both domestic sales and exports.

The Indian auto market is still untapped, the majority of the people in country, don't own a four wheeler, and all the major auto companies are trying to increase their sales by several moves. Bringing in new and innovative ideas with ways to make vehicles economical without compromising with the environment, trying constantly to reduce carbon-footprints

Providing with financing options to the people can help people afford four wheelers, not only as a family car but also as a means of earning, by using it as a taxi.

Better testing facilities should be setup both for the vehicles being produced so that they comply with the international safety standards.

Proper training should be imparted to those applying for Drivers License, to decrease in the road accidents arising due to the negligence of the drivers.

Traffic rules should be enforced properly for the sake of smooth flow of traffic and keeping the roads safe, helping in attaining optimum efficiency.

Better Roads will help in giving boost to the Automotive Industry. Government should focus on connecting places with paved roads a must for Road Transport to evolve.

Employment is a very important aspect that needs to be taken into consideration, especially in the case of India, generation of employment opportunities is the need of the hour and this industry can be quite helpful in providing with the same.

Global Warming is a global concern. More vehicles running on fossil fuels ultimately leads to pollution, more research needs to be put forward into this direction, looking for better and affordable alternatives,

Electric Cars are talk of the town now, Governments should support these initiatives by providing with subsidies and ancillary resources needed so that people can make most out of it.

With proper nurturing and support the Indian automobile sector can achieve targets which might seem impossible now. Moving towards being the world leader in Production and Exports.

By analyzing the current trend of Indian Economy and Automobile Industry we can say that being a developing economy there is lot of scope for growth and this industry still have to cross many levels so there is huge opportunities to invest in and this is proving as more and more foreign companies setting up there ventures in India.

More and more companies are setting up their production units in India, which is a good sign showing that the businesses have started showing trust in the Indian market and willing to invest more if provided with a good regulatory framework.

More and more investment should be promoted in the Passenger Vehicle Sector which at present is on a steady rise.

In the present study, the Automotive Industry being one of the key industries in India has received due attention. The brief analysis above gives the optimistic view about the Passenger Vehicle sector and the Automobile Industry at Large, both showing good signs of growth.

References

The websites of the following Organisations have been referred to for the collection of Data :

Society of Indian Automobile Manufacturers (SIAM)

Organisation Internationale des Constructeurs d'Automobiles (OICA)

China Association of Automobile Manufacturers (CAAM)

Japan Automobile Manufacturers Association (JAMA)

German Association of the Automotive Industry (VDA)