
CHAPTER 2 - EVOLUTION & GROWTH OF AUTOMOBILE
SECTOR IN INDIA

You learn something every day if you pay attention. ~ Ray LeBlond

2.1 INTRODUCTION

India is emerging as a source of high value and advanced quality engineering products and services for multinational companies. India is set to emerge not only as a large domestic market for automotive manufacturers, but also as a crucial link in the global automotive chain. Among other industries, the automotive industry in India is understood to be the most dynamic. It has been experiencing strong growth rates after delicensing of the industry in 1991, when major economic reforms took place in India. The automotive industry in India produces a wide range of vehicles like passenger cars, utility vehicles, commercial vehicles, two-wheelers, three-wheelers and tractors. Currently, there are approximately 15 manufacturers of passenger cars and utility vehicles, 9 manufacturers of commercial vehicles, 16 manufacturers of two-wheelers and three-wheelers and 14 manufacturers of tractors. The Indian automotive industry is one of the world's fastest growing automotive industries growing at a Compounded Annual Growth Rate (CAGR) of approximately 7 per cent over the last five years. It is now the eleventh largest manufacturer of passenger cars, fourth largest manufacturer of commercial vehicles and the second largest manufacturer of two-wheelers in the world.

2.1.1 THE LARGEST INDIAN PASSENGER CAR MANUFACTURERS

The largest Indian passenger car manufacturers include Tata Motors, Maruti Suzuki, Mahindra & Mahindra and Hindustan Motors. Presence of foreign players such as Mercedes-Benz, Fiat, General Motors and Toyota is also growing in this segment. Recently, the passenger car segment has also seen the entry of other global majors such as BMW, Audi, Volkswagen and Volvo. Major Indian manufacturers of commercial vehicles are Tata Motors, Ashok Leyland, Eicher Motors, Mahindra & Mahindra and Force Motors. Like the passenger car segment, this segment has also seen foreign companies such as MAN, ITEC, Mercedes-Benz, Scania and Hyundai entering the market. Two-wheeler manufacturing is dominated by Indian companies like Hero Honda, Bajaj Auto and TVS. Foreign players in

this segment include Honda, Yamaha and Piaggio. Three-wheeler manufacturing is also led by Indian companies that include Bajaj Auto, Force Motors and Mahindra & Mahindra.

2.2 EVOLUTION OF THE AUTOMOTIVE INDUSTRY

While the automotive industry in India started developing in the 1940s, distinct growth rates started only in the 1970s. Cars were considered ultra luxury products, manufacturing was strictly licensed, expansion was limited and there was a restrictive tariff structure. The decade 1985 to 1995 saw the entry of Maruti Udyog in the passenger car segment in collaboration with Suzuki of Japan, and Japanese manufacturers in the two-wheeler and commercial vehicle segments. After economic reforms took place in India in 1991, it is only in the mid-1990s, that the automotive industry started opening up. Thus, the mid-1990s are characterized by the entry of global automotive manufacturers through joint ventures in India. Till the 1990s, the automotive industry in India was primarily dominated by Maruti Suzuki, Tata Motors, Hindustan Motors and Premier Padmini in the passenger car segment. Ashok Leyland, Tata Motors and Mahindra & Mahindra dominated the commercial vehicle segment while Bajaj Auto dominated the two-wheeler segment. After the year 2000, further policy changes were introduced and focus on exports in the industry started increasing. Following that, the Core Group on Automotive Research & Development (CAR) was set up in the year 2003 to identify priority areas for Research and Development (R&D) in India. Contribution of the automotive industry to GDP and employment in the 1990s

Turnover of the automotive industry in the year 1998–1999 was Rs. 360 billion and the industry provided employment to over 10 million people directly and indirectly. The contribution of the automotive industry to the GDP during the same period was 4 per cent rising from 2.77 per cent recorded in the year 1992–1993.³ Surge in road freight and passenger traffic generated demand for automobiles in 1990s. The average rate of growth of freight and passenger transport on the road was the highest compared to other means of transport such as rail, air and sea throughout the 1990s. Even in terms of absolute volume, traffic handled by roads was the maximum among the other means. This partly explains the rise in growth of the automotive industry especially since the 1990s.

2.3 GROWTH OF THE INDUSTRY

Growth of the industry is taking place in clusters. The automotive industry is developing in clusters. There are four major clusters in the automotive industry in India. They are in and around New Delhi, Gurgaon and Manesar in North India, Pune, Nasik, Halol and Aurangabad in West India, Chennai, Bangalore and Hosur in South India and Jamshedpur and Kolkata in East India. Of course there are several manufacturing units in many other parts of India but these four clusters are expected to become the main hubs for manufacturing in the automotive industry. The Government of India (GOI) is taking initiatives to develop the automotive clusters. For example, the GOI, in its 11th Five Year Plan (2007–2012), is planning to create the Specialized Education and Training Institute for the automotive industry. It is also taking measures to enhance transportation, communication, and infrastructure facilities in these clusters.

2.3.1 BRIEF PROFILE OF AUTO CLUSTERS

Given below is a brief profile of these clusters in states where major automotive manufacturers are present and where more automotive companies are expected to setup manufacturing facilities.

MAHARASHTRA – This state is in the western part of India and has a well developed automotive industry that employs more than 40 per cent of the total manpower employed in the automotive industry in India. In fact the state of Maharashtra was once called the Detroit of India. The cluster in the state is located in and around the cities of Nasik, Pune, Aurangabad and Nagpur. The state is attracting both domestic and foreign manufacturers. Some of the major companies present in the state are Skoda, Tata Motors, Mahindra & Mahindra, Bajaj Auto and Mercedes-Benz among others.

TAMILNADU – The state is located in the south-eastern part of India along the coastline. It is home to many large automotive companies and the automotive cluster is located around the capital city of the state, Chennai. After Maharashtra, industry experts now refer to Tamilnadu as the new Detroit of India. The state government intends to transform the

area into one of the top three automotive hubs in Asia. The state is seeing big investments from companies like Ford, Nissan, Renault, Ashok Leyland and Hyundai among others.

HARYANA – This state is located in the northern part of India. The automotive industry is probably the biggest industry in the state and Haryana ranks first in India in the production of passenger cars, motorcycles and tractors. Haryana accounts for 50 per cent of total passenger cars and two-wheelers production in India. Market leader Maruti Suzuki is based out of Gurgaon and Manesar in Haryana. The largest two-wheeler manufacturer in India, Hero Honda along with the other large two wheeler manufacturers, Yamaha and Escorts are also present in the state.

KARNATAKA – Karnataka is located in the southern part of India. According to the Confederation of Indian Industry (CII), the automotive industry is one of the key industries in Karnataka. The automotive manufacturers in the state are present mainly around the capital city of the state Bangalore, Hosur and Dharwar. Big automotive manufacturing companies like Toyota, Volvo and Tata Motors have established themselves in the state.

From the geographical distribution of some of the largest automotive manufacturers in India, it can be observed that the eastern cluster is the smallest of the four clusters. However, there may be several financial reforms that are expected to lead to the development of a big automotive hub there as well. For instance, Tata Motors, one of India's largest automotive manufacturers had set up a plant near Kolkata in the state of West Bengal, from where it was to produce the Tata Nano, which was expected to be a large volume and highly successful car. However due to political turmoil there the plant is now shifted to Sanand, in Gujarat. The success of the car alone is expected to lead to the development of the area as a cluster for automotive manufacturing.

2.4 MEDIUM AND HEAVY COMMERCIAL VEHICLES

The medium and heavy commercial vehicles sub-segment consists of rigid trucks, tractor trailers, semi-trailers, bulkers and tippers. These vehicles may have a range of two to twelve axles and they mostly run on diesel. Manufacturing in this sub-segment is dominated by Indian companies, Ashok Leyland, Eicher Motors and Tata Motors. In India, there are certain regulations for entry and exit of trucks and for operation of trucks in certain areas

depending on the time. It can be possible, that to beat the regulation, large consignments are broken up so that smaller commercial vehicles can be used that may not have as many applicable regulations as there are on heavy commercial vehicles. The two largest manufacturers of buses in India are Tata Motors and Ashok Leyland. Due to an increasing focus on environmental issues and emission norms, buses in some cities run on Compressed Natural Gas (CNG). In the capital city of New Delhi for example, it is mandatory for public transport buses to run on CNG. Another vehicle included as part of medium and heavy sized commercial vehicles is the tempo. Tempos are smaller than full sized trucks that cater to the rural and urban areas where big trucks cannot travel.

2.4.1 AUTO MANUFACTURING

Manufacturing in this sub-segment is taking place between Indian companies and global companies through joint ventures as well. Eicher Motors of India has recently tied-up with Volvo to manufacture trucks, Force Motors has tied up with MAN of Germany to manufacture tempos, Nissan and Ashok Leyland announced plans of manufacturing commercial vehicles, Mercedes-Benz and Hero Group have also tied up to manufacture commercial vehicles. The commercial vehicles segment is expected to grow at a strong rate. Increasing competition in the commercial vehicle segment is expected to boost its growth further, the same way increasing competition had a positive impact on the passenger car segment. The fastest growth though is expected in the heavy trucks sub segment.

2.5 LIGHT COMMERCIAL VEHICLES

In India, apart from the medium and heavy trucks, there is growing popularity of light commercial vehicles as well. The light commercial vehicles are popular in rural areas (which form the majority part of India) where due to infrastructural constraints like bad and narrow roads, only small trucks can operate. For example, Tata Motors produces India's first mini truck called Tata Ace. Tata Ace is a big hit both in the city as well as in the rural areas where it can travel easily carrying light weight products effectively, thus providing more penetration.

2.6 AUTOMOBILE INDUSTRY AND HUMAN RESOURCE DEVELOPMENT

Skill shortages and skill mismatches may emerge as a constraint to achieve the growth targets set in the AMP. Thus one of the main areas of focus cited by the Ministry of Heavy Industries and Public Enterprises is to develop advanced capabilities in the workforce. A large workforce consisting of both skilled and unskilled workers will be required to sustain the increased level of production. The challenge is to ensure that the demand–supply gap does not arise either in quantitative or in qualitative terms.

The employment generated can be divided into direct and indirect employment. While direct employment is employment by way of workers being engaged in the production of automobiles and automotive components, indirect employment is generated in feeder and supplier industries in the areas of finance, insurance, mechanics and after-sales personnel for semi-skilled and unskilled workers in rural and semi-urban areas. According to the AMP, it is estimated that the automotive industry would require the following:

- Management and General: 28 per cent or 7 million
- Skilled workers: 62 per cent or 15.5 million
- Unskilled workers: 10 per cent or 2.5 million

The need for top level engineering and managerial manpower is being met by the Indian Institutes of Technology and Indian Institutes of Management. However more such institutes are required to impart high quality technical education to the 40). This information has been obtained from National Manufacturing Competitiveness Council (2006) 30 workforce. Although there are several engineering institutes all over India, there is a growing need for more engineering institutes. The GOI has begun to take some initiatives in this regard. The National Automotive Institute is being set up that will serve as a knowledge bank for the automotive industry, conduct market research and analysis and develop training modules. The plan is to establish the institute in all the major clusters in India, so that the institute can benefit from active participation from automotive companies in those clusters.

2.7 AUTO INDUSTRIES AROUND PUNE

Pune is the leading center for the automotive sector in India; as well as one of the top automotive centers globally. In the past year alone, 3 massive new plants from General

Motors, Volkswagen and Mahindra & Mahindra were inaugurated here. The Chakan-Talegaon Belt is becoming one of the densest automotive clusters in the world.

Tata Motors

Tata Motors is the biggest automotive manufacturer in Pune, and the biggest one in India. The huge Pune campus consists of their corporate HQ, R&D Center and Manufacturing facility for their cars and trucks.

Bajaj Auto

Bajaj Auto is one of the early automotive players in Pune. They have big base in Akurdi, Pune (R&D, Corporate and Manufacturing). A large new plant has been recently opened at Chakan.

Force Motors (Formerly Bajaj Tempo)

Manufacturers of 3 Wheelers, Tractors, LCVs and Large Trucks and shortly coming out in passenger car segment.

Mahindra Two-Wheelers (Formerly Kinetic Motors)

Manufacturers of Scooters, Mopeds and Bikes. Kinetic Motors has been an important player in the Mopeds and Gearless 2 Wheeler space in India. Their famous models include the 'Luna' and 'Kinetic Honda'.

Mercedes-Benz

Mercedez-Benz entered the Indian Market in the 1990s, initially with a partnership with the Tatas. Later on, they setup an independent venture, Mercedez-Benz India. The Pune facility manufacturers and assembles a range of their well known luxury cars.

General Motors

General Motors entered the Indian market in the past decade. The Talegaon Plant is a massive facility that recently started production. Cars manufactured here include the new Chevy Beat.

Volkswagen

Volkswagen opened a massive new plant in Chakan Pune a few months back. This facility is presently geared towards manufacturing high-volume cars like the VW Polo and Skoda Fabia.

Mahindra & Mahindra

M&M inaugurated a huge plant this past week at Chakan. Spread over 700 acres and built with an investment of nearly Rs 5,000 Crores (1 Billion Dollars), this plant will manufacture various models of SUVs and Commercial Vehicles.

Premier Motors

Makers of that famous Indian car of 'The Premier Padmini'. Current models manufactured include Diesel Pickup Trucks and Vans.

Fiat

The new upcoming Fiat Ranjangaon Plant will manufacture the various models like Punto and Linea.

Bridgestone

Bridgestone is setting up a big new plant in Chakan Pune with a total investment of around Rs 2,600 Cr.

Research Institutes, Suppliers & Infrastructure Players relating to Automobile Industry

ARAI (Automotive Research Association of India)

ARAI is a premier research and certification institution for the automotive industry in India. It has a beautiful campus on top of a hill in central Pune (near 'Vetal Tekdi').

In addition to the Auto OEMs (Original Equipment Manufacturers), Pune has a wide range of Tier-1 Tier-2 and infrastructure suppliers. Prominent Industry Players include:

Bharat Forge

Bharat Forge is one of the top forging companies in the world. They manufacture a wide range of forged auto components. Their Pune facility includes their HQ, Design Center and Manufacturing Facility.

Sandvik

Sandvik is a world leader in cutting tools. Their Pune facility has been around for nearly 50 years.

PARI Robotics & Automation

PARI is one of the leading industrial automation companies and have setup factory automation systems at many global manufacturing facilities.

Software & Information Technology

Software and IT are increasingly playing an important role in the area of cars and automotive manufacturing. Many leading global CAD/CAM/CAE Software Leaders are based in Pune. These include: Siemens, PTC, Ansys. Important IT Outsourcing Players in this area in Pune include Geometric and KPIT Cummins.

2.8 FUTURE OUTLOOK

“To emerge as the destination of choice in the world for design and manufacture of automobiles and auto components with output reaching a level of USD 145 billion accounting for more than 10 per cent of GDP and providing additional employment to 25 million people by 2016” is the vision put forward by the Ministry of Heavy Industries and Public Enterprises. Going forward it is evident that the automotive industry in India offers immense potential in terms of sales and employment opportunities. Growth in the economy is expected to continue which is also going to help the automotive industry to expand. Rising

disposable incomes and the new wave of consumerism arising out of it are going to be key drivers. Foreign direct investments are pouring into India in large numbers and manufacturing companies including global majors are going to setup manufacturing facilities first and then develop R&D services, both on a large scale.

Companies are confident that productivity can be increased through low cost automation and management efficiency. After productivity, the major concern among manufacturers is the relatively poor infrastructure in the country. The slow pace of development of roads, railways and ports is a disadvantage, but continuous improvements are being made in this regard also. The automotive industry in India has been crossing record milestones and is one of the world's fastest growing markets. The strengths of the Indian economy – large pool of skilled human resources, high quality engineering skills, strategic position combined with the strong growth trends in the economy and vast investments by global companies, are expected to drive the automotive industry to great heights.

2010 proved to be a bumper year for the automotive industry as newer models were launched, making India one of the fastest-growing market for cars globally and raising hopes that it may be headed for a boom similar to that witnessed in China, which rode past a struggling US to become the world's biggest car market. Small is big in the Indian car market. With small cars accounting for over 70 per cent of the nearly two million units market, the year 2010 saw a slew of models like Chevrolet Beat, Volkswagen Polo, Ford Figo, Nissan Micra, Alto-K10, etc. making their debut here. In the export front, about 450,000 small cars, including Hyundai's i10, i20 & Santro and Maruti Suzuki's A-star did extremely well.

In a year when global corporate investments in R&D declined 3.5% for the first time in more than a decade, India Inc bucked the trend. According to a study by the ET Intelligence Group, the research division of The Economic Times, R&D expenditure of the top 100 Indian companies increased 8% to Rs 11,582 crore in 2009-10. Three sectors— pharmaceutical, automobiles and capital goods—dominated the country's R&D landscape. The automotive sector accounted for about 22%. As a result of its investments in developing the Nano, the cheapest car in the world, Tata Motors was India Inc's biggest R&D spender, with a tab of Rs 1,171 crore. The Electric Vehicle sales are to go up in 2011 with the Union Ministry of New and Renewable Energy's (MNRE) recent decision of 20% financial

incentive on ex-factory price of electric cars & scooters sold in India leading to boost green revolution in automotive sector.

2.9 CONCLUSION

This chapter provides an overview of the automotive industry in India with relevant facts regarding the structure and size, growth rates, as well as an indication of future outlook of the main segments in the automotive industry. India is becoming a base of high value and advanced quality engineering products and services for multinational companies. India is emerging as a large domestic market for automotive manufacturers and has become a crucial link in the global automotive industries. This industry in India has become most dynamic and experiencing strong growth. The automotive industry is one of the largest industries in India and is a key driver for growth in the economy. Owing to its deep forward and backward linkages with other sectors in the economy, the automotive industry has a strong multiplier effect on the economy. Since, this sector is adding huge amount in Gross National product, it is interesting to see how the work force is trained and developed to survive in the cut throat competition. Therefore, the next chapter speaks about various aspects of training and development.

The learning and knowledge that we have, is, at the most, but little compared with that of which we are ignorant. ~Plato

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