CONCLUSION

Automobile was invented during the last decade of the 19th century in Europe and is steering strong even in the 21st century throughout the world. Automobile is not machine it makes statement. The possession of an automobile personifies the owner and represents their lifestyle and their stage of life. Sociologist Karen Sternheimer had rightly remarked cars reflect the social structure. Cars can be used to make personal statement about who we are (microsociology) and also reflect our economic stratification (macrosociology). Anthropologist Terence Turner remarks Car as our Social Skin, having a car confer status, each brand and model that a person buys suggest a level of income and success.

When automobiles were introduced it was claimed that human beings had conquest over time and space by virtue of its speed of forward motion. The automobile enlarged the geographical opportunity circle of a man. For a man on foot, a man on horseback or a man with a cycle, the 'geographical opportunity cycle' is extremely limited, while for a car owner it is considerably larger: according to one estimate, the area of this circle is 56 times larger for the car owner compared to a man on foot. The introduction of automobiles created a new class in the society. The automobile was invented at a time when the landed aristocracy was at decline and a new bourgeoisie who didn't belong to the noble lineage was emerging. This rising, moneyed, urban bourgeoisie wanted to show their presence with the new machine, automobiles and not with the horse carriages of the nobility.

"Cars are also one measure of our identities. They provide hints to the world concerning our values, aspirations and present-day economic situation". Mass production of cars became, first, the largest and best-paying manufacturing industry of the 20th century and, then, a leader in automation and robotization that cut the

511 Lugur, Stan. op. cit., pp. 11-12.
labour force. Intensifying traffic necessitated large-scale construction of paved roads, and this was the main reason for hugely increased extraction of sand, rock, and limestone whose mass now dominates the world's mineral production and accounts for a large share of freight transport.\textsuperscript{513}

Mimi sheller and John Urry had noted the impact of automobiles as, "Automobility impacts not only on local public spaces and opportunities for coming together, but also on the formation of gendered subjectivities, familial and social networks, spatially segregated urban neighbourhoods, national images and aspirations to modernity, and global relations ranging from transnational migration to terrorism and oil wars. This sociotechnical system is not only a key form of contemporary mobility, but is furthermore interconnected with other mobile systems that organise flows of information, population, petroleum oil, risks and disasters, images and dreams".\textsuperscript{514}

The automobiles had its genesis in France, took its shape in Germany and attained maturity in US. In Europe the production method was craft production and it took a paradigm shift in US as mass production. The automobile was popularised by three major manufacturers, Ford, General Motors and Chrysler. Ford came out with idea "anything is good until it is black", General Motors floated the concept 'for every purse and purpose'. Chrysler came out with cars "by price and function". The automobile had a strong impact on the US and it turned them as a Car Country. The oil crisis of 1970's shifted the automobile production from United States to Japan who were the pioneers of compact cars. The Japanese with their lean technique dominated the auto world and was followed by the Koreans. In the 21st century there is a major shift in the production centre due to market saturation in the home country and untapped market and rising income levels in foreign countries. The automobiles companies looked towards China and off late to India as their manufacturing centers due to the potential markets.


The Indian automobile industry has a distinct growth history. It started with imports and now it is the 6th largest industry in world. The Indian automobile industry passed through three phases namely: The Colonial Phase, the Independent phase and the Globalization phase. The Colonial Phase saw the import and later assembly activity. During this phase the Colonial government didn't respond for the Indian demand for establishing the industry. The second phase is the Independent phase. This phase saw two characteristics such as intervention and indigenisation. The GoI resolved to follow the import substitution policy by which the import of foreign cars was restricted so as to promote native industries. This laid the base for industrial growth in India. The GoI appointed commissions and committees such as the Report on Panel on Automobiles and Tractors 1945, the Motor Vehicles Taxation Enquiry Committee in 1950, the Industrial Policy Resolution of 1948, The Industries (Development and Regulation) Act (IDRA) of 1951, the Tariff Commission of 1953, L. K. Jha Committee of 1960, Motor Car Quality Enquiry Committee in 1967, MRTP Act (Monopolies and Restrictive Trade Practices Act) of 1969, the FERA (Foreign Exchange Regulation Act) in 1973, the Car Prices Inquiry Commission, to regulate the industry. During this phase passenger car industry was treated as an item of luxury and support was given to ancillary industries, commercial vehicles and two wheelers and not to cars. The final phase is the Globalization phase, Prior to this phase Maruti was established which laid the road for the growth of automobile industries in India. This phase witnessed the entry of Global manufacturers to India. The presence of strong component supplier base and untapped market made the Global players to target India. The GoI had also realised the importance of the industry and had taken necessary steps such as 100% FDI for the automobile sector, the Auto Policy 2002, Automotive Mission Plan (AMP) 2006-16, National Electric Mobility Mission Plan (NEMMP) 2020 and AMP 2016-26 to accelerate the growth of the auto-sector. All the commissions and committees and policy and plans of the GoI had significantly contributed to the progress of Indian automobile industry.

The automobile industry of Chennai is covered through six phases. The First Phase is the Forerunner Phase where agency houses were setup to import automobiles and later they started service stations and made few spares. The Second Phase is United Action Phase where the Colonial authorities and the natives together demanded for the establishment of automobile industry in Madras. The Third Phase is
the Control Phase where the Madras State controlled the sale of automobiles. The Fourth Phase is the Factory Phase, it saw the establishment of Ashok Leyland, Standard Motors and Royal Enfield Factory. The Fifth Phase is the Base Phase where strong ancillary industries emerged targeting their products allover India and exporting a few. The Sixth phase is the Post-Globalization Phase where the GoTN with its policies, *Ultra Mega Integrated Automobile Projects Policy, 2007 & the Tamil Nadu Automobile and Auto Components Policy 2014* attracted major auto-players to Chennai. The political stability in the state, socio-welfare policies of the GoTN which led to high HDI, industrial infrastructure and policies, physical infrastructure facilities such as airport, sea ports, and well-connected roads and rail network acted in favour-of the growth of the industries in the State of Tamil Nadu, especially in Chennai.

The automobile was made as a mass product by Henry Ford. In India it was Sir M. V. who strongly urged for the establishment of the industry. Individuals like Mr. Walchand and Birla's made early attempts to establish manufacturing units in India. Mr. Raghunadhan Saran, T V Sundaram Iyengar, S. Anantharamakrishnan, Ganapathy Iyer, K. Sundaram Iyer, K. M. Mammen Mappillai played an important role in the development of the automobile industries in Chennai. In addition, the political administrators from the state of Tamil Nadu created the necessary background for the growth of the industry in Chennai.

Of all technological products, the automobiles had the greatest impact on the mankind. The establishment of automobile industries in Chennai had a noticeable impact on Chennai. Chennai expanded from 1189 sq km in 1976 to 8878 sq kms in 2017 and it has the third largest expat population. The usage of automobiles had made Chennai the second highest place across the selected cities in the world at 26.6 persons per lakh population killed in road accidents and it has been ranked first in PM10 (vehicle exhaust pollution) emission at 50,200 tons per year. The foreign language learning centers and restaurants serving foreign cuisines have a reasonable patronage due to the presence of automobile sector in Chennai.
From the above chart we find the private mode of transport such as Two Wheelers and Cars usage is in an increasing trend. On the other hand, the automobile industry is facing new challenges around the world such as car sharing, hybrid cars, shortage of oil resources and environment criticism. This new challenge is taking its roads in India and in Chennai too. Ola & Uber services have picked up which might reduce the sales %, the GoI had implemented FAME-India Scheme (Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India) from 1st April 2015 forcing the conventional auto makers to invest more money on this format but the efficiency of this format is still in experimental stage, to reduce the automobile usage the GoTN had initiated integrated multi model transport system including metro, mono-rail, bus rapid transit with cycle tracks and walk ways. Poor state of Road Infrastructure, Non- existence of vehicle scrapping norms, Excess capacity creation, Poor growth of core sectors, Fuel costs in India, Auto policy and its pitfalls are some other challenges in the growth of the automobile industry.
Scope for further Study:

The Automobile industry has the strongest forward and backward linkages of all industries so a complete study of the industry is not possible. Some of the areas for further scope of study are:

1. Now most of the Global OEMs have established their units in Chennai due to the availability of cheap Labour cost when compared to their home country. The Automobile industrial Labour -their composition, condition and their prospects are a major study area.

2. With the coming of automobiles to Chennai there was a development of Petrol-vending units. The oil distribution of Chennai is of another major study area.

3. Automobiles are part of all the media. The study of automobiles in the media over a period of time reflects the society.

4. The banks are closely associated with Car loans and bike loans. The study of loans and the repayment issues.

5. The expat's encounters & experience of Chennai.

India has the largest young population around 66% people under the age of 35 and the vehicle penetration is low when compared to US or any developed country, it is just 32 vehicles per 1000 people in 2015. Indian economy is one of the fastest growing major economies in the world. India registered 7.2 % growth in 2014-15 and 7.6 % in 2015-16 in spite of the global recession. This steady economic growth and the rising middle class is a favourable factor for the sales of automobiles. The possession of a car is considered to be an 'aspirational good' in the minds of the Indians which will drive them for more usage of automobiles. The GoI recent initiative, The Automotive Mission Plan 2016-2026 aims to make the Indian Automotive Industry a significant contributor to the "Skill India" programme and largest job creator. The Vision statement AMP 2026: "Vision 3/ 12/ 65": "By 2026, the Indian automotive industry will be among the top three of the world in engineering, manufacture and export of vehicles and auto components, growing in value to over 12% of India's GDP and generating an additional 65 million jobs."  

The GoTN was one of the earliest States in India to take advantage of the automobile production. Chennai produces everything that moves- from bicycles to battle tanks and everything in between, including motorcycles, cars, tractors, earth moving equipment, trucks and even railway coaches. The region makes three cars every minute and one commercial vehicle every 75 seconds. The presence of the automobile and auto component manufacturers had earned the name Chennai as Detroit of India. In future there is every possibility if the GoI and GoTN take constructive steps in the right direction the leading auto hubs might be called as Chennai of that place, for example Detroit in future may be called as Chennai of USA, and so on.